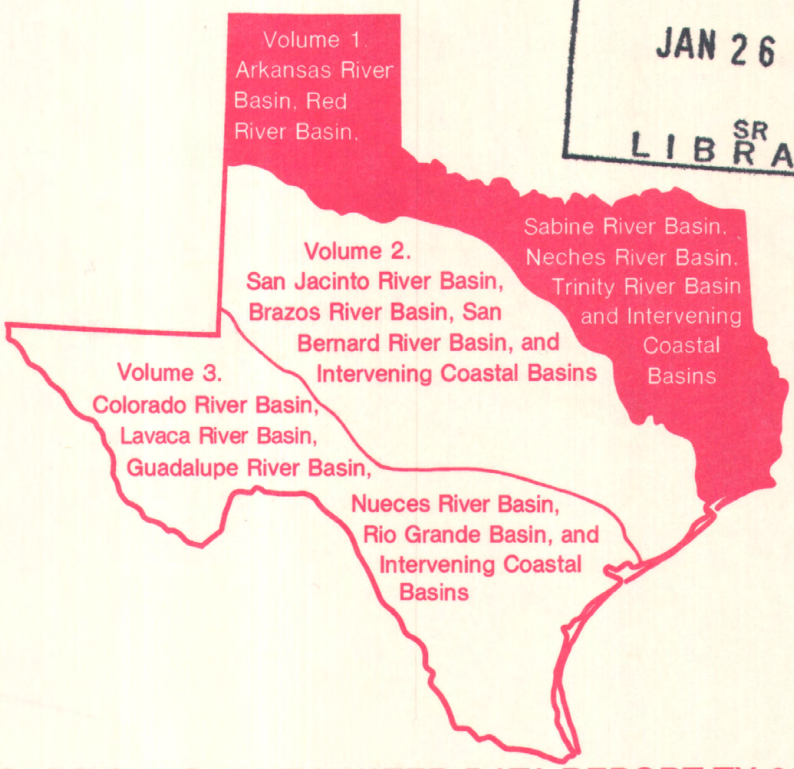
Water Resources Data Texas Water Year 1992

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TX-92-1
Prepared in cooperation with the State of Texas
and with other agencies

CALENDAR FOR WATER YEAR 1992

1991

OCTOBER

S	M	T	W	T	F	S
		1	2	3	4	5
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NOVEMBER

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1992

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APRIL

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SEPTEMBER

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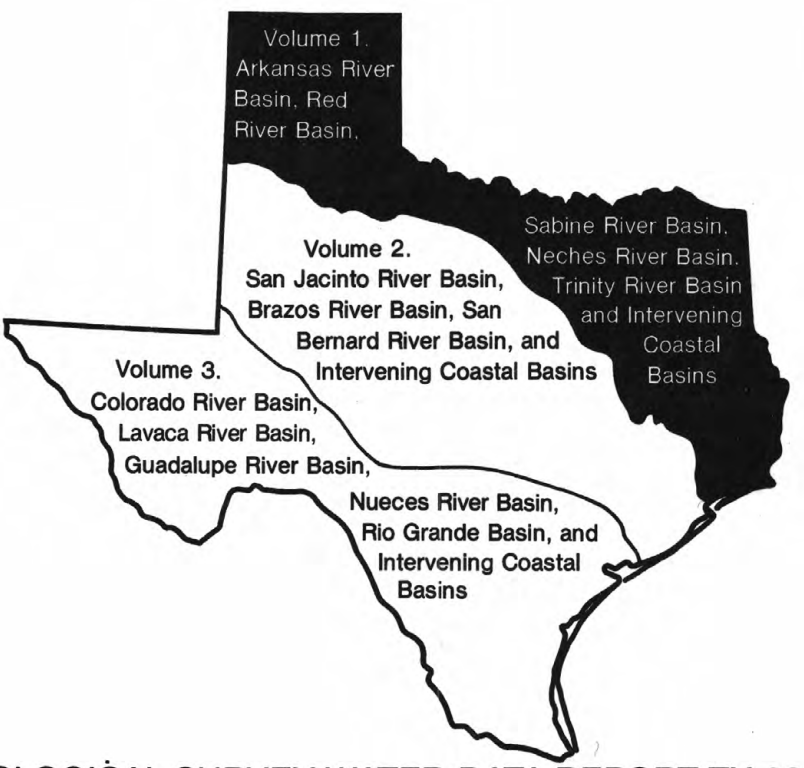
20	21	22	23	24	25	26
27	28	29	30			

Water Resources Data Texas Water Year 1992

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

by H.D. Buckner, F.L. Andrews, and B.A. Hinds



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TX-92-1
Prepared in cooperation with the State of Texas
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

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1993

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 4 volumes:

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

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

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

Volume 4. 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 Geological Survey policy and established guidelines, most of the data were collected, computed, and processed from Subdistrict and field area offices. The following supervised the collection, processing, and tabulation of the data:

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15. Supplementary Notes

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16. Abstract (limit: 200 words)

Water-resources data for the 1992 water year for Texas are presented in four volumes, and consist of records of stage, discharge, and water quality of streams and canals; and stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground-water wells. Volume 1 contains records for water discharge at 111 gaging stations; stage only at 5 gaging stations; stage and contents at 37 lakes and reservoirs; water quality at 96 gaging stations; and data for 7 partial-record and 8 flood-hydrograph partial-record stations. Also included are lists of discontinued surface-water discharge or stage-only stations and discontinued surface-water-quality stations; crest-stage and flood-hydrograph partial-record stations, reconnaissance partial-record stations, and low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data-collection program, and are published as miscellaneous measurements. Records for a few pertinent stations in bordering States also are included. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating Federal, State, and local agencies in Texas.

17. Document Analysis a. Descriptors

*Texas, *Hydrologic data, *Surface water, *Water quality, Flow rate, Gaging Stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperature, Sampling sites, Water levels, Water analyses

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Department of Commerce

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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.]

	Station number	Page
LOWER MISSISSIPPI RIVER BASIN		
ARKANSAS RIVER BASIN		
Arkansas River:		
Canadian River at Logan, NM (d)	07227000	27
Revuelto Creek near Logan, NM (d)	07227100	30
Canadian River near Amarillo (d) (c) (b) (t)	07227500	32
Canadian River near Canadian (d) (c) (b) (t) (s)	07228000	37
North Canadian River:		
Wolf Creek at Lipscomb (d)	07235000	41
RED RIVER BASIN		
Prairie Dog Town Fork Red River near Wayside (d) (c) (b) (t) (s)	07297910	43
Prairie Dog Town Fork Red River near Childress (d)	07299540	46
Groesbeck Creek at State Highway 6 near Quanah (d)	07299670	48
Salt Fork Red River:		
Greenbelt Lake near Clarendon (e)	07299840	49
Salt Fork Red River near Wellington (d) (c) (b) (t)	07300000	50
Salt Fork Red River at Mangum, OK (d)	07300500	52
Sweetwater Creek near Kelton (d)	07301410	53
Middle Pease River near Paducah (c)	07307750	55
Pease River near Childress (d)	07307800	56
Pease River near Vernon (d)	07308200	58
Red River near Burkburnett (d) (c) (b) (t) (s)	07308500	59
North Wichita River (head of Wichita River):		
Bluff Creek:		
Truscott Brine Lake near Truscott (e)	07311669	63
North Wichita River near Truscott (d) (c) (b) (t)	07311700	64
South Wichita River at low-flow dam near Guthrie (d) (c) (b) (t)	07311782	71
South Wichita River below dam near Guthrie (d) (c) (b) (t)	07311783	76
South Wichita River at Ross Ranch near Benjamin (c)	07311790	77
South Wichita River near Banjamin (c) (t)	07311800	78
Wichita River:		
Lake Kemp near Mabelle (e) (c) (t)	07312000	85
Wichita River near Mabelle (d) (c) (t)	07312100	91
Diversion Lake:		
South Side Canal near Dundee (d)	07312110	94
Beaver Creek near Electra (d)	07312200	95
Wichita River at Wichita Falls (d)	07312500	97
Wichita River near Charlie (d) (c) (b) (t)	07312700	99
North Fork Little Wichita River:		
Lake Kickapoo near Archer City (e)	07314000	101
Little Wichita River near Archer City (d)	07314500	102
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Little Wichita River above Henrietta (d)	07314900	105
East Fork Little Wichita River near Henrietta (d)	07315200	107
Red River near Terral, OK (d) (c) (t)	07315500	109
Moss Lake near Gainesville (e)	07315950	113
Red River near Gainesville (d)	07316000	114
Lake Texoma near Denison (e)	07331500	115
Sanders Creek:		
Pat Mayse Lake near Chicota (e)	07335390	116
Red River at Arthur City (d)	07335500	117
Red River near De Kalb (d) (c) (b) (t) (s)	07336820	118
Red River at Index, AR (d)	07337000	121
South Sulphur River near Commerce (c)	07342470	124
Middle Sulphur River at Commerce (d) (c) (b) (t)	07342480	126
Cooper Lake near Cooper (e) (c)	07342495	129
South Sulphur River near Cooper (d) (c) (b) (t)	07342500	133
North Sulphur River near Cooper (d) (c) (b) (t)	07343000	136
Sulphur River near Talco (d) (c) (b) (t)	07343200	139
White Oak Creek near Talco (d)	07343500	143
White Oak Creek near Omaha (c)	07343850	147

	Station number	Page
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RED RIVER BASIN—CONTINUED		
Red River:		
Wright Patman Lake near Texarkana (e) (c)	07344200	149
Sulphur River near Texarkana (e) (c)	07344210	160
Big Cypress Creek near Winnsboro (e)	07344482	162
Brushy Creek at Scroggins (d)	07344486	163
Lake Bob Sandlin near Mount Pleasant (e)	07344489	165
Big Cypress Creek near Pittsburg (e)	07344500	166
Big Cypress Creek near Lone Star (c)	07345600	167
Lake O' the Pines at Highway 155 bridge near Ore City (c)	07345700	172
Lake O' the Pines above dam near Jefferson (c)	07345890	177
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Big Cypress Creek near Jefferson (d) (c) (t)	07346000	183
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Little Cypress Creek near Ore City (d)	07346050	191
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Big Cypress Creek near Karnack (c)	07346085	195
WESTERN GULF OF MEXICO BASINS		
SABINE RIVER BASIN		
Sabine River:		
Cowleech Fork Sabine River at Greenville (d)	08017200	198
South Fork Sabine River near Quinlan (d)	08017300	200
Lake Tawakoni near Wills Point (e)	08017400	202
Sabine River near Wills Point (d)	08017410	203
Sabine River near Mineola (d) (c) (b) (t)	08018500	204
Lake Fork Creek:		
Garrett Creek:		
Big Creek near Brasher (c) (b)	08018620	207
Birch Creek near Yantis (FM2297) (c) (b)	08018720	208
Caney Creek near Como (c) (b)	08018785	209
Lake Fork Reservoir near Quitman (e)	08018800	210
Lake Fork Creek near Quitman (d)	08019000	211
Big Sandy Creek near Big Sandy (d)	08019500	213
Sabine River near Gladewater (d)	08020000	215
Sabine River above Longview (e)	08020450	217
Sabine River near Beckville (d) (c) (b) (t)	08022040	218
Martin Lake near Tatum (e)	08022060	223
Martin Creek near Tatum (d)	08022070	224
Sabine River at Logansport, LA (e)	08022500	225
Toledo Bend Reservoir near Burkeville (e)	08025350	226
Sabine River at Toledo Bend Reservoir near Burkeville (d)	08025360	227
Sabine River near Burkeville (d)	08026000	228
Sabine River near Bon Wier (d) (c) (t)	08028500	230
Big Cow Creek near Newton (d)	08029500	233
Sabine River near Ruliff (d) (c) (b) (t) (s)	08030500	235
NECHES RIVER BASIN		
Neches River:		
Lake Palestine near Frankston (e)	08031400	240
Neches River near Neches (d) (c) (b) (t)	08032000	241
Neches River near Diboll (e)	08033000	243
Neches River near Rockland (d) (c) (b) (t)	08033500	244
Angelina River:		
Angelina River near Alto (d)	08036500	247
Lake Nacogdoches near Nacogdoches (e)	08036700	248
Angelina River:		
Bayou LaNana at Nacogdoches (d)	08037050	249
Attoyac Bayou near Chireno (e)	08038000	250
Ayish Bayou near San Augustine (e)	08039100	251
Sam Rayburn Reservoir near Jasper (e)	08039300	252
B.A. Steinhagen Lake at Town Bluff (e)	08040000	253
Neches River near Town Bluff (d) (c) (b) (t)	08040600	254
Neches River at Evadale (d) (c) (b) (t) (s)	08041000	256
Village Creek near Kountze (d)	08041500	261
Pine Island Bayou near Sour Lake (d)	08041700	

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

	Station number	Page
WESTERN GULF OF MEXICO BASINS—Continued		
TAYLOR BAYOU BASIN		
Taylor Bayou near LaBelle (e)	08042000	264
Hillebrandt Bayou near Lovell Lake (e)	08042500	265
TRINITY RIVER BASIN		
West Fork Trinity River (head of Trinity River) near Jacksboro (d)	08042800	266
Bridgeport Reservoir above Bridgeport (e)	08043000	267
Big Sandy Creek near Bridgeport (d)	08044000	268
West Fork Trinity River near Boyd (d)	08044500	269
Eagle Mountain Reservoir above Fort Worth (e)	08045000	270
Lake Worth above Fort Worth (e)	08045400	271
West Fork Trinity River:		
Clear Fork Trinity River near Weatherford (e)	08045850	272
Clear Fork Trinity River above Benbrook near Aledo (e)	08046020	273
Bear Creek near Benbrook (c)	08046150	275
Benbrook Lake near Benbrook (e) (c) (b) (t)	08046500	277
Clear Fork Trinity River near Benbrook (d) (c) (b) (t)	08047000	289
Clear Fork Trinity River Tributary Outfall at Oak Hill Circle, Fort Worth (c)	08047100	292
Clear Fork Trinity River at Fort Worth (d)	08047500	297
West Fork Trinity River at Fort Worth (d)	08048000	299
Pylon Street Outfall at Meacham Road, Fort Worth (c)	08048505	300
West Fork Trinity River Tributary Outfall at Hwy. 21, Fort Worth (c)	08048510	305
West Fork Trinity River at Beach Street, Fort Worth (d) (c) (b) (t)	08048543	310
West Fork Trinity River:		
Dry Branch Tributary Outfall at 33rd Avenue, Fort Worth (c)	08048545	319
Easter Hill Highschool Outfall at Weiler Drive, Fort Worth (c)	08048700	323
Village Creek at Everman (d) (c) (b) (t)	08048970	327
Lake Arlington at Arlington (e) (c) (t)	08049200	330
West Fork Trinity River at Grand Prairie (d) (c) (b) (t)	08049500	336
Mountain Creek near Venus (e) (c) (b) (t)	08049580	346
Bear Creek Outfall at Shady Grove Road, Irving (c)	08049590	348
Walnut Creek near Mansfield (d) (c) (b) (t)	08049700	352
Joe Pool Lake near Duncanville (e) (c) (b) (t)	08049800	356
Mountail Creek above Duncanville (c)	08049850	370
Mountain Creek Lake near Grand Prairie (e)	08050050	371
Mountain Creek at Grand Prairie (d)	08050100	372
Elm Fork Trinity River at Gainesville (d)	08050400	373
Elm Fork Trinity River near Gainesville (c)	08050410	374
Isle du Bois Creek:		
Jordan Creek:		
Timber Creek near Collinsville (d)	08050800	376
Jordan Creek Tributary near Collinsville (c)	08050815	378
Elm Fork Trinity River:		
Ray Roberts Lake near Pilot Point (e) (c)	08051100	380
Elm Fork Trinity River near Pilot Point (d) (c)	08051130	394
Clear Creek near Sanger (d) (c) (b) (t)	08051500	397
Little Elm Creek near Aubrey (d) (c) (b) (t)	08052700	401
Pecan Creek near Aubrey (c)	08052730	405
Lewisville Lake near Lewisville (e) (c) (b) (t)	08052800	407
Elm Fork Trinity River near Lewisville (d) (c) (b) (t)	08053000	421
Denton Creek near Justin (d)	08053500	425
Grapevine Lake near Grapevine (e)	08054500	427
Elm Fork Trinity River near Carrollton (d)	08055500	428
Hereford Road Outfall at Walnut Hill Road, Irving (c)	08055570	430
Joes Creek Outfall at Denton Drive, Dallas (c)	08055590	434
Elm Fork Trinity River Tributary Outfall at Cascade St., Irving (c)	08056100	439
Bastille Street Outfall (Earl Jones Monitor) at La Reunion Parkway, Dallas (c)	08056390	442
Trinity River at Dallas (d)	08057000	447
Trinity River at Cedar Crest Blvd. (c) (t)	08057055	449
White Rock Creek Tributary Outfall at Preston Rd., Dallas (c)	08057135	457
White Rock Creek at Greenville Avenue, Dallas (d)	08057200	460
Ash Creek Outfall at Whittier Street, Dallas (c)	08057310	462

	Station number	Page
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TRINITY RIVER BASIN—Continued		
Trinity River:		
Trinity River below Dallas (d) (c) (b) (t)	08057410	467
Newton Creek Tributary Outfall at Tioga Street, Dallas (c)	08057441	476
Prairie Creek at U.S. Highway 175, Dallas (d)	08057445	481
East Fork Trinity River at McKinney (d)	08058900	482
Pilot Grove Creek:		
Sister Grove Creek near Blue Ridge (d)	08059400	483
Lavon Lake near Lavon (e)	08060500	484
Rowlett Creek near Sachse (d)	08061540	485
Lake Ray Hubbard near Forney (e)	08061550	486
Duck Creek Tributary Outfall at Hightower Rd., Garland (c)	08061635	487
Sleepy Hollow St. Outfall at NW Highway, Garland (c)	08061660	492
Interstate Hwy. 635 Outfall at Centerville Rd., Garland (c)	08061690	496
Duck Creek near Garland (d)	08061700	499
East Fork Trinity River near Forney (d) (c) (b) (t)	08061750	501
East Fork Trinity River above Seagoville (c) (b) (t)	08061970	511
East Fork Trinity River at Seagoville (c) (b) (t)	08061980	518
East Fork Trinity River near Crandall (d) (c) (b) (t)	08062000	525
Trinity River near Rosser (d) (c) (b) (t)	08062500	535
Trinity River at Trinidad (d) (c) (b) (t) (s)	08062700	545
Cedar Creek Reservoir near Trinidad (e)	08063010	555
Navarro Mills Lake near Dawson (e)	08063050	556
Richland Creek near Dawson (d)	08063100	557
Chambers Creek:		
Waxahachie Creek:		
Bardwell Lake near Ennis (e)	08063700	558
Waxahachie Creek near Bardwell (d)	08063800	559
Chambers Creek near Rice (d) (c) (b) (t)	08064100	560
Richland-Chambers Reservoir near Kerens (e)	08064550	564
Tehuacana Creek near Streetman (d) (c) (b) (t)	08064700	565
Trinity River near Oakwood (d)	08065000	569
Upper Keechi Creek near Oakwood (d)	08065200	571
Trinity River near Crockett (d) (c) (b) (t)	08065350	573
Bedias Creek near Madisonville (d)	08065800	582
Kickapoo Creek near Onalaska (d)	08066170	584
Livingston Reservoir near Goodrich (e) (c) (t)	08066190	586
Livingston Reservoir at outflow weir near Goodrich (d)	08066191	594
Trinity River:		
Long King Creek at Livingston (d)	08066200	595
Trinity River near Goodrich (d)	08066250	597
Menard Creek near Rye (d) (c) (t)	08066300	598
Trinity River at Romayor (d) (c) (b) (t) (s)	08066500	600
Trinity River at Liberty (d)	08067000	605
CIWA Canal near Dayton (d)	08067070	606
Lake Charlotte near Anahuac (e) (c) (b) (t)	08067118	607
CEDAR BAYOU BASIN		
Cedar Bayou near Crosby (e)	08067500	610

The following continiuous-record surface-water discharge or stage-only stations (gaging stations) in Texas have been discontinued. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. Those stations with an asterisk (*) after the station number are currently operated as crest-stage partial-record stations. Discontinued project stations with less than 3 years of record have not been included. Information regarding these stations may be obtained from the District Office at the address given on the back side of 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
Canadian River at Tascosa (d)	07227470	18,536	1969-77
Dixon Creek near Borger (d)	07227920	134	1974-89
Palo Duro Creek near Spearman (d)	07233500	960	1941-42
Tierra Blanca Creek above Buffalo Lake near Umbarger (d)	07295500	1,968	1942-54
			1967-73
Tierra Blanca Creek below Buffalo Lake near Umbarger (d)	07296100	2,075	1967-73
Prairie Dog Town Fork Red River near Canyon (d)	07297500	3,369	1924-26
			1938-49
North Tule Draw at Reservoir near Tulia (d)	07298000	189	1939-40
			1941-73
Tule Creek near Silverton (d)	07298200	1,150	1964-86
Prairie Dog Town Fork Red River near Brice (d)	07298500	6,082	1949-51
			1961-63
Mulberry Creek near Brice (d)	07299000	N/A	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
Jonah Creek at Weir near Estelline (d)	07299512	65.50	1974-82
Jonah Creek below Wier near Estelline (d)	07299514	66.60	1974-76
Salt Creek near Estelline (d)	07299530	142	1974-79
Red River near Quanah (d)	07299570	8,321	1959-82
Salt Fork Red River near Clarendon (d)	07299850	457	1960-64
McClellan Creek near McLean (d)	07301200*	759	1967-80
Quitaque Creek near Quitaque (d)	07307500	293	1946-59
North Pease River near Childress (d)	07307600	1,434	1973-79
Middle Pease River near Padacah (d)	07307750	1,086	1973-79
Middle Pease River below Paducah (d)	07307760	N/A	1980-82
Pease River near Crowell (d)	07308000	3,037	1924-47
Pease River near Vernon (d)	07308200	3,488	1960-82
North Wichita River near Paducah (d)	07311600	540	1961-82
North Wichita River near Crowell (d)	07311622	591	1969-76
Middle Wichita River near Truscott (d)	07311648	161	1971-76
South Wichita River near Guthrie (d)	07311780	239	1971-76
South Wichita River at Ross Ranch near Benjamin (d)	07311790	499	1971-79
Wichita River near Seymore (d)	07311900	1,874	1959-79
Little Wichita River near Ringgold (d)	07315400	1,350	1959-65
Mineral Creek near Sadler (d)	07316200	26	1967-76
Bois D'Arc Creek near Randolph (d)	07332600	72	1962-85
Sanders Creek near Chicota (d)	07335400	175	1968-86
Little Pine Creek near Kanawha (d)	07336750	75.40	1968-80
Pecan Bayou near Clarksville (d)	07336800	100	1962-77
Cuthand Creek near Bogata (d)	07343300	69	1956-90
Dial Branch near Bagwell (e)	07343350	1	1966-74
Buck Creek near Cookville (e)	07343900	0.78	1966-74
Sulphur River near Darden (d)	07344000	2,774	1924-56
Big Cypress Creek near Winnsboro (d)	07344200	27.2	1974-92
Boggy Creek near Daingerfield (d)	07345000	72	1943-77
Big Cypress Creek near Karnack (e)	07346085	N/A	1980-85
Frazier Creek near Linden (d)	07346140	48.0	1965-91
Sabine River near Emory (d)	08017500	888	1953-73
Burke Creek near Yantis (d)	08018730	33.10	1979-89
Prairie Creek near Gladewater (d)	08020200	48.90	1968-77

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Sabine River near Longview (d)	08020500	2,947	1904-06
Rabbit Creek at Kilgore (d)	08020700	75.80	1964-77
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	08021000	120	1940-48
Murvaul 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	1952-82
Sabine River near Milam (d)	08024400	6,508	1939-66
Palo Gaucho Bayou near Hemphill (d)	08024500	123	1952-65
Mill Creek near Burkeville (d)	08025307	18	1974-79
Cypress Creek near Buna (d)	08030000	69.20	1952-83
Cow Bayou near Mauriceville (d)	08031000	83.30	1952-86
Kickapoo Creek near Brownsboro (d)	08031200	232	1962-89
Neches River near Reese (d)	08031500	851	1924-27
Neches River near Alto (d)	08032500	1,945	1944-78
Piney Creek near Groveton (d)	08033300	79	1962-89
Striker Creek near Summerfield (d)	08033700	146	1941-49
East Fork Angelina River near Cushing (d)	08033900	158	1964-89
Mud Creek near Jacksonville (d)	08034500	376	1939-79
Mud Creek at Ponta (d)	08035000	475	1924-27
Angelina River near Lufkin (d)	08037000	1,600	1923-34 1940-79
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	1924-26
Angelina River at Horger (d)	08039500	3,486	1928-51 1966-73
North Creek near Jacksboro (d)	08042700	21.60	1956-80
West Fork Trinity River at Bridgeport (d)	08043100	1,113	1985-89
West Fork Trinity River at Bridgeport (d)	08043500	1,147	1910-30
West Fork Trinity River at Lake Worth, Fort Worth (d)	08045500	2,069	1917-18
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 Drive, 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	1960-73
Litttle 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
Village Creek at Kennedale (d)	08048980	100	1986-89
Village Creek near Handley (d)	08049000	126	1925-30
Big Bear Creek near Grapevine (d)	08049550	29.6	1967-79
Trigg Branch at DFW Airport near Euless (d)	08049565	1.73	1983-87
Mountain Creek near Cedar Hill (d)	08049600	119	1961-84
Mountain Creek above Duncanville (e)	08049850	224	1986-87
Mountain Creek near Duncanville (e)	08049900	225	1970-90
Mountain Creek near Grand Prairie (d)	08050000	273	1925-33
Elm Fork Trinity SWS 6-O near Muenster (e)	08050200	0.77	1957-71
Elm Fork Trinity River near Muenster (d)	08050300	46	1957-73
Elm Fork Trinity River near Sanger (d)	08050500	381	1949-84
Isle Du Bois Creek near Pilot Point (d)	08051000	266	1949-84
Elm Fork Trinity River near Denton (d)	08052000	1,084	1924-26
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
Denton Creek near Roanoke (d)	08054000	621	1924-27 1939-55
Denton Creek near Grapevine (d)	08055000	705	1947-91
Bachman Branch at Dallas (d)	08055700	10	1964-79

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Turtle Creek at Dallas (d)	08056500	7.98	1948-91
White Rock Creek at Keller Springs Road, Dallas (d)	08057100	29.40	1962-79
White Rock Creek at White Rock Lake, Dallas, Tx (d)	08057300	100	1963-79
White Rock Creek at Scyene Road, Dallas (d)	08057400	122	1963-79
Tenmile Creek at State Hwy. 342 at Lancaster (d)	08057450	52.80	1970-79
Honey Creek near McKinney (d)	08058500	39	1951-73
East Fork Trinity River near McKinney (d)	08059000	190	1950-75
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
South Mesquite Creek at Mercury Road near Mesquite (d)	08061950	23	1969-79
Cedar Creek Reservoir Spillway Outflow near Trinidad (d)	08062650	1,007	1966-82
Cedar Creek near Kemp (d)	08062800	189	1963-87
Kings Creek near Kaufman (d)	08062900	233	1963-87
Lacey Fork near Mabank (d)	08062980	118	1982-84
Cedar Creek near Mabank (d)	08063000	733	1939-66
South Twin Creek near Eustace (d)	08063003	27.40	1983-84
Cedar Creek at Trinidad (d)	08063020	1,011	1965-71
Pin Oak Creek near Hubbard (d)	08063200	17.60	1956-72
Richland Creek near Richland (d)	08063500	734	1939-88
Chambers Creek near Corsicana (d)	08064500	963	1939-84
Richland Creek near Fairfield (d)	08064600	1,957	1972-83
Catfish Creek near Tennessee Colony (d)	08064800	207	1962-89
Trinity River near Midway (d)	08065500	14,450	1939-70
Caney Creek near Madisonville (d)	08065700	112	1963-76
White Rock Creek near Trinity (d)	08066100	222	1965-71 1974-85
Big Creek near Shepherd	08066400	38.80	1966-89
Sulphur Barge Canal near Wallisville (e)	08067113	N/A	1976-82
Lost River near Wallisville (e)	08067250	N/A	1976-82
Old River (cutoff channel) near Wallisville (e)	08067255	N/A	1976-82
Anahuac Channel at Anahuac (e)	08067301	N/A	1976-82

The following stations were discontinued as continuous-record surface-water-quality stations prior to the 1991 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	18,536	SC, T	1948-53
				1968-77
Canadian River near Canadian	07228000	22,866	SC, T	1974-81
Prairie Dog Town Fork Red River near Wayside	07297910	4,221	SC, T	1968-81
Tule Creek near Silverton	07298200	1,150	SC, T	1967-69
Prairie Dog Town Fork Red River near Brice	07298500	6,082	T	1950-51
			S	1949-51
Mulberry Creek near Brice	07299000	N/A	T, 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
Salt Fork Red River near Hedley	07299930	744	SC, T	1956-61
Salt Frok Red River near Wellington	07300000	1,222	SC, T	1952-91
North Pease River near Childress	07307600	1,434	SC, T	1973-79
Middle Pease River near Paducah	07307750	1,086	SC	1973-79
			T	1973-77
Middle Pease River near Paducah	07307760	N/A	SC	1979-82
			T	1979-80
Pease River near Childress	07307800	2,754	SC, T	1968-82
Pease River near Crowell	07308000	3,037	SC	1942-43
Red River near Burkburnett	07308500	2,057	SC, T	1968-81
North Fork Wichita River near Paducah	07311600	540	SC, T	1967-76
North Wichita River near Crowell	07311622	591	SC	1970-76
			T	1973-74
Middle Fork Wichita River near Truscott	07311648	161	SC	1970-76
Truscott Brine Lake near Truscott	07311669	N/A	SC, T	1984-89
South Fork Wichita River near Guthrie	07311780	239	SC	1970-76
			T	1973-74
South Wichita River below Low-Flow Dam near Guthrie	07311783	N/A	SC, T	1986-89
South Fork Wichita River at Ross Ranch near Benjamin	07311790	499	SC	1970-79
Wichita River near Seymour	07311900	1,874	SC, T	1968-79
Beaver Creek near Electra	07312200	652	SC, T	1968-70
Wichita River at Wichita Falls	07312500	3,140	SC, T	1981-89
Wichita River near Charlie	07312700	3,439	SC, T	1967-81
Little Wichita River near Archer City	07314500	481	SC	1953-55
			T	1953-54
Little Wichita River above Henrietta	07314900	1,037	SC, T	1952-56
				1959-66
Little Wichita River near Henrietta	07315000	1,037	SC	1953-66
			T	1952-56
				1959-66
East Fork Little Wichita River near Henrietta	07315200	178	T	1953-54
Little Wichita River near Ringgold	07315400	1,350	SC	1959-62
Red River near Gainesville	07316000	N/A	SC	1944-46
				1952-64
				1966-89
			T	1952-63
				1966-89
Red River at Denison Dam near Denison	07331600	3,972	SC	1944-89
			T	1945-89
Little Pine Creek near Kanawha	07336750	75.40	T	1979-80
Red River near De Kalb	07336820	47,348	SC, T	1968-91

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
South Sulphur River near Cooper	07342500	527	SC, T	1958-66
				1967-89
Sulphur River near Talco	07343200	1,365	SC, T	1966-91
White Oak Creek near Talco	07343500	494	SC, T	1967-89
Sulphur River near Darden	07344000	2,774	SC, T	1947-50
Big Cypress Creek near Pittsburg	07344500	366	SC, T	1968-89
Little Cypress Creek near Jefferson	07346070	675	SC, T	1967-91
Sabine River near Emory	08017500	888	SC, T	1952-54
Grand Saline Creek near Grand Saline	08018200	91.40	SC, T	1968-73
Sabine River near Mineola	08018500	1,357	SC, T	1967-91
Lake Fork Creek near Quitman	08019000	585	SC, T	1967-89
Big Sandy Creek near Big Spring	08019500	231	SC, T, S	1984-86
Sabine River at Logansport	08022500	4,842	SC, T	1939-45
Sabine River below Toledo Bend near Burkeville	08026000	7,482	SC, T	1968-86
			C	1969-75
Sabine River near Bon Weir	08028500	8,229	SC, T, C	1969-83
Cow Bayou near Mauriceville	08031000	83.30	SC, T	1952-55
Neches River near Neches	08032000	1,145	SC, T	1969-91
Neches River near Alto	08032500	1,945	SC, T	1959-69
Neches River near Diboll	08033000	2,724	SC, T	1969-81
Neches River near Rockland	08033500	3,636	SC	1941-42
				1945-47
Angelina River near Lufkin	08037000	1,600	SC, T	1954-79
Angelina River below Sam Rayburn Dam near Jasper	08039400	3,449	SC, T	1964-79
Village Creek near Kountze	08041500	860	SC, T	1967-70
Pine Island Bayou near Sour Lake	08041700	336	SC, T	1968-89
Big Sandy Creek near Bridgeport	08044000	333	SC, T	1969-77
			S	1968-77
Clear Fork Trinity River at Fort Worth	08047500	518	SC	1948-52
			T	1947-62
Village Creek at Everman	08048970	84.5	SC, pH, T, DO	1989-91
Elm Fork Trinity River SWS # 6-0 near Muenster	08050200	0.77	S	1956-66
Elm Fork Trinity River near Muenster	08050300	46	SC	1966-67
			T	1957-67
			S	1957-68
Clear Creek near Sanger	08051500	295	SC	1969-77
			T, S	1968-77
Little Elm Creek near Celina	08052650	46.70	SC, T, S	1966-75
Little Elm Creek near Aubrey	08052700	75.50	SC, T, S	1966-75
Elm Fork Trinity River near Lewisville	08053000	1,673	SC	1981-86
			T	1976-81
Trinity River at Westmoreland Road, Dallas	08056400	6,074	SC, pH, T, DO	1977
Duck Creek near Garland	08061700	31.6	SC, pH, T, DO	1988-89
Cedar Creek near Mabank	08063000	733	SC, T	1956-57
Pin Oak Creek near Hubbard	08063200	17.60	SC	1965-72
			T	1957-72
			S	1956-60
				1965-72
Richland Creek near Richland	08063500	734	SC, T	1967-69
				1983-89
Chambers Creek near Corsicana	08064500	936	SC, T	1961-70
Richland Creek near Fairfield	08064600	1,957	SC, T	1956-66
				1972-83
Trinity River near Oakwood	08065000	12,833	SC, T	1947-81
			S	1976-81
Bedias Creek near Madisonville	08065800	321	SC, T	1984-87
			S	1984-86
Long King Creek at Livingston	08066200	141	SC, T	1963-72
Trinity River near Goodrich	08066250	16,844	SC, T	1969-73
Trinity River near Moss Bluff	08067100	N/A	SC	1946-65
Old River near Cove	08067200	N/A	SC	1946-65
			T	1965
Trinity River at Anahuac	08067300	N/A	SC	1946-65

WATER RESOURCES DATA - TEXAS, 1992

VOLUME 1

ARKANSAS RIVER BASIN, RED RIVER BASIN, SABINE RIVER BASIN, NECHES RIVER BASIN, TRINITY RIVER BASIN, AND INTERVENING COASTAL BASINS

INTRODUCTION

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

This report series includes records of stage, discharge, and water quality of streams and canals; stage, contents, and water quality of lakes and reservoirs. Volume 1 contains records for water discharge at 111 gaging stations; stage only at 5 gaging stations; stage and contents at 37 lakes and reservoirs; and water quality at 96 gaging stations. Also included are data for7 partial-record and 8 flood-hydrograph partial-record stations. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating City, State, and Federal agencies in Texas.

This series of annual reports for Texas began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report was changed to its present format, with data on quantities and quality of surface water contained in each of three volumes.

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

Publications similar to this report are published annually by the Geological Survey for all States. These official Geological Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water Data Report TX-92-1." For archiving and general distribution, the reports for the l971-74 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. Beginning with the 1990 water year, all water-data reports will also be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc.

Additional information, including the current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (512) 873-3000. A limited number of CD-ROM discs will be available for sale by the Books & Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, Colorado 80225.

COOPERATION

Federal agencies that assisted the Geological Survey in the collection of data in this report in the form of funds or services in 1992 are:

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

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

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

HYDROLOGIC CONDITIONS

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

Precipitation distribution for water year 1992 generally followed the long-term precipitation pattern. Greater than normal precipitation occurred over each of the 10 climatic divisions (fig. 1) in the State during the current water year. The distribution departure from formal annual precipitation was fairly uniform, with the exceptions of the Canadian River Basin, the Pecos River Basin, and a small tributary in the upper Colorado River Basin. These areas were below to slightly below normal during the water year. Precipitation departures from normal (1951-80) for the current water year ranged from a high of 153 percent of normal in the North Central climatic division to a low of 121 percent of normal in East Texas and the Lower Rio Grande Valley divisions. Precipitation for all other climatic divisions ranged between 136 percent of normal along the Upper Coast to 149 percent of normal in the Trans Pecos climatic divisions.

Precipitation totals for the 10 climatic divisions (fig. 1) for water year 1992 ranged from a high of 62.61 inches along the Upper Coast division (8) to a low of 17.33 inches in the Trans Pecos division (5) of far west Texas. The East Texas division (4) had the second highest precipitation total of 54.29 inches, followed by North Central (3) and South Central (7) divisions with 49.14 inches each, the Edwards Plateau division (6) with 34.72 inches, the Southern division (9) with 33.18 inches, the Lower Rio Grande Valley division (10) with 30.07 inches, and the High Plains division (1) with 24.86 inches. Several locations in Texas reported December through February rainfall totals of more than 5 times the long-term normal precipitation for this period. Austin had the wettest December through February on record with over 25 inches of precipitation for the period.

Streamflow for the current water year followed precipitation patterns, except for three small areas where runoff was near normal. These areas were the Canadian River in the extreme northern Texas panhandle, a small area in the upper Colorado River Basin, and the Pecos River Basin of far west Texas. All other areas of the State indicated above normal runoff for water year 1992. Severe flooding occurred over a large area of Texas, following a week of almost continuous rainfall during December 17-23, 1991. Rainfall from 10 to 15 inches fell over much of Texas during this period. Extensive flooding occurred from Dallas in north-central Texas to the coastal plains of

south-central Texas, and from west Texas near San Angelo to east Texas near the State line. Major flooding occurred at more than 200 streamflow stations, with historical records exceeded at 21 stations. Nine stations experienced floods equal to or exceeding the 100-year recurrence interval.

Flooding also occurred during the week beginning February 2, 1992, when as much as 7 inches of rainfall fell over much of the Trinity, Brazos, Colorado, Guadalupe, Lavaca, and Navidad River Basins. Extensive flooding occurred the first week of March 1992 when as much as 8 inches of rainfall fell on already saturated soil in the Houston metropolitan area. Five streamflow stations in this area had historical records broken and two stations experienced floods equal to or exceeding the 100-year recurrence interval.

Conservation storage in 76 selected reservoirs throughout the State, with a combined conservation capacity of 34,848,000 acre-feet, increased from 87 percent of conservation capacity at the end of water year 1991 to 90 percent at the end of water year 1992. Records from the individual reservoirs indicate that storage increased in 35, decreased in 33, and remained the same in 8.

The area for which water-resources data are presented in volume 1 includes the Texas Panhandle and extends across northern and eastern Texas to southeastern Texas. Normal annual precipitation in this area ranges from about 17 inches in the western part of the Texas Panhandle to more than 50 inches in the extreme southeastern part of the State. Annual runoff ranges from less than 1.0 inch in parts of the Panhandle to as much as 15 inches in southeastern Texas. The area described in volume 1 and the location of selected streamflow-gaging and water-quality stations in the area are shown in figure 2.

Streamflow

Streamflow was above normal during water year 1992 in most of the area described in volume 1 except the Canadian River Basin, Which was 57 percent of normal. Several outstanding storms occurred in the area described in volume 1 during the water year. Five of six representative streamflow stations in the area had streamflow above the normal range during the water year, with only the Panhandle streamflow station (Canadian River near Amarillo) having near normal streamflow. These streamflow patterns resulted from above normal precipitation over the entire area, except the Panhandle, during water year 1992. Streamflow for water year 1992 and streamflow for the period of record at six selected stations (fig. 2), for which data are included in volume 1, is presented in table 1.

Table 1.—Streamflow at six selected stations for water year 1992

Station no. and name	Discharge during 1992 water year (cubic feet per second)			Discharge during period of record (cubic feet per second)		
	Max.	Min.	Avg.	Max.	Min.	Avg.
Arkansas River Basin						
07227500 Canadian River near Amarillo, Tex.	19,400	1.4	168	135,000	0 (1925, 1939-92)	293
Red River Basin						
07308500 Red River near Burkburnett, Tex. [1]	31,300	165	1,808	166,000	0	1,083 (1961-92)
Sabine River Basin						
08022040 Sabine River near Beckville, Tex.	17,900	123	4,857	49,400	2.4	2,443 (1961-92)
Neches River Basin						
08033500 Neches River near Rockland, Tex. [2]	27,300	232	4,542	42,800	18	2,222 (1962-92)
Trinity River Basin						
08057000 Trinity River at Dallas, Tex.	62,200	340	6,150	111,000	1.2	1,739 (1931-92)
08066500 Trinity River at Romayor, Tex.	85,300	292	20,630	105,000	292	8,291 (1969-92)

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

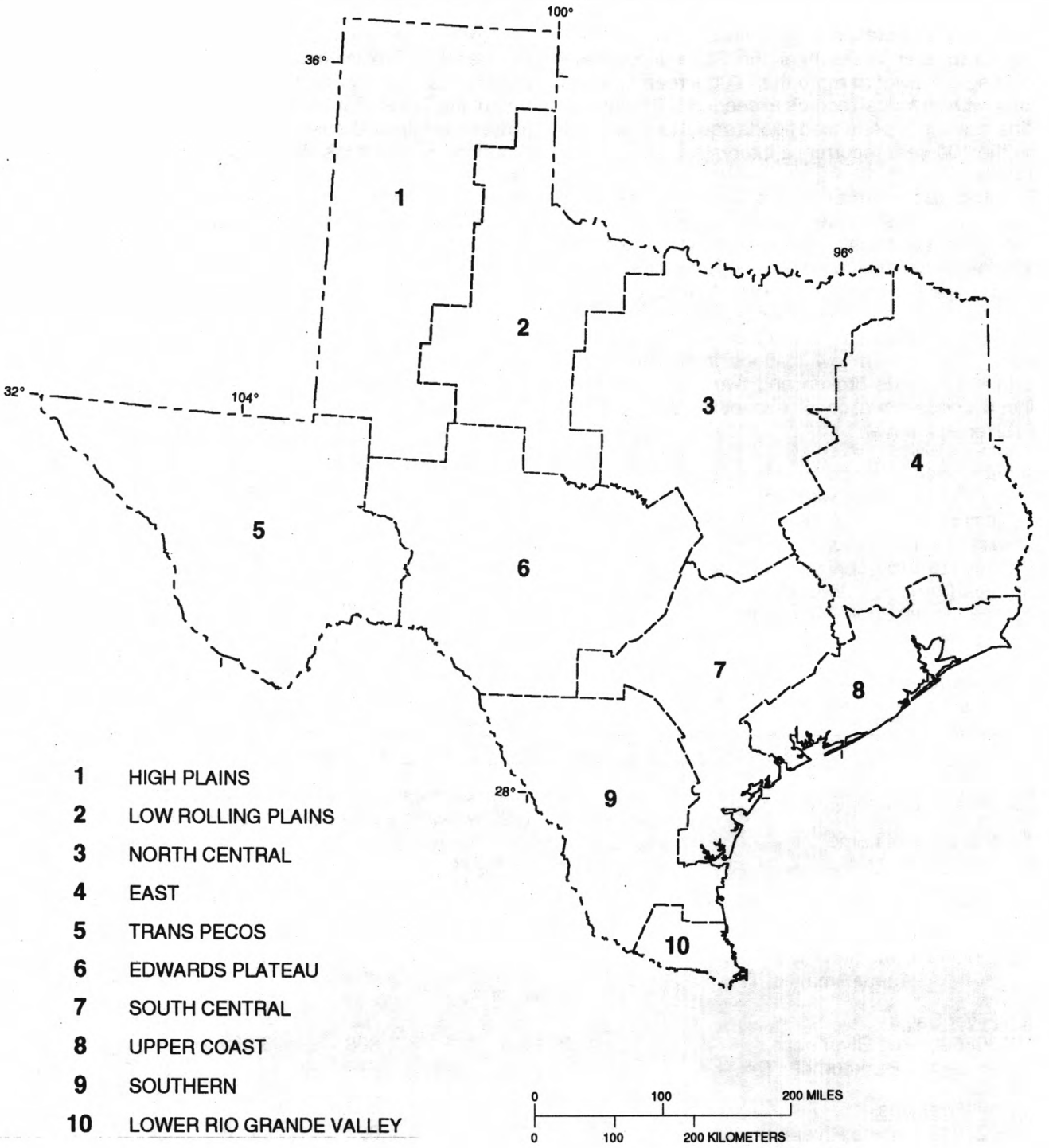


Figure 1. Ten climatic divisions of the State (Modified from U.S. Department of Commerce, National Oceanic and Atmospheric Administration, 1992 Climatological data, Texas; 1992: National Climatic Data Center, v. 97, no. 9.)

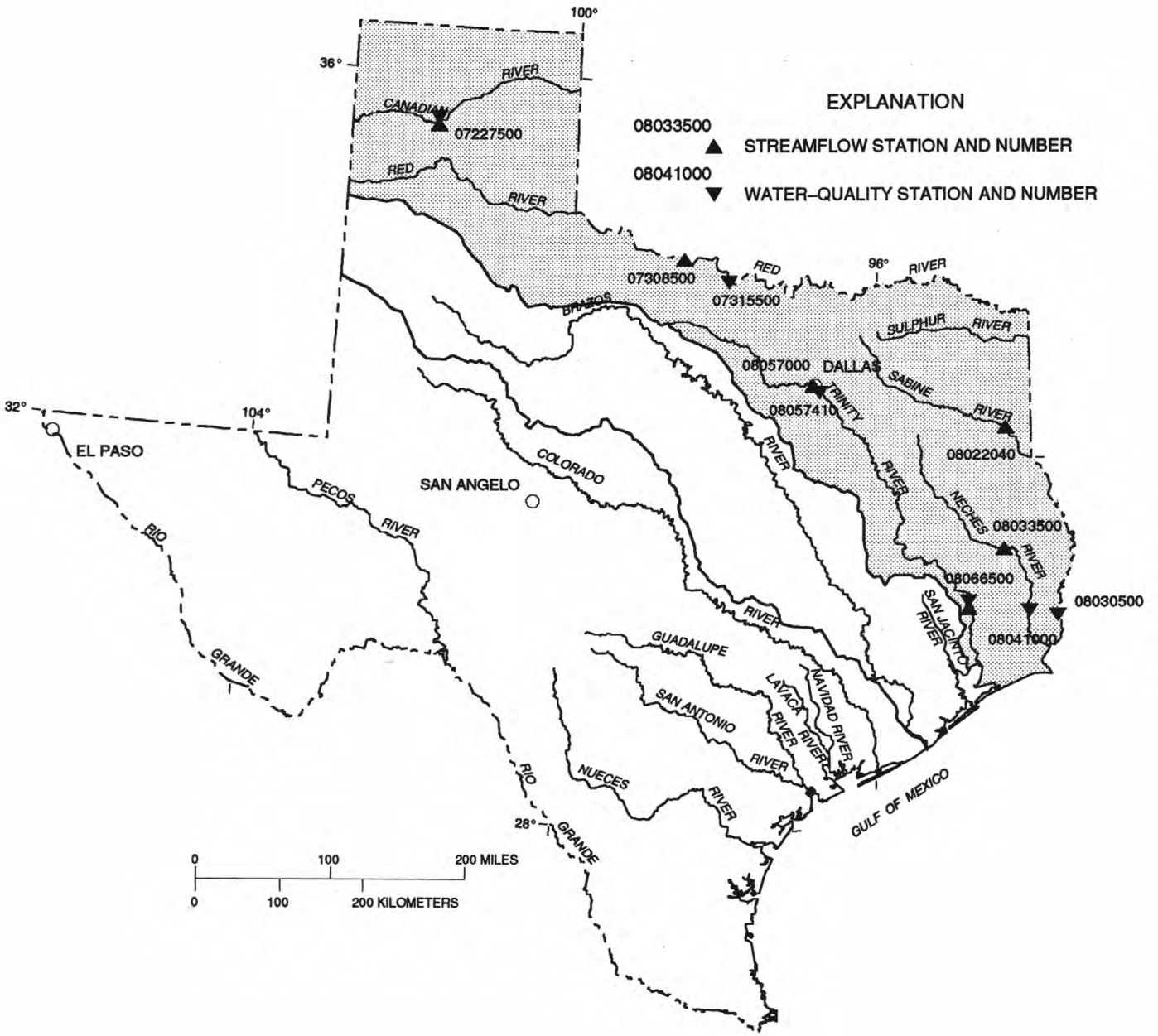


Figure 2. Area of Texas covered by volume 1 (shaded) and location of selected streamflow and water–quality stations in volume 1.

At the four long-term hydrologic index stations in the State, streamflow during water year 1992 was normal at three stations and normal at one station. Monthly mean discharges for water year 1992 and the median of the long-term monthly means for water years 1951-80 for the four long-term hydrologic index stations in the State are shown in figure 3. Streamflow at the hydrologic index station Neches River near Rockland was in the upper quartile (discharges within the highest 25 percent of record) from November through March and between the lower and upper quartile for the remaining 7 months. The North Bosque River near Clifton had streamflow in the upper quartile for the entire water year. The North concho River near Carlsbad had streamflow in the upper quartile from November through July, and normal for the remaining 3 months. Streamflow for the Guadalupe River near Spring Branch was in the upper quartile from December through August, and normal for the remaining 3 months of water year 1992.

Conservation storage in 35 selected reservoirs in this area of the State, with a total combined conservation capacity of 21,586,000 acre-feet, decreased from 93 percent of capacity at the end of September 1991 to 90 percent of capacity at the end of September 1992. Records from these reservoirs indicate that storage increased in 15, decreased in 17, and remained the same in 3 during the water year.

Water Quality

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

Records of discharge-weighted-average concentrations of dissolved solids for water year 1992 are compared with those for water years 1988-92 for selected long-term daily or continuous-record water-quality stations (fig. 2) in the Arkansas, Red, Sabine, Neches, and Trinity River Basins. Results are shown in table 2.

Table 2.—Comparison of records of discharge-weighted-average concentrations of dissolved solids for the 1992 water year

Station no. and name	Mean discharge (cubic feet per second)		Discharge-weighted-average concentration of dissolved solids (milligrams per liter)	
	1992	1988-92	1992	1988-92
Arkansas River Basin				
07227500 Canadian River near Amarillo, Tex.	169	160	926	940
Red River Basin				
07315500 Red River near Terral, Okla.	5,348	3,762	1,410	1,330
Sabine River Basin				
08030500 Sabine River near Ruliff, Tex.	10,230	10,630	63	68
Neches River Basin				
08041000 Neches River at Evadale, Tex.	10,620	8,354	77	81
Trinity River Basin				
08057410 Trinity River below Dallas, Tex.	6,930	3,955	226	230
08066500 Trinity River at Romayor, Tex.	20,630	11,420	166	182

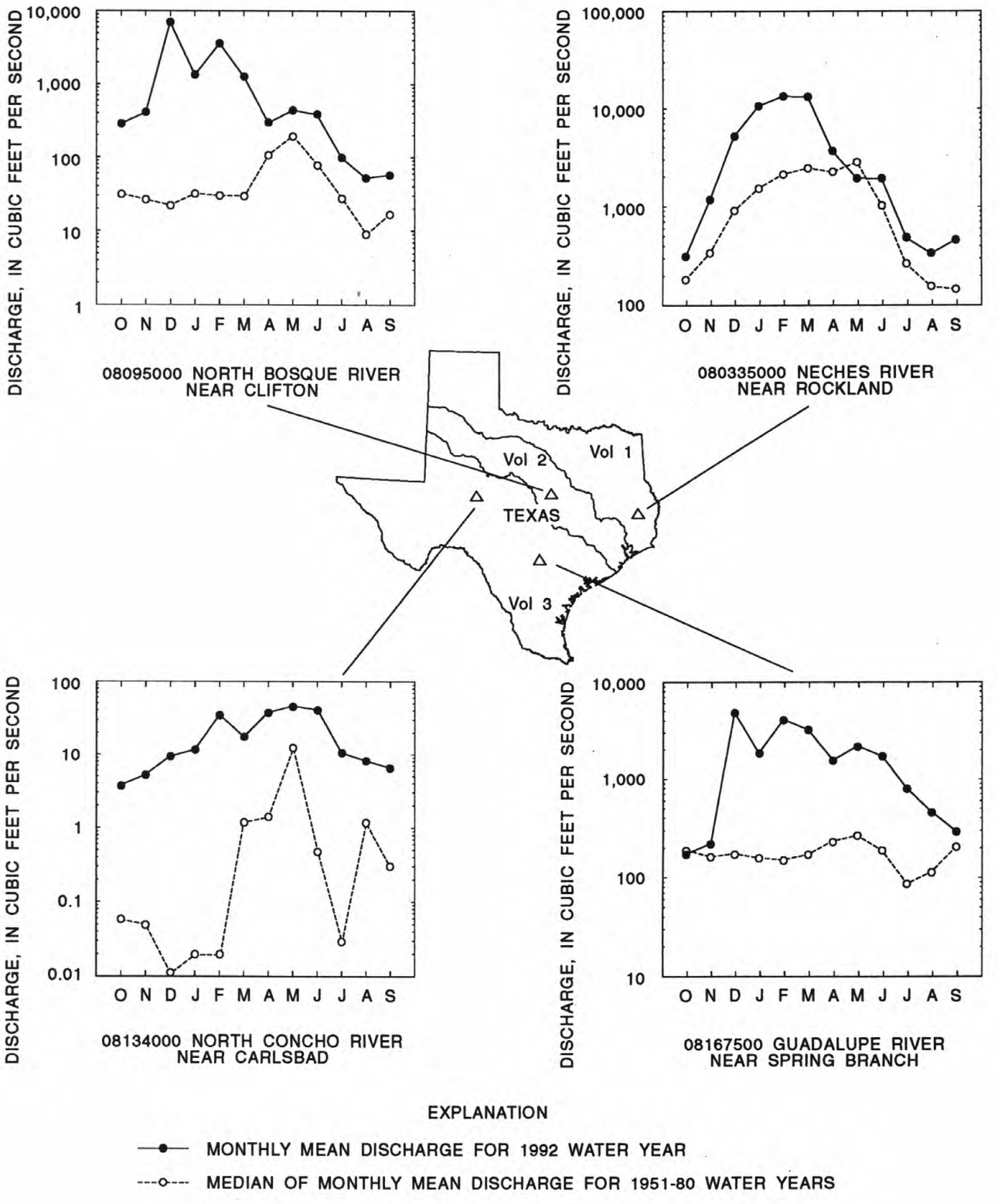


Figure 3. Monthly mean discharges at four long-term hydrologic index gaging stations during the 1992 water year and median of the monthly mean discharges for 1951-80 water years.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

The National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

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

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1992 water year that began October 1, 1991, and ended September 30, 1992. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, and water-quality data for surface water. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

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

Downstream Order Numbering

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for

each station, such as 08057000, which appears just to the left of the station name, includes the 2-digit Part number "08" plus the 6-digit downstream-order number "057000." The Part number designates the major river basin; for example, Part "08" is the Western Gulf of Mexico basin.

Records of Stage and Water Discharge

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

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adopted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

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

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

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

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

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

Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.—Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

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

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

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

GAGE.—The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

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

outlet works and spillway, and purpose and use of the reservoir.

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

AVERAGE DISCHARGE.—The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for those stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

EXTREMES FOR PERIOD OF RECORD.—Extremes may include maximum and minimum stages and maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

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

EXTREMES FOR CURRENT YEAR.—Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

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

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

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

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

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

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

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

Other Records Available

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

Records of Surface-Water Quality

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

Classification of Records

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

A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be one or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station where random samples are collected to give better areal coverage to define water-quality conditions in the

river basin. A careful distinction needs to be made between "continuing records", as used in this report, and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently.

Arrangement of Records

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

On site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory.

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

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

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

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the Texas District Office. The address is given on the back of the title page of this report.

Water Temperature

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

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

Sediment

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

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

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

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

Laboratory Measurements

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

Historical and current (1991) dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If ultraclean techniques were used, then those concentrations are reported in nanograms per liter. If other than ultraclean techniques were used, then those concentrations are reported in micrograms per liter and could reflect contamination introduced during some phase of the procedure.

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

Remark Codes

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

PRINTED OUTPUT	REMARK
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)

Remark codes -- Continued

L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant

ACCESS TO WATSTORE DATA

The National WATer Data STOrage and REtrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at the National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from the District office (see address given on the back of the title page).

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 inch floppy disk; and, as noted in the introduction, on CD-ROM discs. All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories , will be reproduced on a single CD-ROM disc. A limited number of CD-ROM discs will be available for sale by the Books & Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, Colorado 80225.

DEFINITION OF TERMS

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

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

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

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

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

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

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

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

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

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

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the

living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

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

Bottom material: See Bed material.

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

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

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

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

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

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

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

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

Cubic-foot-per-second day [$(ft^3/s)/d$] is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,445 cubic meters.

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

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

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

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

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

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

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

$$\bar{d} = -\sum_{i=1}^{s} \frac{n_i}{n} \log_2 \frac{n_1}{n}$$

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

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

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

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

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

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

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

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

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

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

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

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

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

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are: (1) To obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for; (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs; (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics; and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

The National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and ad-

justed to the number per area habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

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

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

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

Solute is any substance that is dissolved in water.

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

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

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

Substrate is the physical surface upon which an organism lives.

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

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

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

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

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

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

required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

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

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

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

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

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

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

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

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

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

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

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

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In

addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1991, is called the "water year 1991."

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

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

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

PUBLICATIONS OF TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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

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

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

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

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

2-E1. ***Application of borehole geophysics to water-resources investigations,*** by W.S. Keys and L.M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 p.

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

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

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

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

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

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

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

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

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

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

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

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

3-A11. ***Measurement of discharge by moving-boat method,*** by G.F. Smoot and C.E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 p.

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

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

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

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

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

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

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

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

3-B1. ***Aquifer-test design, observation, and data analysis,*** by R.W. Stallman: USGS--TWRI Book 3, Chapter 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, Chapter 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, Chapter B3. 1980. 106 p.

3-B4. ***Regression modeling of ground-water flow,*** by Richard L. Cooley and Richard L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 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, Chapter 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, Chapter B6. 1987. 28 p.

3-B7. ***Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow,*** by Eliezer J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 90 p.

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

3-C2. ***Field methods for measurement of fluvial sediment,*** by H.P. Guy and V.W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 p.

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

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

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

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

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

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

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

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

5-A2. ***Determination of minor elements in water by emission spectroscopy,*** by P.R. Barnett and E.C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 p.

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

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

5-A5. ***Methods for determination of radioactive substances in water and fluvial sediments,*** by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 p.

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

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

6-A1. ***A modular three-dimensional finite-difference ground-water flow model,*** by M.G. McDonald and A.W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 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, Chapter A2. 1991. 68 p.

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, Chapter 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, Chapter C2. 1978. 90 p.

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

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

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

8-B2. ***Calibration and maintenance of vertical-axis type current meters,*** by G.F. Smoot and C.E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 p.

ARKANSAS RIVER BASIN

07227000 CANADIAN RIVER AT LOGAN, NM

LOCATION.--Lat 35°21'25", long 103°25'03", in NE1/4NE1/4 sec.15, T.13 N., R.33 E., Quay County, Hydrologic Unit 11080006, on left bank 1,100 ft upstream from bridge on U.S. Highway 54, 0.7 mi south of Logan, 1.4 mi upstream from Chicago, Rock Island and Pacific Railroad Co. bridge, 2.0 mi downstream from Ute Dam, 4.3 upstream from Revuelto Creek, and at mile 672.0.

DRAINAGE AREA.--11,141 mi², of which 1,100 mi² is probably noncontributing.

PERIOD OF RECORD.--June 1904 to November 1905 (gage heights and discharge measurements only), December 1908 to September 1909, February 1910, April to July 1910, August 1910 to September 1911 (gage heights and discharge measurements only), October 1911 to May 1914, January to May 1924, September 1924 to July 1925, January 1927 to April 1934, August 1934 to current year. Monthly discharge only for some periods, published in WSP 1311. Records for December 1909, January 1910, and May to July 1934, published in WSP 267, 287, and 762 are unreliable and should not be used. Published as "South Canadian River" June to September 1904.

REVISED RECORDS.--WSP 1087: 1935-36. WSP 1117: Drainage area. WSP 1281: 1912, 1932(M), 1934, 1945-47, 1949-50. WSP 1311: 1931(M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 3,667.1 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1987, same site at datum 1 ft higher. See WSP 1311 or 1731 for history of changes prior to Oct. 1, 1934.

REMARKS.--Records poor. Flow regulated by Conchas Lake, 45 mi upstream and by Ute Reservoir, 2 mi upstream. There are diversions for irrigation of about 90,000 acres upstream from station. Several observations of water temperature were made during the year. No flow at times prior to completion of Ute Dam.

AVERAGE DISCHARGE.--15 years (water years 1909, 1912-13, 1927-38), prior to completion of Conchas dam, 392 ft³/s (284,000 acre-ft/yr); 24 years (water years 1939-62) prior to completion of Ute dam, 257 ft³/s (186,200 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1925).--Maximum discharge 219,000 ft³/s Sept. 22, 1941 (gage height, 29.3 ft, from floodmarks), from rating curve extended above 75,000 ft³/s; no flow at times prior to completion of Ute dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 278,000 ft³/s Sept. 30, 1904 (gage height, about 36.5 ft, site and datum used in 1909), from rating curve extended above 14,000 ft³/s, from Ninth Biennial Report of New Mexico State Engineer.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,010 ft³/s Sept. 12 (gage height, 5.73 ft); minimum daily, 1.4 ft³/s May 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	347	3.7	3.8	320	3.8	3.8	4.0	3.7	3.7	4.1	4.7	191
2	348	3.7	3.8	319	3.9	3.8	4.0	3.5	3.6	4.1	5.2	5.3
3	349	3.7	3.9	317	3.8	3.9	3.9	3.5	3.7	4.1	4.6	5.0
4	349	3.7	3.8	317	3.5	3.9	4.0	3.5	3.7	4.1	4.5	5.2
5	349	3.8	3.9	315	3.7	4.0	3.9	3.7	3.6	4.1	4.6	5.0
6	349	3.7	3.8	238	3.5	4.0	4.0	3.6	3.7	4.1	5.2	4.5
7	348	3.8	3.8	8.3	3.4	3.9	4.0	3.4	3.8	4.1	5.3	4.3
8	236	3.8	4.0	7.0	3.5	3.8	4.0	3.5	3.9	4.1	4.9	3.9
9	1.8	3.9	3.9	6.4	3.4	4.0	4.0	3.8	3.9	4.3	4.8	3.9
10	.96	4.1	3.9	5.8	3.4	3.7	4.1	3.7	3.9	4.3	4.8	3.9
11	1.9	4.4	4.0	5.7	3.5	4.0	4.1	4.2	3.9	4.3	4.8	4.0
12	3.4	4.2	4.0	5.3	3.6	4.0	4.0	3.5	4.0	4.4	4.8	4.1
13	3.6	4.5	4.1	4.9	3.3	4.0	4.0	3.6	4.0	4.4	4.8	4.3
14	3.7	4.9	4.3	4.9	3.7	4.0	4.0	3.8	4.1	4.4	4.8	4.5
15	3.8	5.1	4.5	4.9	3.6	4.0	4.1	3.6	4.0	4.4	4.9	5.0
16	4.6	6.5	4.5	4.9	6.7	4.0	4.1	3.7	4.1	4.5	4.8	5.0
17	5.6	5.4	4.7	4.6	3.9	4.0	4.0	3.1	4.0	4.4	5.0	4.9
18	6.8	10	4.6	4.4	3.8	4.0	3.9	3.4	4.1	4.6	5.1	4.9
19	7.2	3.8	4.8	4.3	3.4	3.6	4.1	3.4	4.1	4.7	4.4	5.1
20	7.9	3.7	4.8	4.2	3.2	3.5	4.0	3.5	6.1	4.7	4.3	5.1
21	8.3	4.0	5.0	4.7	3.2	3.3	4.0	3.4	4.7	4.6	4.3	4.9
22	8.7	4.0	5.1	3.8	3.7	3.8	3.8	3.4	4.8	4.7	4.3	4.4
23	11	4.0	5.4	4.1	3.3	2.8	4.3	3.9	3.6	4.8	4.8	1.9
24	4.1	4.1	5.3	3.9	3.5	3.3	4.0	3.9	3.4	4.6	5.3	1.9
25	3.7	4.1	5.5	3.8	3.7	3.5	3.7	3.5	3.5	4.5	5.3	2.0
26	3.8	4.1	137	4.2	3.8	3.5	3.8	3.4	4.0	4.5	5.7	2.0
27	3.7	4.1	329	3.5	3.5	3.7	3.9	3.5	4.0	4.9	193	2.1
28	8.1	4.7	328	3.8	3.6	3.9	3.9	3.6	4.1	4.8	134	2.2
29	3.8	24	326	3.5	3.6	4.0	3.8	3.4	4.1	4.7	5.3	2.3
30	3.7	3.9	324	3.7	---	3.9	3.7	3.6	4.1	4.7	5.0	2.4
31	3.8	---	323	3.6	---	3.9	---	4.1	---	4.6	214	---
TOTAL	2788.96	151.4	1876.2	1944.2	106.5	117.5	119.1	111.4	120.2	137.6	677.3	305.0
MEAN	90.0	5.05	60.5	62.7	3.67	3.79	3.97	3.59	4.01	4.44	21.8	10.2
MAX	349	24	329	320	6.7	4.0	4.3	4.2	6.1	4.9	214	191
MIN	.96	3.7	3.8	3.5	3.2	2.8	3.7	3.1	3.4	4.1	4.3	1.9
AC-FT	5530	300	3720	3860	211	233	236	221	238	273	1340	605

07227000 CANADIAN RIVER AT LOGAN, NM--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1992, BY WATER YEAR (WY)

MEAN	34.9	29.3	7.35	8.08	10.2	3.06	16.3	28.3	48.6	70.5	82.7	86.5
MAX	325	287	84.1	62.7	174	11.4	239	767	575	608	720	838
(WY)	1966	1983	1983	1992	1980	1983	1987	1987	1969	1982	1981	1969
MIN	1.30	1.19	1.24	.86	1.13	.63	.26	.64	.62	.65	1.19	1.36
(WY)	1964	1984	1984	1963	1987	1963	1963	1963	1963	1963	1963	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1963 - 1992	
ANNUAL TOTAL	13353.36		8455.36			
ANNUAL MEAN	36.6		23.1		35.6	
HIGHEST ANNUAL MEAN					145	1969
LOWEST ANNUAL MEAN					1.62	1964
HIGHEST DAILY MEAN	866	Sep 12	349	Oct 3	6860	Jun 18 1969
LOWEST DAILY MEAN	.96	Oct 10	.96	Oct 10	.10	Jan 12 1963
ANNUAL SEVEN-DAY MINIMUM	2.3	May 23	2.1	Sep 23	.10	Apr 16 1963
INSTANTANEOUS PEAK FLOW					219000	Sep 22 1941
INSTANTANEOUS PEAK STAGE					29.30	Sep 22 1941
ANNUAL RUNOFF (AC-FT)	26490		16770		25760	

07227000 CANADIAN RIVER AT LOGAN, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957-62, and February to September 1992.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
FEB											
19...	1430	3.2	5010	8.0	14.5	9.0	666	10.2	390	79	46
MAY											
27...	1230	3.3	7740	8.0	23.5	21.0	660	7.6	520	110	59
JUL											
17...	1315	4.1	7420	7.9	28.0	25.0	670	9.4	540	110	65

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
FEB											
19...	840	19	8.1	274	380	1100	1.0	7.6	2630	300	<10
MAY											
27...	1400	27	8.5	320	480	2100	1.4	11	4360	340	<10
JUL											
17...	1300	24	9.5	322	440	1800	0.90	10	3930	340	40

07227100 REVUELTO CREEK NEAR LOGAN, NM

LOCATION.--Lat 35°20'29", long 103°23'37", in SW1/4NW1/4 sec.24, T.13 N., R.33 E., Quay County, Hydrologic Unit 11080008, on right bank 0.3 mi upstream from bridge on State Highway 39, 1.9 mi southeast of Logan, and at mile 2.3.

DRAINAGE AREA.--786 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1959 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,660 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 16, 1981, at site 320 ft upstream at datum 0.56 ft higher.

REMARKS.--Records poor. Low flows supplemented by surface- and ground-water return from irrigation in the vicinity of Tucumcari. Several observations of water temperature were made during the year.

REMARKS.--Water-discharge records poor. Low flows supplemented by surface and ground-water return from irrigation in vicinity of Tucumcari. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD (1941-47).--Maximum discharge determined, about 13,400 ft³/s Sept. 18, 1946, (gage height, 9.04 ft), at site 180 ft downstream at different datum from unpublished records collected by U.S. Bureau of Reclamation.

A peak discharge of 26,100 ft³/s, date unknown (gage height, 12.9 ft), at former site and datum, was measured by slope-area method in May 1957.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	e6.7	e5.2	33	4.0	4.8	12	9.0	104	4.9	8.5	62
2	15	e6.3	e5.0	29	4.1	4.6	6.2	7.4	112	3.9	41	68
3	23	e6.4	e4.8	27	8.5	4.4	5.5	7.8	61	3.6	11	82
4	20	e7.1	e4.4	29	35	4.2	5.0	13	41	5.4	15	60
5	17	e8.0	e4.2	26	16	4.2	4.0	26	16	4.8	12	49
6	14	e.60	e4.2	29	9.8	4.2	2.7	34	4.5	4.0	142	46
7	17	e9.5	e3.6	186	7.5	4.3	4.8	29	2.5	3.3	128	27
8	18	11	e3.5	46	7.0	3.4	15	19	11	1.7	96	16
9	17	8.8	e4.5	19	6.8	3.1	23	14	1.2	.85	32	12
10	12	7.0	5.5	12	6.9	2.9	18	11	.47	3.5	16	9.1
11	11	11	4.9	11	6.8	3.8	12	13	.89	5.5	11	8.5
12	14	38	7.5	10	6.4	3.7	10	13	.01	4.5	14	8.2
13	10	20	6.7	7.3	6.3	3.3	13	12	1.5	5.7	13	7.6
14	12	14	5.0	7.3	5.6	3.0	16	13	.00	6.3	12	7.2
15	12	11	4.7	6.3	5.4	3.0	15	9.0	.00	6.5	16	6.9
16	9.9	381	5.2	7.1	4.4	2.9	14	13	.00	6.4	20	53
17	9.1	131	5.2	8.6	3.0	2.6	14	17	.00	83	34	11
18	9.5	50	5.8	5.7	2.4	2.3	15	18	.00	123	1080	9.1
19	6.8	56	45	5.4	4.8	2.6	22	7.9	.00	16	142	7.3
20	11	87	159	6.3	5.5	2.6	39	6.3	121	9.6	101	6.9
21	11	39	127	7.2	5.1	2	39	8.3	452	17	13	7.0
22	11	29	554	5.9	4.8	2.0	27	10	905	36	28	6.6
23	9.9	23	174	4.9	4.8	2.3	21	73	128	25	28	6.0
24	12	15	135	6.2	4.7	2.2	20	168	42	19	29	5.8
25	14	12	85	5.5	4.7	2.1	17	122	23	17	291	4.9
26	11	8.1	87	4.9	4.9	2.3	14	87	14	479	120	4.6
27	9.8	7.3	98	4.8	4.7	8.5	13	89	182	854	407	4.3
28	7.7	6.8	64	4.8	4.6	8.0	12	107	48	214	80	67
29	8.5	6.3	52	4.3	4.8	5.1	11	51	10	80	36	3.9
30	7.0	e5.6	44	4.1	---	4.1	9.2	137	6.5	29	17	3.4
31	e7.1	---	40	4.0	---	11	---	528	---	13	21	---
TOTAL	378.3	1022.50	1753.9	567.6	199.3	119.8	449.4	1672.7	2287.57	2085.45	3014.5	670.3
MEAN	12.2	34.1	56.6	18.3	6.87	3.86	15.0	54.0	76.3	67.3	97.2	22.3
MAX	23	381	554	186	35	11	39	528	905	854	1080	82
MIN	6.8	.60	3.5	4.0	2.4	2.0	2.7	6.3	.00	.85	8.5	3.4
AC-FT	750	2030	3480	1130	395	238	891	3320	4540	4140	5980	1330

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1992, BY WATER YEAR (WY)

MEAN	35.7	9.16	10.4	5.66	7.85	6.40	24.2	48.3	70.1	122	127	74.6
MAX	320	34.1	129	27.9	42.5	52.1	346	203	492	1203	575	515
(WY)	1961	1962	1960	1990	1983	1985	1970	1991	1960	1960	1981	1969
MIN	.000	.056	.001	.000	.000	.003	.32	.085	.89	.42	.93	1.72
(WY)	1965	1978	1976	1965	1965	1980	1981	1976	1990	1983	1978	1978

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1959 - 1992	
ANNUAL TOTAL	28629.78		14221.32			
ANNUAL MEAN	78.4		38.9		44.9	
HIGHEST ANNUAL MEAN					204	1960
LOWEST ANNUAL MEAN					4.72	1964
HIGHEST DAILY MEAN	3530	May 22	1080	Aug 18	13800	Jul 9 1960
LOWEST DAILY MEAN	.00	Jan 1	.00	Jun 14	.00	Oct 20 1959
ANNUAL SEVEN-DAY MINIMUM	.01	Sep 22	.21	Jun 13	.00	Oct 20 1959
INSTANTANEOUS PEAK FLOW			6030	Jul 27	26700	Jul 9 1960
INSTANTANEOUS PEAK STAGE			7.58	Jul 27	14.30	Jul 9 1960
INSTANTANEOUS LOW FLOW					.00	*
ANNUAL RUNOFF (AC-FT)	56790		28210		32510	

* No flow at times most years.

07227100 REVUELTO CREEK NEAR LOGAN, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
NOV											
08...	1030	11	1530	8.5	11.0	9.0	673	11.2	370	74	46
FEB											
19...	1530	4.5	2520	8.7	17.0	16.0	666	9.0	470	78	68
MAY											
26...	1500	66	1450	8.5	18.0	22.5	665	7.4	350	71	41
JUL											
17...	1345	6.8	1570	8.4	32.0	31.5	670	7.2	320	59	43

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
NOV											
08...	210	5	5.0	251	440	90	0.70	8.0	1020	230	3
FEB											
19...	420	8	4.0	282	810	170	0.70	7.9	1730	400	<10
MAY											
26...	190	4	5.8	230	410	60	0.60	9.8	926	260	<3
JUL											
17...	200	5	6.1	192	450	78	0.50	7.8	960	270	<3

07227500 CANADIAN RIVER NEAR AMARILLO, TX

LOCATION.--Lat 35°28'13", long 101°52'45", Potter County, Hydrologic Unit 11090105, on left bank at downstream side of southbound lane of bridge on U.S. Highways 87 and 287, 1,500 ft downstream from Pitcher Creek, 1.4 mi downstream from East Amarillo Creek, 1.7 mi downstream from Panhandle and Santa Fe Railway Co. bridge, 19 mi north of Amarillo, and 537.7 mi upstream from mouth.

DRAINAGE AREA.--19,445 mi², of which 4,069 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1924 to December 1925 (period no longer used in computation of average annual discharge), January 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,989.16 ft above National Geodetic Vertical Datum of 1929. Jan. 16, 1924, to Dec. 31, 1925, and Apr. 3 to June 1, 1938, nonrecording gage at site of old bridge 20 ft upstream at same datum. June 2 to Dec. 5, 1938, nonrecording gage at present site and datum.

REMARKS.--Records good except those for periods of estimated daily discharges which are poor. There is some regulation by Conchas and Ute Reservoirs in New Mexico, total capacity 439,000 acre-feet. Conchas and Bell Ranch Canals divert water from Conchas Reservoir upstream for irrigation.

AVERAGE DISCHARGE.--(Water year 1925), 707 ft³/s (512,200 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1914 reached a stage of 24 ft; a higher stage probably occurred during a flood in October 1904, but stage is unknown; information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 14,000 ft³/s.

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
June 5	0800	14,000	7.04	June 12	0500	19,400	7.88

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252	e15	e26	560	35	36	36	8.6	1140	366	194	439
2	271	e12	25	408	38	23	37	6.9	641	357	136	265
3	277	8.8	24	432	59	29	37	6.1	567	292	86	180
4	291	16	22	383	53	46	34	5.8	419	229	64	229
5	277	e17	21	388	52	36	28	5.4	4110	189	71	267
6	306	14	24	477	57	32	24	4.7	417	156	83	157
7	299	17	24	731	56	30	21	4.4	88	138	72	106
8	314	16	20	509	50	28	18	4.0	54	100	57	91
9	305	17	19	332	49	24	17	3.5	32	82	51	78
10	307	14	19	239	54	23	17	3.7	26	201	30	56
11	324	15	23	184	53	19	15	3.7	78	1490	53	46
12	173	16	27	138	50	19	14	3.1	3980	312	71	42
13	65	17	24	98	51	20	13	3.1	211	182	47	36
14	33	17	22	e98	47	19	14	3.1	486	92	46	27
15	22	16	20	e88	45	18	13	2.6	280	60	53	22
16	16	e94	20	80	43	18	27	2.0	184	54	26	22
17	13	97	20	74	38	18	48	1.6	91	38	412	18
18	9.7	57	22	68	34	16	25	7.6	58	35	411	18
19	8.7	136	38	57	32	16	24	4.0	42	31	431	25
20	8.0	140	85	56	32	16	29	2.7	35	24	579	44
21	7.4	112	178	59	33	15	25	13	884	70	354	31
22	5.3	87	596	61	33	14	23	32	2150	82	264	22
23	4.8	76	350	54	35	14	16	31	1100	36	186	17
24	5.0	69	336	47	42	14	15	90	519	73	140	14
25	3.5	71	221	44	40	14	14	72	345	74	584	11
26	e2.9	60	241	42	35	14	14	30	276	98	333	9.1
27	e2.8	47	370	44	28	17	16	47	3540	83	439	8.2
28	29	36	359	43	26	24	15	675	1210	456	1080	7.1
29	8.2	29	364	40	25	19	13	269	662	388	505	6.9
30	e16	e28	452	39	---	18	11	252	540	325	810	6.7
31	e13	---	593	37	---	24	---	695	---	226	798	---
TOTAL	3669.3	1366.8	4585	5910	1225	673	653	2292.6	24165	6339	8466	2301.0
MEAN	118	45.6	148	191	42.2	21.7	21.8	74.0	805	204	273	76.7
MAX	324	140	596	731	59	46	48	695	4110	1490	1080	439
MIN	2.8	8.8	19	37	25	14	11	1.6	26	24	26	6.7
AC-FT	7280	2710	9090	11720	2430	1330	1300	4550	47930	12570	16790	4560

e Estimated

07227500 CANADIAN RIVER NEAR AMARILLO, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1992, BY WATER YEAR (WY)

MEAN	329	82.8	52.9	59.2	47.0	43.5	192	464	534	596	543	553
MAX	5663	812	458	519	259	403	5988	6804	5288	4880	3007	8016
(WY)	1942	1942	1942	1943	1980	1961	1942	1941	1941	1941	1981	1941
MIN	.57	1.52	1.25	4.75	3.00	1.86	1.51	4.60	.95	.31	.11	.034
(WY)	1981	1978	1984	1978	1939	1940	1978	1945	1990	1983	1983	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1939 - 1992	
ANNUAL TOTAL	64360.11		61645.7			
ANNUAL MEAN	176		168		293	
HIGHEST ANNUAL MEAN					2351	1941
LOWEST ANNUAL MEAN					37.7	1984
HIGHEST DAILY MEAN	3590	Jul 16	4110	Jun 5	79600	Sep 23 1941
LOWEST DAILY MEAN	.05	Jul 10	1.6	May 17	.00	Aug 7 1940
ANNUAL SEVEN-DAY MINIMUM	.28	May 15	2.7	May 11	.00	Sep 3 1983
INSTANTANEOUS PEAK FLOW			19400	Jun 12	135000	July 25 1941
INSTANTANEOUS PEAK STAGE			7.88	Jun 12	15.70	July 25 1941
INSTANTANEOUS LOW FLOW			1.4	May 17	.00	at times
ANNUAL RUNOFF (AC-FT)	127700		122300		212000	
10 PERCENT EXCEEDS	456		418		470	
50 PERCENT EXCEEDS	32		42		24	
90 PERCENT EXCEEDS	2.6		9.5		3.8	

07227500 CANADIAN RIVER NEAR AMARILLO, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: July 1948 to October 1949, February 1950 to current year. Chemical and biochemical analyses: March 1968 to current year. Pesticide analyses: March 1968 to June 1981.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1950 to current year.
WATER TEMPERATURE: August 1949 to current year.
SUSPENDED SEDIMENT DISCHARGE: August 1949 to September 1952.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 9,180 microsiemens June 8, 1990; minimum daily, 346 microsiemens Oct. 29, 1964.
WATER TEMPERATURE (1949-76, 1988 to current year): Maximum daily, 39.0°C July 7, 1973; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 7,300 microsiemens July 11; minimum daily, 420 microsiemens Aug. 20.
WATER TEMPERATURE: Maximum daily, 24.0°C July 21, 23, 26; minimum daily, 0.0°C on several days during December.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB DISSOLVD FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
NOV											
19...	1315	160	3750	8.5	7.0	11.0	102	1.4	420	200	88
JAN											
22...	0800	63	3650	8.4	2.5	14.6	120	0.5	460	200	100
MAR											
17...	1020	18	4690	8.4	13.5	9.3	102	0	590	400	130
MAY											
06...	0840	4.8	5630	8.3	14.0	11.3	122	0.2	760	560	180
JUL											
07...	0845	133	3050	8.3	22.0	8.5	108	3.5	380	220	86
AUG											
05...	0750	44	2490	8.4	21.0	10.2	126	1.1	300	140	70

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
NOV										
19...	49	630	13	6.2	230	370	850	0.90	9.1	2140
JAN										
22...	50	640	13	6.2	250	350	860	0.70	12	2170
MAR										
17...	64	760	14	7.7	180	550	990	0.60	12	2630
MAY										
06...	76	910	14	7.5	200	790	1300	0.80	15	3400
JUL										
07...	41	500	11	7.2	170	360	640	0.30	13	1750
AUG										
05...	30	410	10	5.8	160	350	500	0.60	11	1470

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
NOV										
19...	--	<0.010	0.130	<0.010	--	0.60	0.660	0.010	--	--
JAN										
22...	0.180	0.020	0.200	0.050	0.15	0.20	0.070	0.030	2	200
MAR										
17...	--	<0.010	<0.050	0.010	--	<0.20	<0.010	<0.010	--	--
MAY										
06...	--	<0.010	<0.050	0.040	--	<0.20	<0.010	0.020	--	--
JUL										
07...	--	<0.010	0.066	0.020	0.88	0.90	0.160	0.010	4	400
AUG										
05...	0.048	0.010	0.058	0.010	0.69	0.70	0.320	0.030	--	--

0722750O CANADIAN RIVER NEAR AMARILLO, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 19...	--	--	--	--	--	--	--	--	--	--
JAN 22...	<1.0	<1	2	<10	<1	10	<0.1	<1	<1.0	<10
MAR 17...	--	--	--	--	--	--	--	--	--	--
MAY 06...	--	--	--	--	--	--	--	--	--	--
JUL 07...	<1.0	<1	2	30	<1	<10	<0.1	<1	<1.0	<10
AUG 05...	--	--	--	--	--	--	--	--	--	--

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	3669.3	1410	824	8160	270	2640	180	1740	200
NOV.	1991	1366.8	3020	1780	6570	640	2350	380	1400	410
DEC.	1991	4585	2180	1280	15900	440	5450	270	3390	300
JAN.	1992	5910	1890	1110	17700	370	5970	240	3770	260
FEB.	1992	1225	3960	2350	7760	880	2920	500	1650	530
MAR.	1992	673	4360	2590	4710	1000	1810	550	1000	580
APR.	1992	653	3910	2320	4090	880	1540	490	869	530
MAY	1992	2292.6	2000	1170	7250	400	2460	250	1550	280
JUNE	1992	24165	978	570	37200	180	11700	120	7950	140
JULY	1992	6339	1760	1030	17700	350	5950	220	3770	240
AUG.	1992	8466	1470	861	19700	280	6440	180	4200	210
SEPT	1992	2301.0	2070	1220	7570	420	2610	260	1610	290
TOTAL		61645.7	**	**	154000	**	51900	**	32900	**
WTD.AVG.		168	1580	926	**	310	**	200	**	220

07227500 CANADIAN RIVER NEAR AMARILLO, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY EQUIVALENT MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1350	3020	e3900	1560	3900	3530	3710	5480	1290	1590	1500	880
2	e1330	3140	e3920	1600	3990	4200	3370	5550	2140	2630	1730	1120
3	e1310	3410	e3930	1580	3810	4360	3850	5560	1360	1770	2070	1350
4	e1290	3190	e3950	1580	3810	4200	3510	5550	1430	1900	2250	1660
5	e1270	e3300	e3970	1560	3880	4150	4040	5610	644	2340	2420	3110
6	e1250	3420	e3980	1560	3670	4260	4540	5620	1170	2790	2480	2550
7	e1220	3610	e3990	1460	3430	4340	4760	5570	1070	3020	1930	1950
8	e1200	3610	e4000	1290	3510	4340	4700	e5600	1690	3220	2610	1960
9	e1180	3610	e4000	1470	3720	4500	4770	e5620	2150	3430	3220	2220
10	e1160	3860	e4010	1570	3730	4560	4720	e5640	2130	3660	3550	e2430
11	e1420	3720	e4020	1640	4010	4540	4630	e5670	2640	700	2520	e2640
12	e1680	3680	e4040	1930	4130	4540	4740	e5700	548	770	4100	e2850
13	e1840	3740	e4040	1990	3770	4540	4700	e5720	941	1490	3210	e3060
14	e2100	3640	e4040	2500	3620	4580	4740	e5740	2030	2790	2800	e3270
15	e2360	3720	e4050	2920	3850	4580	4600	e5760	1360	2590	1730	3460
16	e2620	3340	4050	3300	4020	4590	4510	e5780	1490	2740	2870	3550
17	e2880	e2650	4090	3460	4130	4630	2300	e5800	1670	2740	750	3760
18	e3140	1960	4130	3540	4200	4670	3550	e3500	2050	2870	750	3910
19	e3400	3510	3800	3800	4270	4660	3630	4600	2410	2720	1620	3810
20	e3660	3540	3380	3750	4330	4630	2900	5050	2870	2750	2950	4150
21	e3920	2230	2150	3740	4300	4640	3160	4950	2810	3070	1560	4150
22	e4180	2000	e1670	3810	4310	4750	3010	1880	995	2170	1400	2900
23	e4440	e2300	1190	3800	4300	4700	3780	1660	1040	2690	1440	3480
24	e4700	e2600	2640	3910	4100	4710	3760	2700	1060	3830	1510	4050
25	e4960	2900	2140	4100	4180	4770	3940	2140	1180	1950	1520	4240
26	e5120	3610	1720	3940	4280	4740	4280	2850	1290	2790	820	4510
27	e5270	3330	1610	3910	4400	4790	4540	3460	761	1310	1540	4500
28	e3290	3140	1650	3880	4370	4040	4710	1970	471	1850	e1350	4640
29	e4980	3380	2070	e3870	4270	3780	5140	1400	675	1760	e1100	4820
30	e4070	3640	3200	3860	---	4120	5280	1400	917	1420	990	4760
31	e3650	---	1720	3890	---	3810	---	1780	---	1410	940	---
MEAN	2780	3230	3260	2800	4010	4430	4130	4360	1480	2350	1980	3190
MAX	5270	3860	4130	4100	4400	4790	5280	5800	2870	3830	4100	4820
MIN	1160	1960	1190	1290	3430	3530	2300	1400	471	700	750	880

WTR YR 1992 MEAN 3160 MAX 5800 MIN 471

e Estimated

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e19.0	10.0	e4.0	3.0	5.0	8.0	7.0	16.0	17.0	21.0	22.0	18.0
2	e19.0	6.0	e6.0	3.0	7.0	8.0	8.0	14.0	16.0	20.0	22.0	20.0
3	e20.0	8.0	e8.0	3.0	8.0	11.0	7.0	13.0	15.0	20.0	22.0	21.0
4	e16.0	10.0	e9.0	5.0	5.0	9.0	10.0	14.0	18.0	22.0	23.0	23.0
5	e12.0	e10.0	e10.0	4.0	4.0	8.0	12.0	14.0	15.0	21.0	23.0	20.0
6	e14.0	10.0	e11.0	4.0	5.0	7.0	12.0	14.0	17.0	23.0	23.0	18.0
7	e15.0	8.0	e12.0	5.0	4.0	8.0	14.0	14.0	20.0	23.0	22.0	19.0
8	e18.0	8.0	e10.0	4.0	4.0	8.0	14.0	e15.0	21.0	20.0	23.0	19.0
9	e18.0	10.0	e10.0	3.0	4.0	6.0	14.0	e15.0	18.0	22.0	23.0	19.0
10	e19.0	10.0	e10.0	5.0	5.0	2.0	13.0	e16.0	18.0	22.0	23.0	e19.0
11	e19.0	12.0	e9.0	3.0	8.0	6.0	13.0	e16.0	20.0	21.0	21.0	e19.0
12	e19.0	10.0	e10.0	5.0	8.0	7.0	12.0	e17.0	16.0	22.0	21.0	e20.0
13	e19.0	12.0	e9.0	2.0	6.0	8.0	13.0	e17.0	20.0	22.0	21.0	e20.0
14	e17.0	12.0	e8.0	2.0	7.0	8.0	15.0	e18.0	21.0	23.0	20.0	e20.0
15	e18.0	10.0	e9.0	1.0	5.0	8.0	15.0	e18.0	20.0	23.0	20.0	20.0
16	e19.0	8.0	8.0	3.0	7.0	12.0	15.0	e18.0	18.0	20.0	18.0	20.0
17	e19.0	e8.5	3.0	2.0	5.0	12.0	15.0	e19.0	17.0	21.0	20.0	18.0
18	e16.0	9.0	4.0	2.0	4.0	8.0	14.0	e20.0	18.0	20.0	20.0	17.0
19	e13.0	8.0	4.0	1.0	4.0	7.0	12.0	20.0	21.0	22.0	18.0	15.0
20	e14.0	4.0	5.0	1.0	5.0	8.0	10.0	18.0	21.0	22.0	18.0	16.0
21	e16.0	4.0	4.0	7.0	8.0	10.0	11.0	17.0	18.0	22.0	20.0	16.0
22	e17.0	6.0	e4.0	8.0	5.0	5.0	13.0	23.0	17.0	22.0	20.0	14.0
23	e17.0	e6.0	4.0	1.0	8.0	7.0	12.0	17.0	21.0	23.0	20.0	14.0
24	e15.0	e5.0	4.0	2.0	6.0	10.0	14.0	16.0	23.0	29.0	20.0	13.0
25	e13.0	4.0	4.0	4.0	4.0	9.0	12.0	17.0	23.0	22.0	18.0	14.0
26	e15.0	4.0	5.0	5.0	4.0	11.0	13.0	20.0	22.0	23.0	17.0	13.0
27	e14.0	5.0	5.0	6.0	6.0	10.0	13.0	15.0	19.0	23.0	17.0	12.0
28	e14.0	6.0	5.0	8.0	6.0	11.0	15.0	11.0	20.0	23.0	e19.0	12.0
29	e13.0	7.0	4.0	e10.0	7.0	11.0	14.0	11.0	21.0	23.0	e20.0	e12.0
30	e11.0	4.0	4.0	12.0	---	8.0	16.0	14.0	23.0	23.0	21.0	12.0
31	e10.0	---	8.0	4.0	---	11.0	---	14.0	---	22.0	20.0	---
MEAN	16.1	7.8	6.8	4.1	5.7	8.5	12.6	16.2	19.1	22.1	20.5	17.1
MAX	20.0	12.0	12.0	12.0	8.0	12.0	16.0	23.0	23.0	29.0	23.0	23.0
MIN	10.0	4.0	3.0	1.0	4.0	2.0	7.0	11.0	15.0	20.0	17.0	12.0

WTR YR 1992 MEAN 13.1 MAX 29.0 MIN 1.0

e Estimated

07228000 CANADIAN RIVER NEAR CANADIAN, TX
(National stream-quality accounting network)

LOCATION.--Lat 35°56'06", long 100°22'13", Hemphill County, Hydrologic Unit 11090106, on left abutment at downstream side of upstream bridge on U.S. Highways 60 and 83, 600 ft downstream from Panhandle and Santa Fe Railway Co. bridge, 1.2 mi downstream from Red Deer Creek, 1.6 mi northeast of Canadian, and 433.9 mi upstream from mouth.

DRAINAGE AREA.--22,866 mi², of which 4,688 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1924 to August 1925 (gage heights only), January 1938 to current year. Prior to April 1938, monthly discharges only, published in WSP 1311.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,301.50 ft above National Geodetic Vertical Datum of 1929. July 1, 1924, to Aug. 31, 1925, and Apr. 21 to Dec. 15, 1938, nonrecording gage; Dec. 16, 1938, to Sept. 30, 1953, water-stage recorder and nonrecording gages; all at site 300 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Extreme low flow is maintained by springs that enter river about 600 ft upstream from the gage. There is some regulation and diversions from Lake Meredith (07227900) 75 mi upstream. Gage-height telemeter at station via Sutron data collection platform.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--26 years (water years 1939-64) prior to completion of Lake Meredith, 549 ft³/s (397,800 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1939-64).--Maximum discharge, 122,000 ft³/s Sept. 23, 1941 (gage height, 9.8 ft), from graph based on gage readings, and from rating curves for two channels extended above 8,000 and 54,000 ft³/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 20.0 ft Oct. 2, 1904. Floods of May 2, 1914, and Oct. 5, 1923, reached stages of 12 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	e18	48	202	109	65	199	67	e357	87	16	26
2	10	e20	48	199	108	62	237	60	e376	64	16	26
3	9.4	e18	47	183	117	60	256	54	e369	53	14	25
4	9.1	e25	45	167	126	75	205	52	e350	50	12	23
5	9.2	33	45	156	135	76	163	47	289	46	11	21
6	9.6	31	47	143	123	78	134	46	e203	40	12	19
7	9.8	30	49	159	108	75	111	48	e218	33	12	17
8	10	30	49	172	107	70	101	47	e320	29	10	15
9	10	30	45	169	103	66	88	42	e387	27	9.0	15
10	10	31	46	159	103	66	89	42	846	32	9.3	13
11	10	31	50	146	106	65	82	40	526	37	13	12
12	9.6	31	65	141	110	64	77	40	227	45	e15	12
13	9.8	32	64	130	106	64	77	38	162	55	e17	11
14	9.7	31	60	121	96	64	73	90	114	70	e18	9.9
15	10	31	58	115	87	60	75	93	82	67	e19	9.3
16	10	89	57	117	84	59	113	66	73	61	e23	8.8
17	10	175	55	98	81	59	201	56	56	63	e27	8.1
18	11	134	56	105	73	72	287	51	48	54	31	7.3
19	11	105	90	96	71	73	371	50	43	54	30	7.9
20	11	90	188	92	71	68	339	46	43	51	33	8.6
21	12	76	239	97	69	65	283	60	45	44	30	8.2
22	13	66	252	98	70	61	220	62	52	41	25	7.5
23	13	57	263	91	70	60	167	50	62	33	22	7.2
24	13	55	217	89	71	59	135	59	61	29	19	7.0
25	13	52	191	93	69	59	117	85	52	25	29	6.8
26	14	50	179	92	69	59	104	115	49	25	36	6.5
27	15	50	251	109	68	57	96	87	45	25	32	6.4
28	19	49	288	114	68	115	92	201	105	22	30	6.2
29	20	50	249	118	66	114	83	212	132	19	26	6.6
30	19	47	223	113	---	123	77	184	97	17	25	6.6
31	21	---	196	111	---	122	---	270	---	15	24	---
TOTAL	371.2	1567	3760	3995	2644	2235	4652	2460	5789	1313	645.3	363.9
MEAN	12.0	52.2	121	129	91.2	72.1	155	79.4	193	42.4	20.8	12.1
MAX	21	175	288	202	135	123	371	270	846	87	36	26
MIN	9.1	18	45	89	66	57	73	38	43	15	9.0	6.2
AC-FT	736	3110	7460	7920	5240	4430	9230	4880	11480	2600	1280	722

e Estimated

07228000 CANADIAN RIVER NEAR CANADIAN, TX--Continued
(National stream-quality accounting network)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1992#, BY WATER YEAR (WY)

MEAN	50.7	68.9	68.8	78.2	86.5	119	90.6	175	198	36.8	27.7	40.6
MAX	426	848	490	292	146	473	555	1022	1054	167	89.6	266
(WY)	1969	1972	1972	1972	1972	1973	1973	1977	1965	1967	1965	1970
MIN	.35	4.97	22.4	31.0	37.0	23.0	3.90	1.39	.34	.019	.019	.000
(WY)	1976	1967	1967	1977	1981	1967	1968	1966	1966	1970	1980	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1965 - 1992#	
ANNUAL TOTAL	21201.1		29795.4			
ANNUAL MEAN	58.1		81.4		86.6	
HIGHEST ANNUAL MEAN					190	1972
LOWEST ANNUAL MEAN					35.4	1981
HIGHEST DAILY MEAN	668	Jun 23	846	Jun 10	12700	Oct 9 1968
LOWEST DAILY MEAN	9.1	Oct 4	6.2	Sep 28	.00	Oct 11 1964
ANNUAL SEVEN-DAY MINIMUM	9.6	Oct 1	6.6	Sep 24	.00	Oct 11 1964
INSTANTANEOUS PEAK FLOW			1160	Jun 10	38900	Oct 9 1968
INSTANTANEOUS PEAK STAGE			5.12	Jun 10	9.83	Apr 15 1973
INSTANTANEOUS LOW FLOW			5.7	Sep 28	.00	*
ANNUAL RUNOFF (AC-FT)	42050		59100		62720	
10 PERCENT EXCEEDS	107		192		144	
50 PERCENT EXCEEDS	45		59		37	
90 PERCENT EXCEEDS	13		10		.60	

\# Period of regulated streamflow.
* No flow at times most years.

07228000 CANADIAN RIVER NEAR CANADIAN, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: August 1966 to current year. Pesticide analyses: October 1970 to June 1982.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to September 1981.
WATER TEMPERATURE: October 1974 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,480 microsiemens Aug. 12, 1979; minimum daily, 461 microsiemens Sept. 8, 1980.
WATER TEMPERATURE: Maximum daily, 39.0°C June 28, 1979; minimum daily, 0.0°C on many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV												
19...	0850	103	2780	8.4	8.0	7.7	11.6	107	2.2	330	480	490
JAN												
21...	1610	97	3130	8.3	9.0	5.2	10.1	96	1.8	K2	K10	540
MAR												
16...	1510	63	3100	8.3	18.5	4.0	9.8	116	0.9	K22	K18	560
MAY												
06...	1210	47	3520	8.4	19.0	1.0	10.3	120	0.2	K45	K25	620
AUG												
04...	0925	13	3210	8.4	22.0	3.1	10.7	133	1.2	240	140	480

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV												
19...	250	110	51	380	8	10	10	274	241	240	210	580
JAN												
21...	270	130	52	450	8	6.9	0	323	264	260	230	720
MAR												
16...	330	130	57	440	8	3.7	0	285	234	230	300	740
MAY												
06...	420	140	65	520	9	7.4	1	247	204	200	330	860
AUG												
04...	300	97	57	490	10	7.3	6	201	174	170	250	820

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
NOV												
19...	2.1	17	1620	1510	0.140	0.130	0.010	0.010	0.150	0.140	<0.010	<0.010
JAN												
21...	2.3	24	1870	1780	0.500	0.470	0.020	0.020	0.520	0.490	0.070	0.070
MAR												
16...	2.0	12	1780	1830	--	--	<0.010	<0.010	<0.050	<0.050	0.010	<0.010
MAY												
06...	2.6	11	2090	2060	--	--	<0.010	<0.010	<0.050	<0.050	<0.010	<0.010
AUG												
04...	2.4	7.4	1850	1840	--	--	<0.010	<0.010	<0.050	<0.050	0.010	<0.010

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
NOV											
19...	--	0.50	0.030	0.020	<0.010	0.010	--	93	26	19	20
JAN											
21...	0.43	0.50	0.030	0.020	0.020	0.020	0.06	50	13	80	--
MAR											
16...	0.29	0.30	0.030	<0.010	<0.010	<0.010	--	48	8.2	90	<10
MAY											
06...	--	<0.20	<0.010	<0.010	<0.010	<0.010	--	194	25	18	<10
AUG											
04...	--	<0.20	<0.010	0.040	<0.010	<0.010	--	31	1.1	93	<10

07228000 CANADIAN RIVER NEAR CANADIAN, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)
NOV 19...	200	<1	50	100	<10	4	2	1	<1.0	2000	14
JAN 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	300	<1	<10	80	20	3	1	<1	<1.0	2100	16
MAY 06...	300	<1	20	100	10	4	3	<1	<1.0	2600	39
AUG 04...	200	<1	10	90	20	4	2	<1	<1.0	2100	16

07235000 WOLF CREEK AT LIPSCOMB, TX

LOCATION.--Lat 36°14'19", long 100°16'31", Lipscomb County, Hydrologic Unit 11100203, on right bank at downstream side of State Highway 305, 0.3 mi north of Lipscomb, 0.6 mi downstream from Sand Creek, 2 mi upstream from Plum Creek, and 61.2 mi upstream from mouth.

DRAINAGE AREA.--697 mi², of which 222 mi² probably is noncontributing.

PERIOD OF RECORD.--October 1937 to September 1942, October 1961 to current year. Prior to 1941, monthly discharges only, published in WSP 1311.
Water-quality records.--Chemical and biochemical analyses: May 1980.

REVISED RECORDS.--WSP 1311: 1938-39, drainage area.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 2,371.29 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 25, 1938, nonrecording gage, Feb. 25, 1938, to Sept. 30, 1942, water-stage recorder at present site at datum 5.77 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. There are small diversions upstream from station for irrigation and recreation.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--5 years (water years 1938-42), 39.7 ft³/s (1.14 in/yr), 28,760 acre-ft/yr.

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1938-42).--Maximum discharge, 20,000 ft³/s Oct. 21, 1941 (Gage-height, 11.57 ft, present datum), from rating curve extended above 14,000 ft³/s on basis of velocity-area studies; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1890, 15.5 ft June 23, 1957, present site and datum, from flood-marks. A flood in May 1955 reached a stage of 12.1 ft, present site and datum, from information by State Department of Highways and Public Transportation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.38	e.41	e.42	3.2	1.7	1.4	4.6	1.8	5.0	2.4	1.4	1.2
2	.38	.42	.42	3.0	1.7	1.8	4.7	1.6	2.9	2.0	1.3	1.0
3	.37	.45	.42	3.1	1.8	1.9	4.4	1.4	2.1	1.7	1.2	1.0
4	.34	.44	.45	2.7	1.9	1.6	4.2	1.4	1.5	1.5	1.2	.95
5	.35	.44	.44	2.6	1.8	1.8	4.0	1.4	1.1	1.3	1.2	.98
6	.34	.44	.48	2.3	1.7	1.9	3.9	1.1	.89	1.1	1.1	.90
7	.32	.44	.48	2.6	1.7	2.1	3.8	1.0	1.3	.82	1.1	.82
8	.35	.44	.46	2.9	1.7	2.2	3.8	.95	2.2	.64	.98	.71
9	.36	.44	.43	2.7	1.7	1.7	3.8	.84	2.3	.53	.92	.68
10	.37	.44	.42	2.5	1.7	1.5	3.8	.78	4.3	.54	.95	.61
11	.40	.44	.45	2.2	1.5	1.7	3.6	.81	4.4	.56	1.7	.67
12	.40	.44	.52	2.3	1.6	2.5	3.5	.75	4.0	.49	1.7	.71
13	.40	.46	.56	2.0	1.9	1.6	3.5	.65	3.8	.42	1.3	.64
14	.40	.48	.58	1.8	1.7	1.6	3.5	3.7	3.8	.43	.91	.59
15	.40	.49	.47	2.1	1.9	1.8	4.4	3.7	3.4	13	.86	.55
16	.42	1.8	.52	e1.8	1.5	1.7	4.4	3.3	3.1	39	.83	.54
17	.42	1.3	.54	e1.6	1.5	2.1	4.0	2.4	2.8	4.0	.79	.57
18	.39	.90	.49	1.8	1.6	2.2	4.0	1.6	2.7	7.5	1.4	.59
19	.36	.81	1.1	1.8	1.8	2.2	4.2	1.1	3.2	15	1.80	.64
20	.40	.72	1.9	1.8	1.4	2.1	4.4	.80	3.2	11	1.8	.67
21	.44	.69	2.4	1.8	1.2	2.4	4.2	.73	3.2	11	1.5	.66
22	.44	.68	2.6	1.9	2.0	2.3	3.9	1.0	3.3	9.5	1.3	.65
23	.43	.62	2.7	1.8	1.7	2.4	3.7	.74	2.9	6.9	1.0	.66
24	.40	.57	2.5	1.8	1.3	2.5	3.4	.62	2.6	5.4	.87	.67
25	.40	.54	2.2	1.7	1.4	2.4	2.9	.62	2.4	4.0	1.3	.71
26	.38	.52	2.2	1.5	1.5	2.3	2.8	.58	2.3	3.2	1.4	.67
27	.38	.51	2.9	1.8	2.6	2.3	2.9	.55	2.3	2.8	1.5	.75
28	.54	.51	2.8	2.0	1.4	4.1	2.9	1.3	2.8	2.4	1.3	.75
29	.38	.52	2.8	2.0	1.2	4.2	2.8	1.5	2.9	2.1	1.2	.77
30	.36	.44	2.6	2.0	---	3.7	2.5	.84	2.8	1.7	1.1	.77
31	e.40	---	2.6	1.8	---	3.7	---	.78	---	1.4	1.2	---
TOTAL	12.10	17.80	39.85	66.9	48.1	69.7	112.5	40.34	85.49	154.33	38.11	22.08
MEAN	.39	.59	1.29	2.16	1.66	2.25	3.75	1.30	2.85	4.98	1.23	.74
MAX	.54	1.8	2.9	3.2	2.6	4.2	4.7	3.7	5.0	39	1.8	1.2
MIN	.32	.41	.42	1.5	1.2	1.4	2.5	.55	.89	.42	.79	.54
AC-FT	24	35	79	133	95	138	223	80	170	306	76	44
CFSM	.00	.00	.00	.00	.00	.00	.01	.00	.01	.01	.00	.00
IN.	.00	.00	.00	.01	.00	.01	.01	.00	.01	.01	.00	.00

e Estimated

07235000 WOLF CREEK AT LIPSCOMB, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1992, BY WATER YEAR (WY)

MEAN	7.33	6.23	3.60	3.78	4.57	7.24	8.60	19.8	19.4	6.85	9.15	6.71
MAX	167	112	12.3	11.8	10.9	53.0	69.1	124	206	82.7	77.6	61.8
(WY)	1969	1972	1972	1969	1963	1974	1980	1979	1965	1967	1965	1963
MIN	.10	.57	.73	.55	.60	1.10	.94	.65	.74	.30	.000	.21
(WY)	1965	1979	1984	1986	1986	1986	1986	1986	1966	1974	1964	1984

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1962 - 1992	
ANNUAL TOTAL	580.20		707.30			
ANNUAL MEAN	1.59		1.93		8.62	
HIGHEST ANNUAL MEAN					30.5	1965
LOWEST ANNUAL MEAN					1.44	1986
HIGHEST DAILY MEAN	6.3	Jun 2	39	Jul 16	2860	May 31 1963
LOWEST DAILY MEAN	.26	Aug 28	.32	Oct 7	.00	May 24 1964
ANNUAL SEVEN-DAY MINIMUM	.30	Aug 24	.35	Oct 3	.00	Jul 22 1964
INSTANTANEOUS PEAK FLOW			*266	Jul 16	8790	May 31 1963
INSTANTANEOUS PEAK STAGE			5.51	Jul 16	10.62	May 10 1979
INSTANTANEOUS LOW FLOW			.30	Oct 7	.00	at times
ANNUAL RUNOFF (AC-FT)	1150		1400		6240	
ANNUAL RUNOFF (CFSM)	.003		.004		.018	
ANNUAL RUNOFF (INCHES)	.05		.06		.25	
10 PERCENT EXCEEDS	2.8		3.8		10	
50 PERCENT EXCEEDS	1.6		1.5		2.5	
90 PERCENT EXCEEDS	.40		.43		.50	

* No peak discharge greater than base discharge of 500 ft³/s during year.

07297910 PRAIRIE DOG TOWN FORK RED RIVER NEAR WAYSIDE, TX
(National stream-quality accounting network)

LOCATION.--Lat 34°50'15", long 101°24'49", Armstrong County, Hydrologic Unit 11120103, on left bank at downstream side of bridge on Farm Road 284, 13 mi northeast of Wayside, 26 mi south of Claude, and at mile 1,145.

DRAINAGE AREA.--4,211 mi², of which 3,281 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,463.74 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. There are several small diversions upstream from station. Sewage effluent released into river above station by the city of Amarillo.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft³/s.

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)

No peak greater than base discharge during year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	5.8	11	8.6	3.4	1.7	36	5.7	139	9.7	9.4	15
2	1.1	6.4	12	8.3	4.9	1.7	32	5.0	43	6.6	3.5	7.8
3	1.1	10	12	7.9	5.8	9.4	32	5.0	21	8.2	3.9	5.8
4	1.1	6.0	13	8.3	4.2	35	29	5.1	9.2	7.7	3.9	5.4
5	1.6	5.2	12	7.5	3.8	5.4	26	5.1	487	6.8	3.3	4.2
6	1.6	5.2	11	6.9	3.4	4.0	27	4.9	142	6.1	12	3.1
7	1.6	4.9	11	10	3.4	3.0	27	5.3	60	4.8	8.5	2.6
8	1.9	6.8	11	8.3	3.3	3.3	27	5.1	50	5.2	2.9	2.9
9	1.7	7.1	10	6.8	3.3	2.9	27	5.3	66	5.0	2.0	2.3
10	1.7	6.0	11	6.3	3.3	3.6	28	5.6	55	14	81	2.0
11	1.6	6.0	12	6.6	3.1	4.2	25	4.7	43	77	136	2.8
12	1.5	7.5	12	6.0	3.0	4.7	26	4.9	169	12	46	2.6
13	1.5	7.7	11	5.6	2.9	4.3	27	4.7	78	4.8	25	2.1
14	1.4	7.7	10	5.6	2.7	3.8	28	9.9	52	4.1	15	1.8
15	1.4	7.8	9.6	e5.0	2.5	3.6	89	41	46	21	8.9	1.6
16	1.4	245	9.5	e5.0	2.4	4.0	482	12	41	5.6	11	1.5
17	1.3	57	9.4	5.3	2.2	4.8	74	12	38	4.3	30	1.4
18	1.3	28	10	4.7	2.1	4.9	21	11	46	11	9.6	1.2
19	1.3	15	16	4.5	2.1	4.7	16	11	161	5.3	7.9	1.7
20	1.5	14	41	4.9	2.1	4.6	13	15	101	4.2	6.5	1.8
21	3.8	14	24	4.5	1.2	4.7	12	256	183	15	4.9	1.5
22	4.4	15	64	4.0	1.2	4.5	10	51	119	5.2	3.8	2.6
23	4.0	12	20	4.0	1.2	4.8	8.9	40	56	4.2	2.8	3.0
24	4.0	10	15	4.1	1.7	5.4	7.7	40	36	3.8	2.3	2.5
25	4.4	8.7	15	3.8	1.7	4.4	7.4	37	23	3.5	13	2.3
26	4.5	7.8	15	5.1	1.5	4.2	7.4	34	23	6.6	14	1.9
27	5.5	8.3	16	5.6	1.5	5.7	7.8	44	25	31	105	2.0
28	4.2	10	13	5.1	1.5	542	7.3	279	74	9.8	24	2.1
29	4.1	11	11	4.0	1.5	48	6.4	32	26	5.6	11	2.4
30	4.7	11	9.9	3.7	---	37	5.8	19	12	14	8.1	2.6
31	5.1	---	9.9	3.5	---	35	---	43	---	66	28	---
TOTAL	77.5	566.9	467.3	179.5	76.9	809.3	1172.7	1053.3	2424.2	388.1	643.2	92.5
MEAN	2.50	18.9	15.1	5.79	2.65	26.1	39.1	34.0	80.8	12.5	20.7	3.08
MAX	5.5	245	64	10	5.8	542	482	279	487	77	136	15
MIN	1.1	4.9	9.4	3.5	1.2	1.7	5.8	4.7	9.2	3.5	2.0	1.2
AC-FT	154	1120	927	356	153	1610	2330	2090	4810	770	1280	183

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992, BY WATER YEAR (WY)

MEAN	26.7	7.46	4.10	3.90	3.35	6.69	11.2	54.9	59.7	23.3	91.9	25.8
MAX	147	51.9	20.3	24.7	17.4	26.1	97.5	472	304	77.7	1410	110
(WY)	1986	1972	1988	1988	1990	1992	1977	1978	1984	1975	1968	1969
MIN	.000	.066	.099	.30	.16	.34	.17	.13	1.44	.000	.39	.000
(WY)	1976	1971	1971	1971	1976	1971	1978	1984	1970	1974	1983	1975

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1968 - 1992	
ANNUAL TOTAL	4124.16		7951.4			
ANNUAL MEAN	11.3		21.7		26.8	
HIGHEST ANNUAL MEAN					137	1968
LOWEST ANNUAL MEAN					1.90	1983
HIGHEST DAILY MEAN	485	Jul 14	542	Mar 28	22700	Aug 29 1968
LOWEST DAILY MEAN	.07	Aug 29	1.1	Oct 2	.00	Jul 30 1968
ANNUAL SEVEN-DAY MINIMUM	.20	Aug 23	1.3	Oct 1	.00	Jul 30 1968
INSTANTANEOUS PEAK FLOW			3700	Apr 16	58000	Aug 28 1968
INSTANTANEOUS PEAK STAGE			9.44	Apr 16	13.00	Aug 28 1968
INSTANTANEOUS LOW FLOW			.90	Oct 3	.00	at times
ANNUAL RUNOFF (AC-FT)	8180		15770		19380	
10 PERCENT EXCEEDS	15		43		23	
50 PERCENT EXCEEDS	3.0		6.6		1.7	
90 PERCENT EXCEEDS	.87		1.8		.05	

07297910 PRAIRIE DOG TOWN FORK RED RIVER NEAR WAYSIDE, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1967 to current year. Chemical and biochemical analyses: October 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1968 to September 1981.
WATER TEMPERATURE: October 1968 to September 1981.

INSTRUMENTATION.--Specific conductance was recorded continuously at this station from April 1968 to September 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 51,100 microsiemens July 30, 1978; minimum daily, 417 microsiemens July 10, 1975.
WATER TEMPERATURE: Maximum daily, 38.0°C Oct. 14, 1968, June 13, 1975; minimum daily, 0.0°C on many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 19...	1620	13	3920	8.2	8.0	150	10.8	100	1.9	480	630	770
JAN 22...	1220	4.0	8760	8.2	9.0	11	12.9	125	0.6	K8	58	1600
MAR 17...	1225	4.5	6050	8.6	21.0	17	12.0	152	2.6	540	150	1200
MAY 05...	1500	5.2	7590	8.3	29.5	2.2	10.5	152	0.9	240	K25	1400
AUG 04...	1350	2.9	5480	8.2	34.0	83	8.4	131	1.0	120	140	1100

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV 19...	560	210	58	530	8	16	0	254	208	210	780	650
JAN 22...	1400	460	110	1400	15	21	0	210	172	170	1600	2000
MAR 17...	1000	330	82	930	12	19	15	140	140	140	1200	1300
MAY 05...	1200	390	90	1200	14	19	8	180	160	160	1500	1600
AUG 04...	970	320	77	840	11	17	0	190	156	160	1200	1200

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
NOV 19...	1.5	22	2570	2420	4.24	4.14	0.260	0.260	4.50	4.40	0.340	0.350
JAN 22...	1.7	24	6000	5720	0.080	--	0.010	<0.010	0.090	0.092	0.040	0.040
MAR 17...	1.0	13	4060	3970	0.270	0.280	0.080	0.070	0.350	0.350	0.030	0.030
MAY 05...	1.7	22	5300	4930	--	--	<0.010	<0.010	<0.050	0.077	0.040	0.040
AUG 04...	1.6	24	3960	3780	0.630	0.640	0.040	0.040	0.670	0.680	0.020	0.020

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
NOV 19...	0.76	1.1	2.60	2.30	2.10	2.10	6.4	320	11	99	30
JAN 22...	0.16	0.20	0.090	0.110	0.090	0.090	0.28	69	0.75	87	--
MAR 17...	1.1	1.1	0.240	0.060	0.060	0.080	0.18	137	1.7	75	10
MAY 05...	0.16	0.20	0.110	0.080	0.080	0.090	0.25	15	0.21	76	<10
AUG 04...	0.48	0.50	0.140	0.030	0.030	0.040	0.09	232	1.8	99	<10

07297910 PRAIRIE DOG TOWN FORK RED RIVER NEAR WAYSIDE, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)
NOV 19...	200	<1	20	110	30	11	<1	1	<1.0	3900	22
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
MAR 17...	<100	<1	<10	140	40	13	<1	<1	<1.0	5300	28
MAY 05...	<100	1	10	140	50	8	2	<1	<1.0	7800	33
AUG 04...	200	1	<10	110	30	18	2	<1	<1.0	6600	29

07299540 PRAIRIE DOG TOWN FORK RED RIVER NEAR CHILDRESS, TX

LOCATION.--Lat 34°34'09", long 100°11'37", Childress County, Hydrologic Unit 11120105, on left bank at downstream side of bridge on U.S. Highways 62 and 83, 3.1 mi downstream from Salt Creek, 10.0 mi north of Childress, and at mile 1,061.

DRAINAGE AREA.--7,725 mi², of which 4,769 mi² probably is noncontributing.

PERIOD OF RECORD.--December 1964 to March 1965 (gage heights only), April 1965 to current year.
Water-quality records: September 1948 to April 1963, January 1969 to September 1986. Chemical and biochemical analyses: January 1978 to September 1986.

GAGE.--Water-stage recorder. Datum of gage is 1,628.4 ft above National Geodetic Vertical Datum of 1929 (from Texas State Department of Highways and Public Transportation bench mark).

REMARKS.--Records poor. Many small diversions upstream from station. Flow is affected at times by discharge from the flood-detention pools of 23 floodwater-retarding structures with a combined detention capacity of 20,010 acre-ft. These structures control runoff from 95.2 mi² in the drainage basin above station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1899, 16.9 ft in May or June 1957, from information by local residents and State Department of Highways and Public Transportation.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 29	1115	13,600	10.90	June 21	1100	7,580	9.59
Apr. 9	0130	11,200	10.70	June 28	unknown	8,070	a/9.65
Apr. 16	1800	7,340	10.29	July 11	1430	12,800	10.14

a/ From floodmark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	94	22	123	48	27	1000	47	766	94	45	2290
2	9.6	76	21	124	56	19	148	28	418	57	36	527
3	8.7	35	19	110	326	23	218	22	158	31	45	129
4	7.2	31	17	89	637	127	87	42	114	17	36	28
5	5.7	26	16	89	319	72	44	16	255	10	17	9.1
6	5.2	19	16	88	166	302	32	15	786	44	2.7	11
7	5.7	13	15	113	100	180	20	14	146	46	2.7	6.7
8	6.1	11	13	75	78	71	181	6.3	133	24	1.6	3.5
9	7.3	10	13	75	60	35	1570	6.4	87	35	1.3	2.8
10	8.1	9.1	13	74	61	17	64	7.1	e64	194	1.4	2.4
11	8.9	10	209	66	56	13	20	15	e64	4170	1.8	4.5
12	8.2	10	230	60	38	13	8.1	9.6	e45	1040	2.7	4.6
13	7.8	11	33	302	42	14	6.6	6.9	e39	139	3.2	3.3
14	7.2	13	50	92	58	13	98	8.7	e36	114	4.0	2.2
15	7.0	23	64	77	43	13	73	9.4	e30	58	5.4	2.6
16	6.9	286	53	62	30	12	1820	7.4	e21	40	4.3	2.4
17	6.9	704	44	63	17	14	2720	7.0	e21	35	5.9	2.4
18	6.7	375	43	50	12	18	1520	7.9	e21	30	5.5	2.5
19	5.6	24	304	47	10	17	1530	8.4	34	25	4.2	3.1
20	6.1	29	545	46	9.8	39	256	284	27	20	3.2	3.4
21	7.6	49	505	60	9.4	63	498	495	2180	16	2.6	2.7
22	9.4	61	1070	59	9.0	37	415	221	1790	14	2.0	2.3
23	8.8	36	774	41	12	18	220	122	e356	13	1.3	2.2
24	7.6	20	167	29	188	17	109	128	e156	12	1.2	2.7
25	6.9	20	39	22	213	17	77	178	e101	11	7.7	2.6
26	7.3	31	216	41	198	17	65	160	e84	10	2.8	2.7
27	20	39	188	219	60	17	63	80	e493	522	2.0	2.2
28	137	50	110	218	44	268	60	938	e2360	1140	1.8	2.3
29	14	58	84	252	42	2390	62	268	e356	186	1.3	2.7
30	9.1	33	111	93	---	684	57	102	e180	96	93	3.0
31	94	---	107	77	---	125	---	179	---	68	3220	---
TOTAL	467.6	2206.1	5111	2936	2942.2	4692	13041.7	3439.1	11321	8311	3564.6	3065.9
MEAN	15.1	73.5	165	94.7	101	151	435	111	377	268	115	102
MAX	137	704	1070	302	637	2390	2720	938	2360	4170	3220	2290
MIN	5.2	9.1	13	22	9.0	12	6.6	6.3	21	10	1.2	2.2
AC-FT	927	4380	10140	5820	5840	9310	25870	6820	22460	16480	7070	6080

e Estimated

07299540 PRAIRIE DOG TOWN FORK RED RIVER NEAR CHILDRESS, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1992, BY WATER YEAR (WY)

MEAN	115	38.2	26.3	27.7	26.0	42.0	96.5	265	322	103	160	152
MAX	1279	377	165	228	162	243	594	1835	1123	367	1086	470
(WY)	1987	1987	1992	1987	1987	1973	1973	1978	1985	1972	1968	1966
MIN	3.14	1.85	2.27	2.05	2.00	1.72	2.95	1.18	11.4	.66	1.56	3.39
(WY)	1985	1978	1983	1971	1974	1966	1978	1988	1970	1974	1980	1984

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1966 - 1992	
ANNUAL TOTAL	43101.17		61098.2			
ANNUAL MEAN	118		167		115	
HIGHEST ANNUAL MEAN					286	1987
LOWEST ANNUAL MEAN					28.1	1980
HIGHEST DAILY MEAN	3490	May 25	4170	Jul 11	34200	May 28 1978
LOWEST DAILY MEAN	.20	Jul 13	1.2	Aug 24	.00	Aug 5 1970
ANNUAL SEVEN-DAY MINIMUM	.31	Jul 7	2.0	Aug 6	.00	Jun 7 1988
INSTANTANEOUS PEAK FLOW			13600	Mar 29	86400	May 28 1978
INSTANTANEOUS PEAK STAGE			10.90	Mar 29	13.94	May 21 1977
INSTANTANEOUS LOW FLOW			.32	Aug 8	.00	at times
ANNUAL RUNOFF (AC-FT)	85490		121200		83010	
10 PERCENT EXCEEDS	240		321		170	
50 PERCENT EXCEEDS	11		35		7.1	
90 PERCENT EXCEEDS	2.7		3.4		1.0	

07299670 GROESBECK CREEK AT STATE HIGHWAY 6 NEAR QUANAH, TX

LOCATION.--Lat 34°21'16", long 99°44'24", Hardeman County, Hydrologic Unit 11130101, near left bank at downstream side of bridge on State Highway 6, 2 mi downstream from confluence of North and South Groesbeck Creeks, 4 mi north of Quanah, and 9 mi upstream from mouth.

DRAINAGE AREA.--303 mi².

PERIOD OF RECORD.--November 1961 to current year. Prior to October 1974, published as "at State Highway 283".

GAGE.--Water-stage recorder. Datum of gage is 1,425.69 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. There are several diversions upstream from station for farm and ranch use and for a gypsum plant. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--The highest stage known occurred in June 1891; and the highest stage since 1891 occurred in September 1929, stages unknown. Other large floods are reported to have occurred in 1912, 1936, 1946, 1951, 1955, and 1957, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s.

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)

No peak greater than base discharge during year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	21	18	25	26	24	20	19	139	27	19	22
2	16	20	20	25	26	23	20	19	116	25	19	21
3	16	20	20	24	26	23	20	19	72	25	18	20
4	17	20	19	23	28	24	20	20	72	23	18	19
5	17	21	19	23	30	23	20	20	46	23	18	18
6	17	21	19	23	45	22	20	20	110	22	17	18
7	18	20	19	23	34	22	20	20	127	22	17	18
8	18	19	19	23	30	22	20	20	80	21	17	18
9	18	20	19	22	28	21	20	21	86	21	17	18
10	18	19	18	22	27	20	20	20	78	21	16	18
11	18	20	19	22	27	20	20	21	45	21	18	18
12	19	20	32	23	26	20	19	22	36	21	18	18
13	19	20	48	25	25	20	19	20	32	21	18	18
14	18	20	35	26	25	20	19	20	31	21	17	17
15	18	20	25	28	25	20	19	20	30	21	17	17
16	19	21	22	32	25	20	21	18	30	20	17	17
17	19	21	20	28	24	21	57	18	26	20	17	17
18	19	21	19	26	24	20	299	18	25	20	17	17
19	19	20	30	24	24	19	110	19	24	20	18	17
20	19	20	228	23	24	19	131	21	23	20	17	16
21	20	19	173	23	24	19	70	21	38	19	17	16
22	20	19	106	23	23	19	35	24	35	19	16	16
23	20	18	115	23	23	19	34	21	27	19	16	17
24	20	18	65	23	25	19	25	17	25	19	16	17
25	20	18	38	23	25	19	21	17	24	18	18	17
26	20	18	32	23	24	19	20	17	24	18	24	17
27	22	18	28	25	23	19	19	17	23	19	23	17
28	59	19	27	25	24	20	19	24	27	22	19	17
29	29	19	28	25	24	20	19	32	30	21	18	17
30	22	18	27	25	---	19	19	24	29	20	18	17
31	22	---	26	26	---	19	---	23	---	20	19	---
TOTAL	632	588	1333	754	764	634	1195	632	1510	649	554	530
MEAN	20.4	19.6	43.0	24.3	26.3	20.5	39.8	20.4	50.3	20.9	17.9	17.7
MAX	59	21	228	32	45	24	299	32	139	27	24	22
MIN	16	18	18	22	23	19	19	17	23	18	16	16
AC-FT	1250	1170	2640	1500	1520	1260	2370	1250	3000	1290	1100	1050
CFSM	.07	.06	.14	.08	.09	.07	.13	.07	.17	.07	.06	.06
IN.	.08	.07	.16	.09	.09	.08	.15	.08	.19	.08	.07	.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1992, BY WATER YEAR (WY)

MEAN	34.6	7.69	7.77	6.47	6.75	8.03	13.3	25.2	37.1	12.9	8.97	47.3
MAX	393	19.6	43.0	24.3	26.3	37.1	97.1	163	423	116	53.4	286
(WY)	1984	1992	1992	1992	1992	1990	1976	1987	1991	1975	1969	1974
MIN	.68	1.33	1.48	1.33	1.35	1.18	1.12	1.74	1.54	.10	.000	.39
(WY)	1969	1969	1969	1971	1971	1971	1969	1967	1967	1964	1964	1968

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1963 - 1992	
ANNUAL TOTAL	25507.7		9775			
ANNUAL MEAN	69.9		26.7		18.0	
HIGHEST ANNUAL MEAN					65.5	1991
LOWEST ANNUAL MEAN					2.97	1964
HIGHEST DAILY MEAN	6680	Jun 2	299	Apr 18	9570	Oct 20 1983
LOWEST DAILY MEAN	7.8	May 22	16	Oct 1	.00	Jul 7 1964
ANNUAL SEVEN-DAY MINIMUM	8.1	May 18	17	Sep 16	.00	Jul 7 1964
INSTANTANEOUS PEAK FLOW			405	Apr 18	18000	Oct 20 1983
INSTANTANEOUS PEAK STAGE			10.28	Apr 18	24.78	Oct 20 1983
INSTANTANEOUS LOW FLOW			15	Oct 1	.00	at times
ANNUAL RUNOFF (AC-FT)	50590		19390		13050	
ANNUAL RUNOFF (CFSM)	.23		.088		.059	
ANNUAL RUNOFF (INCHES)	3.13		1.20		.81	
10 PERCENT EXCEEDS	37		32		15	
50 PERCENT EXCEEDS	16		20		5.5	
90 PERCENT EXCEEDS	9.1		17		1.4	

07299840 GREENBELT LAKE NEAR CLARENDON, TX

LOCATION.--Lat 35°00'02", long 100°53'40", Donley County, Hydrologic Unit 11120201, on upstream side near right end of dam on Salt Fork Red River and 4.3 mi north of Clarendon.

DRAINAGE AREA.--457 mi², of which 191 mi² probably is noncontributing.

PERIOD OF RECORD.--August 1967 to current year. Prior to October 1973, published as Greenbelt Reservoir.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Freese and Nichols, Inc., Consulting Engineers bench mark).

REMARKS.--The lake is formed by a rolled earthfill dam 5,800 ft long. Deliberate impoundment began Dec. 5, 1966, and the dam was completed in August 1967. The dam is the property of Greenbelt Municipal and Industrial Water Authority and was built to impound water for municipal and industrial uses by the cities of Childress, Clarendon, Crowell, Hedley, and Quanah. The spillway is an uncontrolled open cut through natural ground, 1,450 ft wide and located at the left end of dam, designed to discharge 184,000 ft³/s at an elevation of 2,684.0 ft. A morning-glory-type drop inlet with a 26-foot 8.5-inch-diameter opening at crest discharges into a 7- by 7-foot concrete conduit. The outlet works consists of a 36-inch pipe that is controlled by two 20-inch valves that control the discharge into a stilling basin and to a water treatment plant. The capacity table, dated April 1964, is based on Geological Survey topographic maps dated 1962. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	2,686.0	-
Design flood	2,683.0	105,600
Crest of spillway	2,674.0	81,760
Crest of morning-glory-type drop inlet	2,663.65	59,110
Lowest gated outlet (invert)	2,597.0	900

COOPERATION.--Records of diversion and capacity table provided by Greenbelt Municipal and Industrial Water Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 44,650 acre-ft June 26-28, 1975 (elevation, 2,655.71 ft); minimum, 2,950 acre-ft Aug. 29, 30, 1967 (elevation, 2,607.37 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 36,280 acre-ft July 1 at 0900 hours (elevation, 2,650.35 ft); minimum, 32,580 acre-ft Nov. 3, 7 (elevation, 2,647.69 ft).

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

2,647.0	31,660	2,650.0	35,770
2,648.0	32,990	2,651.0	37,230
2,649.0	34,360		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33200	32660	32940	33550	33840	34060	34430	34530	34670	36250	35470	34630
2	33180	32600	32940	33570	33870	34060	34420	34470	34680	36210	35450	34630
3	33170	32620	32950	33590	33920	34200	34460	34460	34680	36150	35420	34600
4	33070	32630	32950	33590	33920	34240	34440	34400	34700	36130	35380	34590
5	33060	32630	32940	33590	33950	34240	34440	34370	35160	36110	35330	34540
6	33020	32620	32910	33620	33950	34220	34440	34320	35420	36080	35250	34520
7	33020	32620	32940	33610	33960	34240	34460	34310	35490	36000	35180	34500
8	33000	32620	32920	33610	33960	34220	34460	34280	35530	35950	35120	34470
9	32990	32630	32920	33610	33960	34150	34440	34260	35560	35900	35080	34440
10	32980	32620	32940	33620	33980	34180	34470	34290	35530	35870	35020	34370
11	32950	32640	32960	33650	33990	34180	34420	34290	35560	35970	34970	34360
12	32960	32660	33000	33590	33990	34180	34430	34280	35560	35930	34920	34330
13	32940	32660	32990	33650	34020	34210	34460	34260	35560	35900	34900	34310
14	32900	32700	32980	33650	34030	34210	34470	34280	35560	35870	34840	34260
15	32870	32750	32990	33630	34030	34200	34490	34250	35540	35860	34810	34240
16	32870	32880	32980	33650	34020	34200	34560	34220	35500	35800	34770	34200
17	32860	32920	32980	33650	34020	34250	34570	34200	35500	35740	34780	34170
18	32800	33000	33030	33650	33990	34240	34610	34170	35230	35730	34750	34110
19	32760	33000	33140	33650	34020	34220	34610	34150	35450	35690	34740	34070
20	32760	33060	33220	33660	34030	34240	34630	34260	35730	35660	34710	34040
21	32740	33060	33280	33670	34020	34210	34640	34320	35930	35610	34670	33980
22	32750	33020	33320	33650	34020	34210	34640	34330	36020	35570	34640	33950
23	32740	33020	33370	33670	34020	34210	34630	34360	36080	35530	34600	33910
24	32700	33020	33400	33670	34030	34220	34600	34360	36060	35470	34540	33870
25	32680	33020	33430	33690	34040	34220	34590	34400	36030	35430	34590	33830
26	32670	33020	33470	33720	34030	34210	34570	34390	36050	35220	34570	33770
27	32750	33000	33480	33740	34040	34220	34590	34460	36120	35590	34560	33730
28	32710	33030	33510	33780	34040	34330	34590	34520	36220	35590	34530	33720
29	32680	32960	33540	33800	34060	34350	34570	34540	36250	35540	34520	33670
30	32660	32980	33540	33810	---	34370	34540	34530	36270	35520	34470	33650
31	32620	---	33550	33840	---	34390	---	34570	---	35520	34630	---
MAX	33200	33060	33550	33840	34060	34390	34640	34570	36270	36250	35470	34630
MIN	32620	32600	32910	33550	33840	34060	34420	34150	34670	35220	34470	33650
(†)	2647.72	2647.99	2648.41	2648.62	2648.78	2649.02	2649.13	2649.15	2650.34	2649.82	2649.19	2648.48
(ϕ)	-590	+360	+570	+290	+220	+330	+150	+30	+1700	-750	-890	-980
(ǂ)	289	234	235	240	209	258	264	305	294	429	403	344

CAL YR 1991 MAX 33550 MIN 30890 (ϕ) +2040 (ǂ) 3451
WTR YR 1992 MAX 36270 MIN 32600 (ϕ) +440 (ǂ) 3504

(†) Elevation, in feet, at end of month.
(ϕ) Change in contents, in acre-feet.
(ǂ) Diversions, in acre-feet, for municipal and industrial uses by Greenbelt Municipal Water Authoity.

07300000 SALT FORK RED RIVER NEAR WELLINGTON, TX

LOCATION.--Lat 34°57'27", long 100°13'14", Collingsworth County, Hydrologic Unit 11120202, near center of stream at downstream side of bridge on U.S. Highway 83, 4 mi downstream from Fort Worth and Denver (Burlington) Railway Co. bridge, 4.5 mi south of Lutie, and 7.2 mi north of Wellington.

DRAINAGE AREA.--1,222 mi², of which 209 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,941.41 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. There are several small diversions upstream from gage for irrigation. There is some regulation for municipal use by Greenbelt Lake (station 07299840), capacity 59,100 acre-ft, 42 mi upstream.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--14 years (water years 1953-66) prior to completion of Greenbelt Lake, 72.6 ft³/s (52,600 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1953-66).--Maximum discharge, 146,000 ft³/s May 16, 1957 (gage height, 19.00 ft), from rating curve extended above 11,000 ft³/s on basis of slope-area measurement of 63,400 ft³/s; minimum, 0.1 ft³/s June 19, 1952.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	45	40	89	51	e37	50	17	627	101	10	13
2	17	53	40	71	54	e34	71	15	430	67	9.2	10
3	15	25	34	61	108	e33	57	14	144	47	8.0	8.8
4	14	39	32	59	143	115	55	13	76	43	9.3	8.3
5	14	44	32	68	89	90	49	14	1420	37	11	8.6
6	15	41	30	69	56	52	48	15	1330	32	10	7.6
7	16	35	28	89	53	40	46	13	532	28	9.9	7.8
8	16	37	27	86	43	35	45	12	382	25	7.6	7.6
9	15	37	27	60	40	31	42	11	252	22	7.5	8.0
10	15	40	26	57	43	26	41	12	164	20	6.8	7.3
11	14	43	36	56	51	29	41	17	92	28	8.1	8.4
12	15	45	124	73	52	32	38	16	74	31	10	8.7
13	16	40	80	72	52	34	39	13	67	30	9.6	8.0
14	16	38	58	62	45	30	39	16	61	23	9.5	8.2
15	15	49	48	47	40	28	51	15	47	21	9.5	8.4
16	16	216	61	43	36	28	52	12	39	19	8.7	8.9
17	16	169	61	48	e33	142	79	13	32	18	9.6	9.2
18	16	87	45	65	e30	270	68	13	25	18	11	9.2
19	15	50	156	43	e27	79	96	14	20	17	11	9.8
20	17	43	261	33	e24	60	86	15	457	15	11	11
21	17	45	169	36	e21	52	58	342	496	15	9.3	9.7
22	15	39	249	43	e20	47	43	460	513	15	8.5	9.2
23	14	29	197	35	e22	41	34	313	216	15	7.9	9.2
24	12	32	124	29	e50	45	28	268	113	14	7.6	9.2
25	12	39	94	25	e80	52	22	102	75	14	7.9	8.9
26	13	40	120	32	e76	45	23	60	70	13	8.9	9.0
27	18	45	209	107	e60	43	23	50	67	24	8.8	9.0
28	46	50	172	123	e50	88	24	503	587	23	8.2	9.1
29	50	51	117	86	e43	76	24	240	361	20	7.4	9.2
30	25	49	87	72	---	49	19	164	157	14	7.4	9.2
31	25	---	79	65	---	40	---	128	---	11	11	---
TOTAL	557	1595	2863	1904	1492	1803	1391	2910	8926	820	280.2	268.5
MEAN	18.0	53.2	92.4	61.4	51.4	58.2	46.4	93.9	298	26.5	9.04	8.95
MAX	50	216	261	123	143	270	96	503	1420	101	11	13
MIN	12	25	26	25	20	26	19	11	20	11	6.8	7.3
AC-FT	1100	3160	5680	3780	2960	3580	2760	5770	17700	1630	556	533

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1992#, BY WATER YEAR (WY)

MEAN	33.9	28.7	25.4	28.1	33.9	40.4	62.4	121	135	23.5	28.9	32.4
MAX	279	213	92.4	61.4	64.5	127	505	468	962	118	301	113
(WY)	1987	1987	1992	1992	1988	1979	1977	1977	1989	1968	1968	1981
MIN	4.28	8.03	3.59	10.5	10.9	8.15	6.10	2.61	8.17	2.65	1.68	2.22
(WY)	1981	1981	1984	1971	1967	1972	1971	1971	1970	1970	1970	1984

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1967 - 1992#	
ANNUAL TOTAL	19303.0		24809.7			
ANNUAL MEAN	52.9		67.8		49.4	
HIGHEST ANNUAL MEAN					115	1989
LOWEST ANNUAL MEAN					10.5	1971
HIGHEST DAILY MEAN	2620	May 30	1420	Jun 5	14200	Jun 13 1989
LOWEST DAILY MEAN	2.8	Aug 24	6.8	Aug 10	.40	Jun 2 1985
ANNUAL SEVEN-DAY MINIMUM	3.2	Aug 23	7.9	Sep 4	.73	May 27 1985
INSTANTANEOUS PEAK FLOW			2920	Jun 6	62100	Apr 20 1977
INSTANTANEOUS PEAK STAGE			6.26	Jun 6	13.80	Apr 20 1977
INSTANTANEOUS LOW FLOW			5.6	Aug 10	.33	Sep 22 1980
ANNUAL RUNOFF (AC-FT)	38290		49210		35820	
10 PERCENT EXCEEDS	83		125		65	
50 PERCENT EXCEEDS	23		36		16	
90 PERCENT EXCEEDS	8.8		9.2		4.2	

Period of regulated streamflow.

07300000 SALT FORK RED RIVER NEAR WELLINGTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: February 1951 to October 1954, October 1967 to current year. Chemical and biochemical analyses: October 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1952 to September 1954, October 1967 to September 1991 (discontinued).
WATER TEMPERATURE: June 1952 to September 1954, October 1967 to September 1991 (discontinued).

INSTRUMENTATION.--From September 1968 to September 1974, specific conductance was continuously recorded at this station.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,510 microsiemens Dec. 20, 1990; minimum daily, 330 microsiemens July 30, 1982.
WATER TEMPERATURE: Maximum daily, 40.0°C July 20, 1981; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,510 microsiemens Dec. 20; minimum daily, 1,100 microsiemens May 30.
WATER TEMPERATURE: Maximum daily, 34.5.0°C July 18; minimum daily, 0.0°C Jan. 29.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV											
18...	1550	87	2680	8.3	15.5	8.9	97	1.7	370	450	980
JAN											
21...	1300	33	2810	8.3	7.0	12.8	114	0.4	K10	100	1100
MAR											
16...	1200	29	2800	8.1	19.0	9.5	111	0.1	K20	40	1200
MAY											
06...	1515	15	3150	8.0	28.0	9.5	129	0.3	110	K65	1500
JUL											
06...	1515	32	3010	8.0	34.0	7.2	109	1.9	K20	K20	1400
AUG											
03...	1650	7.5	3140	8.0	35.0	7.9	122	0.5	120	220	1700

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV										
18...	790	270	74	230	3	7.0	190	800	310	0.80
JAN										
21...	930	320	75	210	3	4.2	180	960	240	0.60
MAR										
16...	1000	350	75	210	3	4.5	160	1100	280	0.50
MAY										
06...	1400	460	83	200	2	4.0	140	1300	270	0.70
JUL										
06...	1200	410	84	210	2	5.0	130	1300	300	0.40
AUG										
03...	1500	520	88	180	2	4.3	110	1500	230	0.30

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
NOV										
18...	19	1820	--	<0.010	0.440	<0.010	--	0.30	0.070	<0.010
JAN										
21...	21	1940	--	<0.010	0.920	0.040	--	<0.20	0.020	<0.010
MAR										
16...	18	2130	1.09	0.010	1.10	0.020	--	<0.20	<0.010	<0.010
MAY										
06...	18	2420	1.48	0.020	1.50	0.070	--	<0.20	<0.010	<0.010
JUL										
06...	21	2410	1.18	0.020	1.20	0.080	0.42	0.50	0.010	0.010
AUG										
03...	21	2610	1.68	0.020	1.70	0.100	--	<0.20	<0.010	<0.010

07300500 SALT FORK RED RIVER AT MANGUM, OK

LOCATION.--Lat 34°51'30", long 99°30'30", in SW 1/4 SE 1/4 sec.34, T.5 N, R.22 W., Greer County, Hydrologic Unit 11120202, near left bank on downstream side of pier of bridge on State Highway 34, 0.5 mi south of Mangum, 13.0 mi downstream from Fish Creek, and at mile 35.5.

DRAINAGE AREA.--1,566 mi², of which 209 mi² is probably noncontributing.

PERIOD OF RECORD.--April 1905 to June 1906, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1241: 1938.

GAGE.--Water-stage recorder. Datum of gage is 1,490.87 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Apr. 11, 1905 to June 30, 1906, nonrecording gage at site 0.2 mi upstream at different datum. Oct. 1, 1937 to Nov. 8, 1938, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records fair.

PEAK DISCHARGES FOR CURRENT YEAR.--peak discharges greater than base discharge of 6,000 ft³/s:

Date	Time	Discharge	Gage height	Date	Time	Discharge	Gage height
No peaks greater than base discharge during year.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	63	71	135	100	77	86	44	506	175	16	15
2	28	67	69	117	100	69	84	40	692	102	19	16
3	26	71	66	121	101	67	89	37	275	146	16	15
4	23	76	64	121	124	100	96	36	96	77	13	12
5	21	65	64	110	180	108	80	34	1380	50	11	10
6	20	60	65	103	160	134	73	32	2530	44	9.7	6.8
7	19	58	64	101	123	110	69	30	617	39	8.5	5.3
8	18	56	62	97	106	97	64	30	475	33	6.8	4.5
9	17	55	62	106	97	82	61	29	407	29	5.7	4.0
10	17	53	62	105	87	66	60	29	294	27	5.0	3.8
11	16	52	72	97	94	64	54	31	228	27	6.0	4.5
12	16	53	300	100	97	64	54	35	180	26	6.7	4.7
13	16	54	192	119	94	63	59	35	153	26	5.7	5.0
14	14	55	164	138	86	63	55	35	139	25	5.5	4.3
15	14	56	130	110	83	60	50	34	120	23	5.9	3.6
16	14	86	117	99	82	60	68	36	107	24	6.2	3.1
17	13	165	109	90	78	60	95	28	92	21	6.4	2.6
18	12	223	111	82	78	179	88	28	84	18	9.7	2.2
19	11	133	259	85	76	207	349	29	70	16	10	2.0
20	12	119	450	102	70	156	201	38	94	15	10	2.0
21	13	100	296	96	67	96	170	36	344	23	11	2.0
22	13	78	254	91	64	75	134	274	486	16	9.2	1.8
23	14	72	233	92	64	69	99	895	473	13	6.8	1.7
24	13	71	138	90	88	67	72	253	300	12	5.1	1.6
25	12	73	147	83	100	69	62	234	200	11	4.9	1.5
26	13	75	131	80	97	72	56	82	146	9.8	6.4	1.3
27	16	75	134	100	97	74	50	47	117	23	5.9	1.2
28	48	78	197	125	91	75	50	516	359	19	4.7	1.3
29	62	77	186	174	84	75	50	475	670	27	4.0	1.3
30	56	71	157	146	---	97	48	164	434	21	3.6	1.3
31	73	---	148	117	---	87	---	114	---	19	8.8	---
TOTAL	691	2390	4574	3332	2768	2742	2626	3760	12068	1136.8	253.2	141.4
MEAN	22.3	79.7	148	107	95.4	88.5	87.5	121	402	36.7	8.17	4.71
MAX	73	223	450	174	180	207	349	895	2530	175	19	16
MIN	11	52	62	80	64	60	48	28	70	9.8	3.6	1.2
AC-FT	1370	4740	9070	6610	5490	5440	5210	7460	23940	2250	502	280

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1992, BY WATER YEAR (WY)

MEAN	81.8	27.7	34.5	44.5	50.9	47.5	85.3	275	241	57.0	31.9	45.6
MAX	919	196	148	199	196	183	490	1389	1602	575	301	315
(WY)	1961	1987	1992	1960	1949	1969	1973	1957	1941	1953	1968	1986
MIN	.000	.000	.000	.000	.000	.12	.000	.000	.000	.000	.000	.000
(WY)	1941	1940	1940	1940	1953	1971	1955	1953	1952	1963	1943	1939

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1938 - 1992	
ANNUAL TOTAL	28432.01		36482.4			
ANNUAL MEAN	77.9		99.7		85.3	
HIGHEST ANNUAL MEAN					277	1941
LOWEST ANNUAL MEAN					12.3	1940
HIGHEST DAILY MEAN	2800	Jun 7	2530	Jun 6	22600	May 28 1978
LOWEST DAILY MEAN	.26	Aug 28	1.2	Sep 27	.00	Oct 2 1937
ANNUAL SEVEN-DAY MINIMUM	.34	Aug 27	1.4	Sep 24	.00	Aug 14 1938
INSTANTANEOUS PEAK FLOW			4280	Jun 5	72000	May 16 1957
INSTANTANEOUS PEAK STAGE			8.09	Jun 5	14.70	Jun 16 1938
INSTANTANEOUS LOW FLOW					.00	*
ANNUAL RUNOFF (AC-FT)	56390		72360		61780	
10 PERCENT EXCEEDS	163		188		118	
50 PERCENT EXCEEDS	34		66		15	
90 PERCENT EXCEEDS	4.3		6.1		.00	

* No flow at times most years.

07301410 SWEETWATER CREEK NEAR KELTON, TX

LOCATION.--Lat 35°28'23", long 100°07'14", Wheeler County, Hydrologic Unit 11120302, near center of stream at downstream side of bridge on Farm Road 592, 5 mi north of Kelton, 8 mi upstream from Texas-Oklahoma State line, and 8.5 mi northeast of Wheeler.

DRAINAGE AREA.--287 mi², of which 20 mi² probably is noncontributing.

PERIOD OF RECORD.--November 1961 to current year.
Water-quality records.--Chemical analyses: October 1969 to June 1985.

GAGE.--Water stage recorder. Elevation of gage is 2,230 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. There are many small diversions upstream from station for ranch use. Gage-height telemeter at station via Sutron data collection platform.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1882, about 20 ft May 16, 1957.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)

No peak greater than base discharge during year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	e6.9	11	24	18	15	25	10	41	e8.9	e4.4	1.9
2	3.9	e6.6	12	21	18	14	27	9.8	43	e8.4	e4.2	1.7
3	3.6	e7.0	12	21	21	14	25	9.4	33	e8.1	e4.1	1.5
4	3.4	e6.6	11	20	23	23	22	9.2	28	e7.9	e3.9	1.4
5	3.6	e7.4	11	19	22	24	20	8.8	27	e7.6	e3.8	1.3
6	3.7	7.8	11	18	20	20	18	8.1	35	e7.3	e3.6	1.3
7	3.9	7.7	11	19	18	17	17	8.0	32	e6.9	e3.3	1.2
8	3.9	e7.6	11	20	17	18	17	7.6	32	e6.7	e3.1	1.2
9	3.8	8.2	11	19	17	17	16	7.3	29	e6.4	e3.0	1.2
10	3.8	8.3	11	18	17	15	16	7.5	26	e6.2	e2.9	1.2
11	3.9	8.3	12	18	17	15	16	7.9	24	e7.2	e2.7	1.2
12	4.0	8.5	17	18	17	14	15	7.1	22	e6.1	2.5	1.2
13	4.1	8.8	16	17	16	13	15	6.5	21	e6.0	2.0	1.1
14	3.9	8.6	14	16	17	13	15	6.1	18	11	2.0	.99
15	4.0	8.5	14	15	16	13	16	5.4	15	e8.5	2.0	.97
16	4.1	19	13	16	16	13	17	4.6	13	e7.9	1.9	.96
17	4.3	25	13	17	16	13	18	4.1	11	e7.5	2.1	.92
18	4.3	17	13	17	16	16	18	4.1	11	e7.3	2.9	.91
19	4.4	14	22	16	16	16	21	4.2	10	e7.0	2.9	.97
20	4.7	12	37	16	16	14	24	4.4	11	e6.8	2.6	.97
21	5.0	11	38	16	16	15	21	6.9	12	e6.7	2.2	.90
22	4.9	11	36	16	17	13	19	32	11	e6.5	2.0	.85
23	4.7	11	35	16	17	14	17	74	11	e6.3	1.7	.86
24	4.6	12	28	16	17	15	15	31	9.8	e6.1	1.5	.90
25	4.6	12	25	16	17	14	14	22	9.4	e5.9	1.6	.91
26	5.1	12	24	15	16	14	14	32	9.1	e5.6	2.3	.88
27	5.4	11	27	21	16	13	13	35	8.7	e5.4	2.1	.88
28	6.3	11	28	24	16	25	13	53	11	e5.1	1.9	.89
29	6.1	11	27	23	15	28	12	56	14	e5.0	1.6	.89
30	6.3	11	25	22	---	23	11	38	10	e4.8	1.5	.90
31	7.1	---	23	20	---	20	---	33	---	e4.6	1.7	---
TOTAL	139.3	316.8	599	570	501	511	527	553.0	588.0	211.7	80.0	32.95
MEAN	4.49	10.6	19.3	18.4	17.3	16.5	17.6	17.8	19.6	6.83	2.58	1.10
MAX	7.1	25	38	24	23	28	27	74	43	11	4.4	1.9
MIN	3.4	6.6	11	15	15	13	11	4.1	8.7	4.6	1.5	.85
AC-FT	276	628	1190	1130	994	1010	1050	1100	1170	420	159	65
IN.	.02	.04	.08	.08	.07	.07	.07	.08	.08	.03	.01	.00

e Estimated

07301410 SWEETWATER CREEK NEAR KELTON, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1992, BY WATER YEAR (WY)

MEAN	8.80	10.8	11.7	13.0	16.0	18.2	20.7	25.5	20.4	5.28	4.98	7.20
MAX	42.1	34.5	19.3	24.3	29.6	35.3	74.6	196	86.3	32.3	42.7	40.9
(WY)	1987	1975	1992	1987	1987	1988	1970	1977	1965	1967	1963	1988
MIN	.30	1.05	3.11	5.87	7.25	9.09	8.72	3.38	2.80	.44	.000	.027
(WY)	1985	1985	1984	1984	1981	1977	1971	1971	1966	1974	1964	1984

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1963 - 1992	
ANNUAL TOTAL	3594.1		4629.75			
ANNUAL MEAN	9.85		12.6		13.5	
HIGHEST ANNUAL MEAN					26.8	1977
LOWEST ANNUAL MEAN					4.89	1984
HIGHEST DAILY MEAN	47	Jun 22	74	May 23	1820	May 21 1977
LOWEST DAILY MEAN	1.0	Aug 7	.85	Sep 22	.00	Jul 29 1964
ANNUAL SEVEN-DAY MINIMUM	1.1	Aug 3	.88	Sep 22	.00	Jul 29 1964
INSTANTANEOUS PEAK FLOW			*119	May 23	2890	May 20 1977
INSTANTANEOUS PEAK STAGE			8.91	May 23	15.73	May 20 1977
INSTANTANEOUS LOW FLOW			.79	Sep 22	.00	at times
ANNUAL RUNOFF (AC-FT)	7130		9180		9800	
ANNUAL RUNOFF (INCHES)	.50		.65		.69	
10 PERCENT EXCEEDS	16		24		21	
50 PERCENT EXCEEDS	11		11		10	
90 PERCENT EXCEEDS	2.4		1.9		.87	

* No peak discharge greater than base discharge of 500 ft^3/s during year.

07307750 MIDDLE PEASE RIVER NEAR PADUCAH, TX.

LOCATION.--Lat 34°12'31", long 100°18'03", Cottle County, Hydrologic Unit 11120104, on left bank at downstream side of bridge on U.S. Highway 62 and 83, 11.8 mi north of Paducah, and 13.4 mi upstream from mouth.

DRAINAGE AREA.--1,086 mi², of which 65 mi² probably is noncontributing.

PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: May 1973 to Septmber 1979.
WATER TEMPERATURE: May 1973 to September 1979.
SEDIMENT RECORDS: January 1992 to September 1992.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,910 microsiemens Feb. 12, 1975; minimum daily, 802 microsiemens June 10, 1979.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JAN						
14...	1620	80	6.0	256	55	30
FEB						
27...	1240	78	13.5	74	16	42
APR						
07...	1620	26	22.5	44	3.1	63
MAY						
19...	1735	1.3	28.0	20	0.07	56
JUN						
30...	1730	241	27.0	500	325	28

07307800 PEASE RIVER NEAR CHILDRESS, TX

LOCATION.--Lat 34°13'39", long 100°04'24", Cottle County, Hydrologic Unit 11130105, near right bank at downstream side of bridge on Farm Road 104, 0.8 mi upstream from Catfish Creek, 4.4 mi downstream from confluence of North and Middle Forks, 17 mi southeast of Childress, and 71.0 mi upstream from mouth.

DRAINAGE AREA.--2,754 mi², of which 559 mi² probably is noncontributing.

PERIOD OF RECORD.--December 1959 to September 1962 (average discharge for 1961-62 water years excluded from average annual discharge computations), and October 1967 to current year.
Water-quality records.--Chemical analyses: July 1968 to September 1982

GAGE.--Water-stage recorder. Datum of gage is 1,492.98 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 21, 1959, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. There are three small diversions for irrigation above station. Flow is affected at times by discharge from the flood-detention pools of six flood-water-retarding structures with a combined detention capacity of 1,360 acre-ft. These structures control runoff from 6.27 mi² in the Kent Creek drainage basin.

AVERAGE DISCHARGE.--2 years (water years 1961-62), 89.6 ft³/s (0.55 in/yr), 64,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (WATER YEARS 1960-62).--Maximum discharge, 19,000 ft³/s June 9, 1960 (gage height, 13.59 ft), from rating curve extended above 4,000 ft³/s on basis of runoff comparisons with nearby stations.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1909, 22 ft June 1, 1957; flood in May 1935 reached a stage of 18 ft and was the second highest, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft³/s.

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 15	0800	6,500	11.27	June 7	0500	2,400	9.98

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	65	21	e175	e130	96	64	e52	538	356	5.9	51
2	53	60	22	e165	e115	91	59	e47	761	208	10	53
3	47	55	23	e158	e250	90	76	e45	462	122	9.7	28
4	36	49	23	e150	e600	93	76	e42	348	117	6.5	23
5	30	47	27	e140	e500	96	63	e39	536	86	6.9	23
6	28	42	28	e135	e340	101	63	e37	685	75	8.6	22
7	27	38	28	e130	e250	96	64	e35	1750	46	8.9	20
8	25	37	27	e125	e170	96	64	e33	779	26	8.4	18
9	23	37	25	e122	e140	78	56	e31	657	21	8.3	15
10	21	34	25	e120	e130	69	51	e29	526	16	9.1	13
11	20	33	34	e120	e125	69	48	e28	478	13	10	16
12	20	35	184	e135	e120	68	e28	e27	330	34	20	16
13	19	36	143	e256	e110	66	e24	e25	296	99	21	14
14	17	37	107	e278	e105	63	e21	e24	225	39	18	13
15	16	38	95	e190	e100	59	e2930	e23	173	15	17	13
16	16	58	89	e150	e95	62	e701	e22	143	7.3	17	13
17	16	86	79	e140	e90	69	e413	e21	117	5.4	17	12
18	15	87	79	e130	e85	69	e246	e20	98	5.5	18	11
19	13	69	162	e120	e82	59	e200	e19	90	5.7	18	10
20	13	62	e210	e115	e78	56	e170	18	78	4.7	19	9.0
21	15	52	e227	e120	e76	61	e150	16	132	4.4	17	8.0
22	14	46	e321	e130	e74	50	e130	150	412	4.5	16	7.2
23	14	40	e333	e125	e72	51	e115	195	272	4.7	15	6.6
24	13	36	e254	e105	e100	53	e100	248	187	4.5	14	6.2
25	12	34	e208	e90	e280	48	e88	192	151	4.5	19	6.0
26	13	32	e208	e85	e320	51	e80	175	126	4.7	43	5.8
27	16	29	e263	e150	e160	52	e72	134	141	10	32	5.5
28	164	29	e246	e300	127	66	e65	190	658	12	22	5.3
29	70	27	e220	e330	104	57	e60	233	703	6.6	19	5.2
30	46	21	e200	e250	---	54	e56	153	565	6.0	18	5.1
31	57	---	e185	e160	---	52	---	135	---	5.8	19	---
TOTAL	947	1351	4096	4899	4928	2141	6333	2438	12417	1369.3	491.3	453.9
MEAN	30.5	45.0	132	158	170	69.1	211	78.6	414	44.2	15.8	15.1
MAX	164	87	333	330	600	101	2930	248	1750	356	43	53
MIN	12	21	21	85	72	48	21	16	78	4.4	5.9	5.1
AC-FT	1880	2680	8120	9720	9770	4250	12560	4840	24630	2720	974	900
CFSM	.01	.02	.06	.07	.08	.03	.10	.04	.19	.02	.01	.01
IN.	.02	.02	.07	.08	.08	.04	.11	.04	.21	.02	.01	.01

e Estimated

0730/800 PEASE RIVER NEAR CHILDRESS, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992, BY WATER YEAR (WY)

MEAN	102	24.2	17.9	19.7	23.1	31.3	45.2	94.4	206	41.8	48.5	87.4
MAX	895	153	132	158	170	181	215	341	766	172	257	380
(WY)	1984	1987	1992	1992	1992	1973	1973	1982	1985	1979	1968	1989
MIN	1.68	3.04	3.74	2.70	2.83	2.78	3.32	5.99	4.08	.28	.13	1.23
(WY)	1981	1978	1979	1971	1971	1971	1974	1975	1970	1980	1980	1980

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1968 - 1992	
ANNUAL TOTAL	34647.2		41864.5			
ANNUAL MEAN	94.9		114		61.8	
HIGHEST ANNUAL MEAN					144	1987
LOWEST ANNUAL MEAN					16.2	1983
HIGHEST DAILY MEAN	6940	Jun 2	2930	Apr 15	14800	Oct 20 1983
LOWEST DAILY MEAN	3.8	Aug 8	4.4	Jul 21	.00	Aug 10 1969
ANNUAL SEVEN-DAY MINIMUM	4.8	Mar 23	4.6	Jul 20	.00	Aug 10 1969
INSTANTANEOUS PEAK FLOW			6500	Apr 15	19000	Jun 9 1960
INSTANTANEOUS PEAK STAGE			11.27	Apr 15	14.83	Oct 20 1983
INSTANTANEOUS LOW FLOW			3.0	Jul 25	.00	*
ANNUAL RUNOFF (AC-FT)	68720		83040		44790	
ANNUAL RUNOFF (CFSM)	.043		.052		.028	
ANNUAL RUNOFF (INCHES)	.59		.71		.38	
10 PERCENT EXCEEDS	201		250		90	
50 PERCENT EXCEEDS	18		56		8.7	
90 PERCENT EXCEEDS	5.8		10		1.4	

* No flow Aug. 10-22, 1969, and May 25, 26, 1971.

07308200 PEASE RIVER NEAR VERNON, TX

LOCATION.--Lat 34°10'45", long 99°16'40", Wilbarger County, Hydrologic Unit 11130105, near left bank at downstream side of bridge on U. S. Highway 283, 1.9 mi north of Vernon, and 10 mi upstream from mouth.

DRAINAGE AREA.--3,488 mi², of which 55 mi² probably is noncontributing.

PERIOD OF RECORD.--December 1959 to September 1982 (discontinued as a continuous record station; converted to a crest-stage partial record station; discontinued as a partial-record station in 1987; reestablished as a continuous-record station in March 1992.
Water-quality records.--Chemical analyses: November 1967 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 1,166.03 ft above National Vertical Datum of 1929.

REMARKS.--Records fair. Four small diversions for irrigation above station. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 07307800.

AVERAGE DISCHARGE.--22 years (water years 1961-1982), 107 ft³/s, 77,520 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,500 ft³/s Oct. 2, 1983 (gage height, 20.15 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 24 ft in 1891. The flood in September 1936 reached a stage of 23.5 ft, and the flood of June 2, 1957, reached a stage of 22.0 ft, from information by local residents.

EXTREMES DURING PERIOD MARCH 20 TO SEPTEMBER 30.--Peak discharges greater than base discharge of 2,500 ft³/s.

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 17	1100	4,310	13.07	June 8	0600	11,900	15.87

Minimum discharge during period March 20 to September 30, 5.9 ft³/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	115	98	229	780	91	169
2	---	---	---	---	---	---	120	86	835	575	45	106
3	---	---	---	---	---	---	120	79	1170	403	40	100
4	---	---	---	---	---	---	123	72	922	308	38	65
5	---	---	---	---	---	---	124	66	668	243	30	56
6	---	---	---	---	---	---	130	60	1520	208	26	80
7	---	---	---	---	---	---	128	55	2440	175	23	89
8	---	---	---	---	---	---	123	51	6590	148	17	66
9	---	---	---	---	---	---	117	49	2350	129	13	43
10	---	---	---	---	---	---	115	47	1460	115	12	35
11	---	---	---	---	---	---	113	56	1090	105	15	34
12	---	---	---	---	---	---	105	48	680	97	24	31
13	---	---	---	---	---	---	104	44	529	91	171	28
14	---	---	---	---	---	---	104	39	407	90	114	24
15	---	---	---	---	---	---	103	51	390	114	62	21
16	---	---	---	---	---	---	114	36	335	137	42	18
17	---	---	---	---	---	---	2720	34	251	115	30	16
18	---	---	---	---	---	---	1080	33	207	88	25	14
19	---	---	---	---	---	---	719	34	176	77	24	12
20	---	---	---	---	---	145	465	36	149	67	23	19
21	---	---	---	---	---	132	442	56	147	59	21	13
22	---	---	---	---	---	123	355	93	178	54	18	10
23	---	---	---	---	---	121	335	83	273	50	16	9.3
24	---	---	---	---	---	118	238	119	393	47	13	8.8
25	---	---	---	---	---	117	192	267	297	43	12	8.4
26	---	---	---	---	---	118	162	382	214	39	95	8.2
27	---	---	---	---	---	126	144	285	185	37	113	9.0
28	---	---	---	---	---	149	128	293	229	36	102	7.8
29	---	---	---	---	---	132	115	299	1240	34	66	7.2
30	---	---	---	---	---	127	108	281	680	34	47	7.0
31	---	---	---	---	---	117	---	293	---	80	84	---
TOTAL	---	---	---	---	---	---	9061	3525	26234	4578	1452	1114.7
MEAN	---	---	---	---	---	---	302	114	874	148	46.8	37.2
MAX	---	---	---	---	---	---	2720	382	6590	780	171	169
MIN	---	---	---	---	---	---	103	33	147	34	12	7.0
AC-FT	---	---	---	---	---	---	17970	6990	52040	9080	2880	2210

CAL YR 1991 TOTAL --- MEAN --- MAX --- MIN --- AC-FT ---
WTR YR 1992 TOTAL --- MEAN --- MAX --- MIN --- AC-FT ---

07308500 RED RIVER NEAR BURKBURNETT, TX

LOCATION.--Lat 34°06'36", long 98°31'53", Cotton County, Okla., Hydrologic Unit 11130102, on left bank at downstream side of bridge on U.S. Highways 277 and 281, 2.5 mi northeast of Burkburnett, and at mile 933.

DRAINAGE AREA.--20,570 mi², of which 5,936 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1924 to August 1925 (monthly discharge only), December 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 952.57 ft above National Geodetic Vertical Datum of 1929. July 11, 1924, to Aug. 31, 1925, nonrecording gage at site 1,000 ft downstream at same datum. Dec. 16, 1959, to Jan. 11, 1960, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. There are many small diversions upstream from station for irrigation, but total amounts are unknown.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 3, 1957, reached a stage of 13.54 ft, from levels to floodmarks. According to local residents, higher stages occurred in 1891 and June 1941.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 20	2400	31,300	a/10.88	June 8	1800	27,200	10.46
Apr. 18	0400	9,070	8.80				

a/ From highwater mark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	688	1130	722	2900	1670	1310	942	471	2710	4430	1800	4320
2	e689	e1180	731	2600	1620	1160	1100	409	2880	3720	1430	3030
3	e639	1010	722	2390	1520	1080	1040	356	7100	3880	903	4020
4	e583	995	708	2320	2310	1820	928	343	4020	3410	805	2360
5	e530	931	688	2340	5470	2550	899	305	3930	2620	755	1570
6	e496	854	685	2290	4270	2580	886	251	5530	2080	585	1270
7	480	826	680	2240	3740	1820	849	229	12600	1410	460	1630
8	466	774	676	2040	2950	2120	816	215	23000	1030	397	1530
9	453	695	693	1910	2360	4470	784	199	16800	811	352	2820
10	467	660	694	1810	2010	3000	731	205	9230	719	322	1400
11	482	655	741	1730	1880	2110	674	555	4720	682	322	940
12	476	647	1070	1650	1810	1820	735	292	4300	689	346	742
13	467	648	1290	1970	1720	1670	801	216	2800	649	393	639
14	461	667	2460	2720	1580	1610	648	244	1950	1120	497	563
15	448	695	2330	3200	1430	1550	581	202	1470	1080	565	493
16	430	755	2070	2870	1430	1520	647	220	1330	881	377	438
17	418	844	1700	2450	1370	1440	1180	418	1140	917	294	408
18	397	967	1610	2230	1260	1470	8100	327	1020	1630	285	389
19	381	1200	2130	1990	1110	1420	5620	319	928	1650	288	360
20	366	1370	19500	1800	1010	1310	4500	578	1100	1860	282	369
21	371	1520	23200	1800	890	1430	2960	567	1200	1260	308	374
22	372	1300	14800	1840	876	1740	2730	403	e1380	969	306	320
23	369	1110	12200	1760	886	1550	2860	394	3540	796	305	300
24	364	965	10000	1590	975	1170	2050	1080	2150	772	319	288
25	364	878	7440	1430	2040	1020	1430	1980	1700	686	286	285
26	392	822	5630	1380	2930	991	1120	1410	1420	618	272	262
27	372	784	5640	1480	2010	987	902	1510	1240	635	555	253
28	1470	773	5230	1490	1780	1120	701	1910	1330	608	2710	257
29	e4640	751	4440	1620	1500	1130	610	3530	1560	639	2580	261
30	2060	724	3720	1720	---	1020	541	4200	5860	991	1640	251
31	1360	---	3280	1680	---	961	---	3280	---	2340	1220	---
TOTAL	21951	27130	137480	63240	56407	50949	48365	26618	129938	45582	21959	32142
MEAN	708	904	4435	2040	1945	1644	1612	859	4331	1470	708	1071
MAX	4640	1520	23200	3200	5470	4470	8100	4200	23000	4430	2710	4320
MIN	364	647	676	1380	876	961	541	199	928	608	272	251
AC-FT	43540	53810	272700	125400	111900	101100	95930	52800	257700	90410	43560	63750

e Estimated

07308500 RED RIVER NEAR BURKBURNETT, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1992, BY WATER YEAR (WY)

MEAN	1712	630	474	418	469	650	774	2173	3130	784	532	1238
MAX	14900	4960	4435	2040	3024	3552	5987	12470	13480	5947	2107	4244
(WY)	1987	1987	1992	1992	1987	1987	1973	1977	1991	1975	1979	1965
MIN	21.9	.96	2.98	5.53	8.37	7.97	.15	11.4	148	.058	1.29	32.2
(WY)	1971	1971	1971	1971	1971	1971	1971	1971	1970	1970	1964	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1961 - 1992	
ANNUAL TOTAL	876711		661761			
ANNUAL MEAN	2402		1808		1083	
HIGHEST ANNUAL MEAN					4424	1987
LOWEST ANNUAL MEAN					178	1964
HIGHEST DAILY MEAN	91800	Jun 4	23200	Dec 21	121000	Oct 22 1983
LOWEST DAILY MEAN	164	Apr 16	199	May 9	.00	Jul 19 1964
ANNUAL SEVEN-DAY MINIMUM	175	Apr 16	250	May 4	.00	Jul 19 1964
INSTANTANEOUS PEAK FLOW			31300	Dec 20	166000	Oct 21 1983
INSTANTANEOUS PEAK STAGE			10.88	Dec 20	16.90	Oct 21 1983
INSTANTANEOUS LOW FLOW			165	May 15	.00	at times
ANNUAL RUNOFF (AC-FT)	1739000		1313000		784400	
10 PERCENT EXCEEDS	3820		3590		2080	
50 PERCENT EXCEEDS	676		1100		269	
90 PERCENT EXCEEDS	231		350		46	

07308500 RED RIVER NEAR BURKBURNETT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: May 1968 to September 1974. Chemical and biochemical analyses: October 1974 to current year. Pesticide analyses: October 1973 to September 1982.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1968 to September 1981.
WATER TEMPERATURE: July 1968 to September 1981.

INSTRUMENTATION.--From December 1968 to September 1979, specific conductance was continuously recorded at this station.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 17,400 microsiemens July 30, 1972; minimum daily, 889 microsiemens Sept. 24, 1970.
WATER TEMPERATURE: Maximum daily, 35.5°C June 29, 1980; minimum daily, 0.0°C on many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 15...	1040	689	8710	8.2	14.0	42	9.7	100	1.6	340	530	1500
JAN 24...	0930	1590	7490	8.3	6.0	59	12.1	103	1.0	40	390	1600
MAR 19...	0900	1440	7200	8.2	11.0	26	11.4	109	3.7	K55	K45	1500
MAY 08...	0930	227	8220	8.2	17.5	32	11.2	124	7.7	K14	K36	1500
AUG 07...	0800	903	6210	7.6	24.0	48	9.8	123	4.5	K50	K2100	1000

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV 15...	1300	400	130	1300	14	9.9	0	253	207	210	1100	2200
JAN 24...	1400	390	150	1100	12	8.8	0	285	234	230	1100	1800
MAR 19...	1300	360	140	1100	12	3.7	0	200	164	160	1200	1700
MAY 08...	1400	370	130	1300	15	10	0	119	98	98	1400	2000
AUG 07...	970	250	99	950	13	11	0	76	62	62	1000	1500

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
NOV 15...	1.0	10	5520	5290	1.48	1.38	0.020	0.020	1.50	1.40	0.070	0.070
JAN 24...	0.80	10	5130	4710	1.57	1.57	0.030	0.030	1.60	1.60	0.070	0.080
MAR 19...	0.30	5.2	4590	4610	0.330	0.350	0.040	0.010	0.370	0.360	0.030	0.020
MAY 08...	0.80	5.9	5600	5280	--	--	0.030	<0.010	<0.050	0.075	0.030	0.010
AUG 07...	0.50	7.6	4350	3860	--	--	<0.010	<0.010	<0.050	<0.050	0.020	0.010

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
NOV 15...	0.43	0.50	0.100	0.050	0.030	0.030	0.09	118	220	98	20
JAN 24...	0.53	0.60	0.130	0.040	0.030	0.030	0.09	171	734	96	--
MAR 19...	0.97	1.0	0.080	<0.010	<0.010	0.030	--	97	377	98	<10
MAY 08...	0.57	0.60	0.060	<0.010	<0.010	0.090	--	85	52	95	<10
AUG 07...	0.88	0.90	0.100	<0.010	<0.010	0.030	--	112	273	100	<10

07308500 RED RIVER NEAR BURKBURNETT, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)
NOV 15...	100	<1	140	80	20	4	2	4	<1.0	4600	54
JAN 24...	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	100	<1	<10	80	20	4	<1	3	<1.0	4600	38
MAY 08...	200	<1	<10	90	20	4	2	3	<1.0	4900	45
AUG 07...	200	<1	20	70	10	4	2	4	<1.0	4000	39

07311669 TRUSCOTT BRINE LAKE NEAR TRUSCOTT, TX

LOCATION.--Lat 33°47'52", long 99°50'11", Knox County, Hydrologic Unit 11130204, in gage house on top and near center of dam on Bluff Creek, 3.0 mi northeast of Truscott, and 3.6 mi upstream from mouth.

DRAINAGE AREA.--26.2 mi².

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--The lake is formed by a rolled-filled earthen structure with a 2-foot thick blanket of soil cement normal to the upstream slope. The dam is 16,080 ft long with a maximum height of 107 ft above the streambed. The uncontrolled spillway is a saddle-type sodded spillway on right end of dam 1,000 ft wide. Elevation-spillway discharge points furnished by U.S. Army Corps of Engineers show a discharge of 13,200 and 35,400 ft³/s at elevations of 1,502.00 and 1,508.00 ft, respectively. The lake is operated and maintained by the U.S. Army Corps of Engineers for the purpose of storage and evaporation of water pumped from the South and Middle Wichita Rivers as part of Red River Chloride project. Gage-height telemeter at station. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	1,512.5	-
Crest of spillway	1,499.0	107,000

COOPERATION.--The area and capacity tables 1-A and 1-C are provided by the U.S. Army Corps of Engineers, Tulsa District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 33,270 acre-ft July 5, 1992 (elevation, 1,466.99 ft); minimum, 1,190 acre-ft Oct. 18, 19, 1984 (elevation, 1,429.47 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 33,270 acre-ft July 5 at 1500 hours (elevation, 1,466.99 ft); minimum, 22,780 acre-ft Oct. 25 (elevation, 1,459.89 ft).

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

1,459.0	21,610	1,465.0	30,120
1,461.0	24,290	1,467.0	33,290
1,463.0	27,120		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22930	22910	23240	24540	26580	28620	29260	30140	31060	e33150	32860	32860
2	22940	22880	23280	24570	26620	28660	29260	30090	e31610	e33190	32860	32910
3	22940	22890	23300	24600	26720	28680	29330	30110	e31630	e33210	32790	32890
4	22900	22900	23300	24670	26930	28720	29360	30110	e31610	e33230	32790	32830
5	22870	22920	23320	24680	26980	28740	29360	30110	e31630	e33150	32790	32810
6	22860	22930	23350	24710	27000	28810	29400	30050	e31850	e33180	32780	32810
7	22850	22890	23390	24740	27050	28840	29440	30080	e31950	e33130	32710	32750
8	22860	22930	23390	24750	27090	28850	29460	30060	e32050	33110	32700	32700
9	22860	22980	23390	24750	27140	28780	29470	30030	e32180	33090	32670	32710
10	22900	22970	23370	24790	27200	28770	29490	30090	e32170	33090	32680	32670
11	22910	22960	23560	24810	27230	28820	29540	30250	e32170	33070	32710	32680
12	22900	23000	23570	24860	27240	28850	29470	30280	e32170	33020	32750	32630
13	22890	23050	23580	24930	27260	28880	29540	30320	e32150	32950	32750	32600
14	22860	23070	23570	25060	27340	28920	29590	30370	e32200	33030	32700	32590
15	22860	23090	23600	25190	27370	28940	29600	30360	e32270	32970	32670	32570
16	22880	23150	23640	25380	27420	28970	29790	30360	e32280	32990	32650	32570
17	22890	23150	23640	25540	27430	28980	29980	30360	e32310	32990	32600	32570
18	22860	23190	23690	25750	27430	29000	30000	30370	e32350	33030	32600	32570
19	22810	23160	23920	25930	27460	29000	29990	30390	e32360	33030	32600	32520
20	22830	23190	24140	26100	27510	29010	29980	30400	e32360	33030	32620	32490
21	22840	23200	24150	26280	27530	29050	30000	30400	e32380	33030	32620	32520
22	22850	23180	24290	26380	27560	29010	30050	30430	e32390	33030	32590	32470
23	22850	23170	24280	26360	27620	29040	30060	30460	e32460	33020	32550	32460
24	22830	23190	24290	26390	28270	29080	30050	30500	e32520	32970	32520	32390
25	22840	23190	24320	26390	28400	29100	30020	30530	e32520	32940	32530	32310
26	22850	23230	24360	26450	28450	29140	30060	30530	e32620	32940	32650	32360
27	22980	23230	24390	26490	28490	29170	30080	30510	e32880	32920	32650	32390
28	23010	23300	24430	26520	28540	29230	30120	30540	e33150	32910	32630	32360
29	22940	23270	24470	26530	28590	29210	30090	30580	e33130	32860	32590	32310
30	22920	23260	24470	26550	---	29230	30110	30620	e33130	32860	32650	32300
31	22910	---	24530	26580	---	29260	---	30650	---	32890	32670	---
MAX	23010	23300	24530	26580	28590	29260	30120	30650	33150	33230	32860	32910
MIN	22810	22880	23240	24540	26580	28620	29260	30030	31060	32860	32520	32300
(†)	1459.99	1460.24	1461.17	1462.62	1463.91	1464.40	1464.99	1465.34	1466.90	1466.75	1466.61	1466.38
(ϕ)	-10	+350	+1270	+2050	+2010	+670	+850	+540	+2480	-240	-220	-440

CAL YR 1991 MAX 24530 MIN 20260 (ϕ) +4290
WTR YR 1992 MAX 33230 MIN 22810 (ϕ) +9380

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

e Estimated

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX

LOCATION.--Lat 33°49'14", long 99°47'10", Foard-Knox County line, Hydrologic Unit 11130204, near right bank at downstream side of bridge on State Highway 6, 4.5 mi north of Truscott, about 47.6 mi upstream from confluence with South Wichita River, and 188.4 mi upstream from mouth.

DRAINAGE AREA.--937 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1952-57 (occasional low-flow measurements), December 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,351.78 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 2, 1960, nonrecording gage at same site and datum.

REMARKS.--Records good. There is one small diversion for irrigation upstream from station. Gage-height telemeter at station via Sutron data collection platform.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900 occurred in September 1919; the next highest flood occurred in May 1954, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 24	2300	1,370	12.40	June 8	0700	6,240	18.31
Apr. 18	0100	2,650	15.41	June 12	0400	1,110	11.40
June 2	1100	1,800	13.64	June 28	1400	2,710	15.70
June 6	1300	1,820	13.70				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	52	34	66	70	84	54	54	170	197	e141	157
2	62	53	33	63	72	80	55	50	1390	143	e224	117
3	59	48	32	62	91	78	52	47	703	110	e94	83
4	55	46	32	62	426	80	e50	45	189	114	49	51
5	51	45	31	62	287	75	e50	45	372	131	45	42
6	49	44	31	58	201	71	e49	44	1360	95	44	37
7	48	43	32	57	130	68	49	43	1210	80	41	36
8	47	42	33	54	107	67	46	42	4370	73	38	34
9	46	42	34	52	98	63	44	42	2340	69	36	32
10	45	41	33	51	91	59	44	46	1510	67	35	31
11	44	41	42	51	84	58	43	99	529	64	34	33
12	43	42	172	52	79	59	41	54	748	63	84	33
13	41	42	90	74	77	59	41	49	311	69	58	33
14	40	43	54	94	76	58	42	53	220	63	40	30
15	39	44	44	72	72	57	46	39	178	61	36	32
16	40	45	41	65	71	56	66	37	157	60	35	32
17	40	46	38	63	71	65	1610	37	140	114	34	30
18	40	43	36	70	69	75	1420	36	128	70	35	30
19	39	41	209	68	66	91	263	40	119	60	36	30
20	39	40	787	69	66	63	143	55	112	56	36	30
21	39	39	470	78	66	58	106	48	114	54	35	31
22	39	38	403	80	68	55	88	48	114	53	34	30
23	39	37	269	72	68	52	78	42	107	50	33	29
24	39	36	169	66	594	50	71	46	103	48	31	29
25	49	36	110	64	688	50	67	68	100	46	31	29
26	42	36	92	67	203	49	65	75	134	44	134	28
27	51	36	85	97	130	50	63	58	923	46	85	29
28	470	36	79	96	103	70	62	62	2100	46	51	29
29	163	36	75	85	92	63	60	75	1540	45	39	29
30	77	34	71	79	---	52	57	78	415	43	37	30
31	68	---	68	74	---	51	---	61	---	58	39	---
TOTAL	2009	1247	3729	2123	4316	[illegible]	4925	1618	21906	2292	1724	1226
MEAN	64.8	41.6	120	68.5	149	63.4	164	52.2	730	73.9	55.6	40.9
MAX	470	53	787	97	688	91	1610	99	4370	197	224	157
MIN	39	34	31	51	66	49	41	36	100	43	31	28
AC-FT	3980	2470	7400	4210	8560	3900	9770	3210	43450	4550	3420	2430
IN.	.08	.05	.15	.08	.17	.08	.20	.06	.87	.09	.07	.05

e Estimated

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1992, BY WATER YEAR (WY)

MEAN	118	28.6	25.3	24.0	26.9	31.4	46.9	111	150	43.3	74.7	118
MAX	1170	71.1	120	68.5	149	102	275	771	730	317	1266	818
(WY)	1984	1987	1992	1992	1992	1990	1990	1987	1992	1975	1966	1965
MIN	3.90	10.4	11.8	8.23	6.16	5.49	7.61	16.4	11.9	.72	1.17	3.51
(WY)	1964	1968	1964	1965	1965	1965	1964	1965	1970	1964	1964	1968

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1961 - 1992	
ANNUAL TOTAL	41882		49081			
ANNUAL MEAN	115		134		66.6	
HIGHEST ANNUAL MEAN					193	1966
LOWEST ANNUAL MEAN					17.2	1983
HIGHEST DAILY MEAN	8160	Jun 3	4370	Jun 8	19400	Sep 19 1965
LOWEST DAILY MEAN	12	Apr 3	28	Sep 26	.02	Aug 22 1974
ANNUAL SEVEN-DAY MINIMUM	13	Apr 1	29	Sep 23	.13	Jul 30 1965
INSTANTANEOUS PEAK FLOW			6240	Jun 8	28900	Sep 19 1965
INSTANTANEOUS PEAK STAGE			18.31	Jun 8	21.96	Sep 19 1965
INSTANTANEOUS LOW FLOW			26	Sep 26	.01	Jul 25 1964
ANNUAL RUNOFF (AC-FT)	83070		97350		48230	
ANNUAL RUNOFF (INCHES)	1.66		1.95		.97	
10 PERCENT EXCEEDS	116		171		65	
50 PERCENT EXCEEDS	34		56		19	
90 PERCENT EXCEEDS	16		34		7.2	

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: February 1954 to March 1959, July 1968 to December 1989, September 1990 to current year. Sediment analyses: April 1978 to December 1989 .

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1968 to December 1989, September 1990 to September 1991 (discontinued).
WATER TEMPERATURE: July 1968 to December 1989, September 1990 to September 1991 (discontinued).

INSTRUMENTATION.--From August 1968 to December 1989, September 1990 to September 1991, specific conductance was recorded continuously at this station. From June 1982 to December 1989, September 1990 to September 1991, water temperature was recorded continuously at this station.

REMARKS.--Where maximum and minimum specific conductance values are not shown, mean values are estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 35,800 microsiemens Oct. 9, 1982; minimum, 400 microsiemens June 7, 8, 1985.
WATER TEMPERATURE: Maximum, 39.0°C Aug. 21, 23, 1969, Aug. 22, 1973; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 20,900 microsiemens Apr. 17, 18; minimum, 500 microsiemens June 3, Sept. 19.
WATER TEMPERATURE: Maximum, 34.5°C July 8; minimum, 0.0°C on several days during December and January.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
NOV										
18...	1255	43	13300	8.0	14.5	9.4	102	2200	2000	620
JAN										
17...	1230	63	11000	8.2	4.0	15.4	128	2300	2100	610
MAR										
10...	1030	62	10500	--	9.0	--	--	2200	2000	560
13...	1220	59	11100	8.0	15.0	13.7	147	2600	2400	630
APR										
17...	1345	2130	2480	--	17.0	--	--	680	620	200
MAY										
01...	1250	54	10100	8.0	24.5	9.9	128	2100	2000	560
JUL										
06...	1145	95	7300	7.9	28.0	9.4	129	1700	1600	440
AUG										
03...	1400	68	10900	8.0	29.0	9.7	136	2100	2000	580

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV										
18...	160	2100	19	12	160	2200	3300	1.1	4.0	8490
JAN										
17...	190	1600	15	11	200	2000	2500	0.90	6.2	7040
MAR										
10...	200	1400	13	20	170	2200	2300	0.40	2.7	6790
13...	240	1500	13	13	170	2200	2500	0.10	3.3	7190
APR										
17...	45	250	4	7.5	66	610	360	0.30	7.0	1520
MAY										
01...	180	1600	15	13	150	2000	2600	0.50	3.8	7050
JUL										
06...	150	1000	11	12	160	1700	1500	<0.10	7.8	4900
AUG										
03...	160	1700	16	11	120	2000	2800	0.70	7.0	7330

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)
NOV										
18...	0.530	0.010	0.540	0.050	--	<0.20	0.020	0.010	--	--
JAN										
17...	0.750	0.020	0.770	0.070	0.13	0.20	0.020	<0.010	2	<100
MAR										
10...	--	--	--	--	--	--	--	--	--	--
13...	0.400	0.010	0.410	0.050	--	<0.20	<0.010	0.010	--	--
APR										
17...	--	--	--	--	--	--	--	--	--	--
MAY										
01...	0.073	0.020	0.093	0.120	0.18	0.30	<0.010	0.040	--	--
JUL										
06...	0.130	0.040	0.170	0.100	0.50	0.60	0.080	0.080	11	100
AUG										
03...	0.200	0.020	0.220	0.060	0.14	0.20	<0.010	0.010	--	--

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV										
18...	--	--	--	--	--	--	--	--	--	--
JAN										
17...	<1.0	<2	2	<10	<1	20	0.3	7	<1.0	<10
MAR										
10...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
APR										
17...	--	--	--	--	--	--	--	--	--	--
MAY										
01...	--	--	--	--	--	--	--	--	--	--
JUL										
06...	<1.0	<1	2	<10	<1	20	<0.1	6	<1.0	<10
AUG										
03...	--	--	--	--	--	--	--	--	--	--

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	10500	10200	10300	9110	7790	8430	14200	14000	14100	9390	8980	9190
2	11000	10400	10700	8020	7800	7900	14100	14000	14000	9620	9290	9520
3	11200	10900	11000	8340	8020	8160	14100	13900	14000	9970	9520	9780
4	11300	11000	11200	9180	8440	8780	14100	14000	14100	10100	9780	9970
5	11400	11100	11200	9910	9280	9640	14200	14000	14100	10300	9940	10100
6	11600	11100	11400	10700	10000	10300	14200	14100	14200	10700	10300	10500
7	11700	11400	11600	11300	10700	11100	14300	14100	14200	10800	10600	10700
8	12000	11500	11800	11700	11400	11500	14300	14100	14200	11100	10800	10900
9	12200	11900	12000	11900	11600	11800	14200	14000	14200	11400	11000	11200
10	12200	11900	12100	12100	11900	12000	14200	14100	14200	11500	10500	11300
11	12400	12100	12300	12400	12100	12200	14200	11100	13700	11800	11400	11600
12	---	---	e12400	12600	12300	12500	11900	6150	8350	12000	11600	11800
13	---	---	e12500	12800	12600	12700	9330	5940	7790	11700	9550	11000
14	---	---	e12600	12800	12700	12800	10600	9330	10200	---	---	e10300
15	12900	12800	12800	12900	12700	12800	11400	10500	10800	---	---	e10500
16	13100	12700	12900	12800	12600	12700	12200	11500	11900	---	---	e10800
17	13300	13000	13100	13100	12700	12900	12600	12200	12400	---	---	e11000
18	13400	13100	13200	13200	13000	13000	12600	10600	12300	---	---	e10400
19	13600	13200	13400	13100	13000	13100	10900	3220	7750	---	---	e10000
20	13800	13500	13600	13200	13000	13100	4810	2400	2950	---	---	e10000
21	---	---	e13700	13300	13000	13200	7330	3890	5470	---	---	e9800
22	---	---	e13800	13600	13200	13400	3890	2120	2780	---	---	e9700
23	---	---	e13900	13600	13500	13500	4290	2330	3280	---	---	e9800
24	---	---	e14000	13700	13500	13600	5700	4500	5180	10400	10000	10200
25	---	---	e13000	13800	13600	13700	5600	5090	5390	10700	10300	10600
26	---	---	e10000	13800	13600	13700	5610	5400	5500	10700	8860	10400
27	---	---	e6000	13900	13600	13700	6420	5710	6040	9880	9370	9560
28	6040	3010	4020	14200	13700	13900	7340	6530	6940	9470	9270	9320
29	8930	6570	7500	14200	13900	14000	8160	7450	7790	9570	9270	9440
30	9450	8980	9240	14200	14000	14100	8680	8160	8410	---	---	e10000
31	9200	9000	9100	---	---	---	9090	8680	8890	---	---	e10400
MONTH	13800	3010	11500	14200	7790	12100	14300	2120	9840	12000	8860	10300

e Estimated

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	e10600	---	---	e7500	10000	8950	9270	---	---	e9500
2	---	---	e10300	---	---	e8000	11000	9390	10200	---	---	e10000
3	---	---	e10100	---	---	e8200	---	---	11100	---	---	e10500
4	---	---	e4000	---	---	e8500	---	---	e11200	---	---	e11000
5	---	---	e5000	---	---	e9000	---	---	e11300	11900	11700	11800
6	---	---	e5500	---	---	e9500	---	---	e11400	11700	10300	11300
7	---	---	e6000	---	---	e10000	11700	11400	11500	11200	10300	10900
8	---	---	e6500	---	---	e10200	11800	11500	11600	11300	10000	10600
9	---	---	e7000	---	---	e10300	11800	11500	11600	11300	10000	10500
10	---	---	e7400	---	---	e10500	11900	11500	11700	10800	5700	9900
11	---	---	e8000	---	---	e10600	12100	11700	11900	10100	2500	6260
12	---	---	e8600	10800	10000	10600	11900	11800	11800	11200	8300	10100
13	---	---	e8900	10800	10200	10700	12100	11700	11900	11900	6900	10500
14	---	---	e9500	11000	10100	10800	12300	11900	12000	11000	3900	8600
15	---	---	e10000	11000	10200	10800	12200	11600	12000	12600	11200	12100
16	---	---	e9800	11700	10900	11300	11900	8100	11600	12800	12500	12600
17	---	---	e10000	11300	10900	11100	10000	2100	3840	12800	12600	12700
18	---	---	e10600	11600	11000	11300	2500	1400	1650	13000	12500	12800
19	---	---	e10700	12000	11300	11600	2700	2000	2380	12900	12400	12700
20	---	---	e10500	12000	11700	11900	3400	2700	3090	12600	5800	11000
21	---	---	e10600	11500	10200	10700	4300	3400	3860	12600	11700	12100
22	---	---	e11200	10400	9570	10200	---	---	e6000	12500	11900	12300
23	---	---	e11000	9560	9070	9260	---	---	e7400	12200	10700	11200
24	---	---	e4000	9410	9040	9220	8900	7000	7950	11600	11100	11300
25	---	---	e4500	9780	9260	9520	9000	8700	8820	11600	6800	10200
26	---	---	e5300	10200	9720	9940	9000	8700	8840	12000	9100	10700
27	---	---	e6000	10500	10100	10300	8900	8700	8810	12200	11600	12000
28	---	---	e6500	11300	10100	10600	---	---	e8800	11500	9500	10400
29	---	---	e7000	11800	11300	11600	---	---	e8900	11300	9900	10700
30	---	---	---	11600	11300	11500	---	---	e9000	11600	9900	10700
31	---	---	---	11500	10200	11300	---	---	---	11900	10300	11600
MONTH	---	---	8110	12000	9040	10200	12300	1400	9050	13000	2500	10900

e Estimated

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	11200	2400	6510	---	---	---	---	---	---	---	---	---
2	5500	1100	3100	---	---	---	---	---	---	---	---	---
3	2500	1500	1910	---	---	---	---	---	---	---	---	---
4	3480	2400	2930	---	---	---	---	---	---	---	---	---
5	3760	1380	2740	---	---	---	---	---	---	---	---	---
6	2690	1180	1830	---	---	---	---	---	---	---	---	---
7	4090	753	2200	---	---	---	---	---	---	---	---	---
8	1400	748	1040	---	---	---	---	---	---	---	---	---
9	1530	1150	1350	---	---	---	---	---	---	---	---	---
10	2030	1290	1610	---	---	---	---	---	---	---	---	---
11	3190	2030	2660	---	---	---	---	---	---	---	---	---
12	3440	1450	2430	---	---	---	---	---	---	---	---	---
13	5230	3540	4200	---	---	---	---	---	---	---	---	---
14	5990	5230	5630	---	---	---	---	---	---	---	---	---
15	6300	5990	6110	---	---	---	---	---	---	---	---	---
16	6700	6300	6430	---	---	---	---	---	---	---	---	---
17	7300	6600	6930	---	---	---	---	---	---	---	---	---
18	7700	7000	7370	---	---	---	---	---	---	---	---	---
19	8100	7200	7770	---	---	---	---	---	---	---	---	---
20	8300	7500	8020	---	---	---	---	---	---	---	---	---
21	8400	7400	8050	---	---	---	---	---	---	---	---	---
22	8500	7600	8170	---	---	---	---	---	---	---	---	---
23	8400	7800	8160	---	---	---	---	---	---	---	---	---
24	8800	8100	8480	---	---	---	---	---	---	---	---	---
25	9100	8200	8660	---	---	---	--	---	---	---	---	---
26	9000	8700	8860	---	---	---	---	---	---	---	---	---
27	7800	1800	3450	---	---	---	---	---	---	---	---	---
28	4500	1800	2750	---	---	---	---	---	---	---	---	---
29	3200	1200	1700	---	---	---	---	---	---	---	---	---
30	---	---	e2400	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	11200	748	4780	---	---	---	---	---	---	---	---	---
YEAR	14300	748	9670									

e Estimated

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.7	18.8	21.5	7.7	3.3	5.7	7.4	4.0	5.3	9.6	7.2	8.6
2	25.0	20.0	22.6	6.5	4.5	5.5	6.9	3.2	4.8	9.0	5.7	7.6
3	25.7	20.7	23.3	7.2	3.3	5.3	7.4	3.9	5.6	8.5	5.1	7.1
4	23.4	20.7	22.1	8.5	4.8	6.6	8.1	4.1	6.2	8.7	6.2	7.5
5	20.3	16.2	18.5	10.3	5.7	8.1	9.3	5.2	7.3	11.0	8.1	9.5
6	20.3	15.4	18.0	11.2	7.6	9.5	11.0	6.8	9.0	9.7	7.2	8.8
7	20.7	16.2	18.6	10.2	5.6	7.9	13.7	9.4	11.5	11.4	8.5	9.8
8	22.1	16.7	19.5	8.9	4.1	6.5	12.9	11.9	12.4	9.7	7.0	8.5
9	23.4	18.6	21.1	11.1	6.7	9.0	13.5	10.9	12.1	8.6	5.2	7.2
10	24.2	19.3	22.0	10.3	8.5	9.5	11.9	8.9	10.6	8.1	5.1	6.9
11	24.6	20.2	22.5	8.8	8.2	8.7	13.2	11.6	12.2	7.6	6.0	7.0
12	---	---	e22.0	12.0	8.5	10.2	13.5	11.7	12.8	10.1	6.3	8.2
13	---	---	e21.0	13.6	11.2	12.1	12.3	10.2	11.4	8.2	4.7	6.3
14	---	---	e20.0	14.6	13.4	13.8	10.2	8.0	9.2	5.5	3.3	4.5
15	20.4	18.0	18.7	14.9	13.2	14.0	8.9	5.9	7.7	4.2	1.9	3.3
16	21.4	16.1	18.5	13.6	12.1	12.9	9.5	6.1	8.1	4.2	.0	2.2
17	23.5	16.0	20.3	14.4	11.1	12.7	9.9	7.7	8.8	4.1	2.0	3.2
18	19.3	15.1	17.2	15.0	10.9	13.0	8.1	6.7	7.4	4.2	1.3	2.9
19	21.9	16.9	19.3	14.0	11.4	12.9	6.8	6.3	6.6	4.6	.6	2.9
20	22.9	17.3	20.5	11.9	8.3	10.2	7.2	6.6	6.9	5.8	1.6	3.9
21	18.2	13.3	16.7	11.8	8.1	10.0	7.1	6.8	7.1	5.8	4.0	5.0
22	17.8	16.5	16.9	12.1	9.0	10.6	8.2	6.1	7.2	8.3	4.5	6.4
23	16.8	15.9	16.3	10.3	7.3	8.8	7.8	6.5	7.2	8.0	4.4	6.4
24	16.0	15.9	16.0	8.7	4.9	7.0	7.4	5.2	6.3	8.6	4.0	6.6
25	16.0	15.6	15.8	8.0	5.8	7.0	6.7	4.7	6.0	9.5	5.4	7.7
26	15.8	15.6	15.8	10.0	5.3	7.4	7.4	6.3	6.8	8.1	6.8	7.5
27	15.8	15.7	15.8	11.4	7.8	9.3	7.3	6.5	6.9	8.1	7.3	7.8
28	17.6	15.8	16.6	14.2	10.1	11.8	8.3	6.3	7.2	9.5	7.9	8.6
29	16.7	11.2	13.8	15.1	12.3	13.9	8.8	5.6	7.3	11.6	8.9	10.1
30	10.9	6.5	8.7	11.9	7.6	9.7	8.0	7.0	7.5	12.1	8.2	10.3
31	6.4	4.8	5.7	---	---	---	8.8	6.9	7.8	12.5	8.0	10.5
MONTH	25.7	4.8	18.2	15.1	3.3	9.7	13.7	3.2	8.2	12.5	.0	6.9

e Estimated

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.6	8.6	10.5	17.1	12.4	14.9	17.2	11.5	14.2	24.7	19.2	22.1
2	11.3	10.4	10.9	19.0	13.8	16.2	14.4	11.2	12.8	23.0	20.4	21.8
3	11.6	10.2	10.9	18.6	16.0	17.1	---	---	e14.0	21.3	18.6	20.1
4	10.7	8.5	9.8	19.2	14.5	16.9	---	---	e15.0	22.3	18.1	20.1
5	9.9	7.1	8.5	17.9	13.4	15.9	---	---	e15.0	26.2	18.2	21.5
6	10.2	7.1	8.6	19.2	12.9	16.1	---	---	e16.0	24.2	18.9	21.7
7	10.0	6.4	8.3	19.4	13.4	16.7	---	---	e19.0	24.5	17.6	21.1
8	9.1	6.0	7.7	17.9	15.7	16.1	24.9	18.0	21.3	25.2	18.8	22.0
9	11.4	7.3	9.3	---	---	e14.0	23.3	18.5	21.0	24.0	19.4	21.5
10	13.8	9.1	11.4	13.6	10.3	11.4	25.7	18.7	22.0	23.9	18.8	21.2
11	14.4	10.7	12.5	14.6	7.8	11.4	26.8	19.5	23.0	27.0	16.9	21.6
12	13.0	11.0	12.1	16.2	9.4	12.9	22.8	15.7	18.5	28.8	19.9	24.4
13	10.6	8.8	9.6	17.9	10.6	14.4	22.9	14.9	18.4	29.3	22.4	25.6
14	13.9	9.4	11.5	19.5	12.3	16.1	24.9	18.4	21.4	28.2	20.7	24.8
15	14.4	9.4	12.1	19.9	13.4	16.9	25.5	19.1	22.2	29.2	23.0	26.0
16	15.0	10.3	12.8	21.1	14.2	18.0	25.1	19.8	22.4	25.2	21.8	23.1
17	14.4	9.9	12.4	19.0	16.3	17.8	21.2	16.3	17.5	24.4	20.5	22.2
18	13.8	8.9	11.6	18.6	14.7	16.6	20.8	17.3	18.3	24.5	21.5	23.0
19	13.5	7.8	11.0	17.7	13.1	15.4	20.8	17.9	19.0	26.1	21.7	23.7
20	14.9	9.0	12.1	18.0	11.8	15.1	18.9	15.2	16.9	25.6	21.9	23.9
21	16.1	10.6	13.6	18.8	13.3	16.0	21.8	14.9	17.9	24.6	21.5	23.0
22	16.4	12.3	14.4	16.7	12.3	14.8	23.6	16.7	19.6	27.0	20.7	23.4
23	15.9	12.4	14.1	17.0	10.2	13.8	25.6	17.4	20.9	24.6	22.0	22.9
24	14.7	8.6	11.0	18.2	11.5	15.2	23.8	19.0	21.0	22.0	20.3	21.2
25	10.0	7.3	8.6	19.8	13.0	16.5	20.0	16.6	18.8	22.0	19.7	20.8
26	12.2	6.8	9.4	21.1	13.8	17.8	20.9	15.6	18.4	22.6	18.0	20.3
27	14.2	9.0	11.4	18.3	15.6	17.1	22.1	16.8	19.6	20.8	17.8	19.1
28	16.0	10.1	13.0	21.0	15.5	18.3	23.7	18.0	20.8	18.6	14.7	16.1
29	17.1	11.6	14.4	20.5	15.9	18.1	23.6	18.7	21.3	17.3	13.5	15.3
30	---	---	---	19.9	13.7	17.0	24.0	19.3	21.8	19.5	14.5	17.0
31	---	---	---	15.7	13.7	14.7	---	---	---	20.7	17.4	18.7
MONTH	17.1	6.0	11.2	21.1	7.8	15.8	26.8	11.2	18.9	29.3	13.5	21.6

e Estimated

07311700 NORTH WICHITA RIVER NEAR TRUSCOTT, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	24.1	17.3	20.7	---	---	---	---	---	---	---	---	---
2	22.7	17.4	20.1	---	---	---	---	---	---	---	---	---
3	24.1	19.5	21.6	---	---	---	---	---	---	---	---	---
4	27.1	21.4	24.0	---	---	---	---	---	---	---	---	---
5	25.5	18.6	23.3	---	---	---	---	---	---	---	---	---
6	24.2	19.2	22.1	---	---	---	---	---	---	---	---	---
7	24.2	20.1	22.3	---	---	---	---	---	---	---	---	---
8	23.5	19.9	21.2	---	---	---	---	---	---	---	---	---
9	24.4	21.4	22.7	---	---	---	---	---	---	---	---	---
10	26.1	22.8	24.4	---	---	---	---	---	---	---	---	---
11	27.6	23.9	25.8	---	---	---	---	---	---	---	---	---
12	26.5	22.7	24.4	---	---	---	---	---	---	---	---	---
13	28.2	24.2	26.0	---	---	---	---	---	---	---	---	---
14	29.3	24.7	26.8	---	---	---	---	---	---	---	---	---
15	29.1	25.5	27.1	---	---	---	---	---	---	---	---	---
16	30.6	25.2	27.6	---	---	---	---	---	---	---	---	---
17	31.6	25.0	28.1	---	---	---	---	---	---	---	---	---
18	32.2	26.6	29.3	---	---	---	---	---	---	---	---	---
19	32.3	26.2	29.2	---	---	---	---	---	---	---	---	---
20	32.7	25.9	28.6	---	---	---	---	---	---	---	---	---
21	30.7	26.7	29.0	---	---	---	---	---	---	---	---	---
22	29.8	25.6	27.8	---	---	---	---	---	---	---	---	---
23	30.7	23.6	26.9	---	---	---	---	---	---	---	---	---
24	30.4	24.6	27.6	---	---	---	---	---	---	---	---	---
25	28.1	24.3	25.9	---	---	---	---	---	---	---	---	---
26	26.4	22.2	24.5	---	---	---	---	---	---	---	---	---
27	28.4	21.1	24.5	---	---	---	---	---	---	---	---	---
28	---	---	e25.0	---	---	---	---	---	---	---	---	---
29	---	---	e25.0	---	---	---	---	---	---	---	---	---
30	---	---	e25.0	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	32.7	17.3	25.2	---	---	---	---	---	---	---	---	---
YEAR	32.7	.0	15.1									

e Estimated

07311782 SOUTH WICHITA RIVER AT LOW FLOW DAM NEAR GUTHRIE, TX

LOCATION.--Lat 33°37'19", long 100°12'31", King County, Hydrologic Unit 11130205, on right bank 1.0 mi downstream from ranch road crossing, 2.9 mi upstream from Willow Creek, 6.6 mi east of Guthrie, and 91.5 mi upstream from confluence with North Wichita River.

DRAINAGE AREA.--223 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to September 1985, May 1987 to current year (discharge to 07311669 Truscott Brine Lake near Truscott).

GAGE.--Water-stage recorder. Datum of gage is 1,590.0 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Discharge represents flow diverted by pumping from South Wichita River at Low Flow dam near Guthrie (station 07311782) via pipeline to Truscott Brine Lake near Truscott (station 07311669). Flow is determined from digital recorder monitoring flowmeter in pipeline. From May 1987 to current year, specific conductivity and discharge values collected at this station have been used for computation of water quality loads for station 07311669. Gage-height telemeter at station.

COOPERATION.--Flow data furnished by the U.S. Army Corps of Engineers, Tulsa District.

PEAK DISCHARGES FOR CURRENT YEAR.--Not determined.

FLOW THRU PIPELINE
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	6.8	6.6	11	.00	11	11	11	11	.00	9.7	6.0
2	11	6.8	8.3	11	.00	11	11	7.8	11	.72	7.7	9.6
3	11	6.8	8.0	11	1.3	11	11	10	8.1	.00	8.7	1.8
4	8.4	6.8	7.1	11	3.9	11	11	8.3	5.6	.00	7.2	.00
5	6.3	5.5	6.6	11	7.0	11	11	7.9	10	.00	6.8	.00
6	6.3	6.6	8.0	11	9.3	11	11	9.5	9.9	.00	7.8	.00
7	6.4	8.2	7.4	11	12	11	11	8.8	10	4.3	7.2	.00
8	6.4	11	6.6	11	12	11	11	8.0	10	10	6.6	.00
9	8.5	7.8	7.5	11	12	11	11	8.9	10	9.2	5.9	.00
10	11	6.7	8.4	11	12	11	11	7.3	10	6.4	7.5	4.7
11	11	11	7.3	11	12	11	11	.00	10	9.7	7.1	9.9
12	8.1	6.7	11	11	12	11	11	3.0	10	5.2	6.4	.12
13	6.9	7.6	11	10	11	11	11	11	10	6.3	6.9	.00
14	6.9	10	11	12	12	11	9.6	11	10	8.1	7.7	5.7
15	6.9	7.3	11	12	12	11	8.5	10	10	.00	6.8	9.4
16	9.7	9.4	11	12	12	11	11	11	10	3.4	6.4	6.9
17	11	7.8	11	11	12	11	11	11	8.5	5.5	7.6	6.1
18	7.0	9.2	10	11	11	11	11	4.2	10	10	7.1	7.1
19	6.9	6.9	11	11	12	11	11	.00	10	8.3	6.6	6.0
20	6.9	7.4	1.9	10	12	11	10	.00	10	8.3	6.9	6.0
21	5.9	8.5	.00	.00	12	11	7.1	5.4	4.5	7.4	7.4	7.5
22	7.2	6.6	.00	.00	12	11	11	11	.00	8.2	7.3	3.8
23	11	8.9	.83	.00	12	11	11	11	.00	7.6	5.8	3.0
24	2.4	6.6	5.6	.00	9.0	11	11	11	.00	1.4	7.4	4.0
25	.00	7.5	11	.00	.00	11	11	11	.00	.00	7.2	5.2
26	.00	8.0	11	.00	.00	11	11	9.4	.00	.00	9.1	5.7
27	.00	6.6	11	.00	2.4	11	11	6.1	.00	.00	8.7	7.3
28	.00	6.6	11	.00	8.8	11	11	4.4	.00	.00	9.6	5.7
29	3.7	10	11	.00	11	11	9.9	11	.00	1.0	7.7	7.4
30	6.8	6.6	11	.00	---	11	11	11	.00	6.0	7.4	7.7
31	6.8	---	11	.00	---	11	---	11	---	9.1	5.2	---
TOTAL	211.40	232.2	254.13	221.00	254.70	341	320.1	251.00	198.60	136.12	227.4	136.62
MEAN	6.82	7.74	8.20	7.13	8.78	11.0	10.7	8.10	6.62	4.39	7.34	4.55
MAX	11	11	11	12	12	11	11	11	11	10	9.7	9.9
MIN	.00	5.5	.00	.00	.00	11	7.1	.00	.00	.00	5.2	.00
AC-FT	419	461	504	438	505	676	635	498	394	270	451	271

CAL YR 1991 TOTAL 2152.55 MEAN 5.90 MAX 11 MIN .00 AC-FT 4270
WTR YR 1992 TOTAL 2784.27 MEAN 7.61 MAX 12 MIN .00 AC-FT 5520

07311782 SOUTH WICHITA RIVER AT LOW FLOW DAM NEAR GUTHRIE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1984 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1984 to current year. October 1986 to April 1987 published under station 07311783.
WATER TEMPERATURE: October 1984 to current year. October 1986 to April 1987 published under station 07311783.

INSTRUMENTATION.--Since October 1984, specific conductance and water temperature are recorded continuously at this station.

REMARKS.--Interruptions in the record are due to malfunction of the instrument or when the pumps were not running. Where maximum and minimum specific conductance values are not shown, mean values are sometimes estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 41,500 microsiemens Aug. 4, 1989; minimum, 200 microsiemens July 3, 1986.
WATER TEMPERATURE: Maximum, 33.0°C Aug. 2, 7, 8, 1985; minimum, 0.0°C Dec. 23, 1989, Dec. 22, 1990.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 39,700 microsiemens July 25; minimum, 542 microsiemens Sept. 18.
WATER TEMPERATURE: Maximum, 31.5°C July 17, Aug. 8; minimum 0.0°C Dec. 22.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT									
31...	0955	7.0	19000	7.5	2600	2400	720	190	3100
FEB									
27...	1345	2.4	13500	14.5	1700	1600	490	120	2000
APR									
07...	1120	11	22800	22.0	2800	2700	790	210	4100

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT								
31...	27	18	150	2100	5300	3.6	8.4	11500
FEB								
27...	21	12	110	1500	3000	0.40	3.9	7190
APR								
07...	33	20	150	2200	6900	1.6	4.7	14300

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	211.40	26500	17500	10000	8500	4840	2500	1420	*
NOV.	1991	232.2	27600	18300	11500	8900	5580	2600	1610	*
DEC.	1991	254.13	23600	15600	10700	7500	5130	2300	1550	*
JAN.	1992	221.00	21600	14100	8430	6700	3980	2100	1280	*
FEB.	1992	254.70	19400	12700	8710	5900	4080	2000	1350	*
MAR.	1992	341	21500	14100	13000	6600	6120	2100	1960	*
APR.	1992	320.1	23300	15300	13200	7300	6310	2300	1960	*
MAY	1992	251.00	24100	15900	10800	7600	5170	2300	1570	*
JUNE	1992	198.60	18700	12200	6540	5700	3060	1900	1020	*
JULY	1992	136.12	29200	19400	7130	9500	3480	2700	982	*
AUG.	1992	227.4	30300	20200	12400	9900	6080	2700	1680	*
SEPT	1992	136.62	30800	20600	7580	10100	3730	2800	1020	*
TOTAL		2784.27	**	**	120000	**	57600	**	17400	**
WTD.AVG.		7.6	24200	16000	**	7700	**	2300	**	**

07311782 SOUTH WICHITA RIVER AT LOW FLOW DAM NEAR GUTHRIE, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	24700	23800	24100	20600	18200	19000	30400	30200	30300	19900	19200	19500
2	25000	24500	24700	21400	19700	20500	30800	30200	30500	21400	19900	20500
3	25400	24900	25100	22600	21500	22300	31900	30700	31400	21500	20800	21200
4	25800	25300	25500	24100	22600	23400	31100	30400	30900	21700	21400	21500
5	25800	25600	25700	25100	23500	24200	31000	29900	30500	21800	21600	21700
6	26600	25700	26100	26300	25400	25800	31400	30000	30500	21900	21700	21800
7	26600	26500	26600	26800	26100	26400	31100	30400	30700	22000	21800	21900
8	26900	26500	26600	27500	26800	27200	30600	29800	30400	22300	21900	22100
9	27100	26800	26900	27800	27100	27600	31100	29400	30500	22600	22000	22400
10	27300	27000	27100	27700	27500	27600	31200	30700	31000	23400	22500	22900
11	27400	26900	27200	28300	27700	28100	31300	29500	30400	23500	23100	23300
12	27400	27100	27200	28900	26900	28200	30000	27400	29200	25900	23200	23800
13	27400	27000	27100	28900	27900	28600	29400	21100	26000	26200	22600	23600
14	27500	27200	27300	28700	28500	28500	21600	19400	20000	22600	21500	22200
15	27600	27300	27500	28700	28400	28600	21100	19700	20500	21400	19900	20200
16	27800	27100	27500	28800	28500	28700	21900	20600	21100	20300	19700	20100
17	27900	27400	27700	29000	28500	28700	23800	21600	22800	21000	20000	20400
18	28600	27600	28000	28800	28100	28500	24800	23300	24200	21400	20800	21000
19	28300	27600	27900	28300	28200	28200	25400	22800	24800	21200	20600	20900
20	28400	28000	28200	28700	28200	28500	22900	10200	16000	21400	20700	21100
21	29500	28000	28800	29300	28500	28800	---	---	---	---	---	---
22	29700	29000	29300	29300	28800	28900	---	---	---	---	---	---
23	31100	29500	30000	29600	29100	29400	12400	10600	11500	---	---	---
24	31300	28800	29700	29700	29400	29500	13500	12200	12800	---	---	---
25	---	---	---	29900	29400	29600	15000	13500	14300	---	---	---
26	---	---	---	30200	29400	29800	17000	15000	15900	---	---	---
27	---	---	---	30000	29800	29900	17900	17100	17600	---	---	---
28	---	---	---	30100	29700	30000	17900	17600	17700	---	---	---
29	29200	24200	26700	30100	29700	29900	18100	17800	17900	---	---	---
30	24000	18600	21200	30300	29800	30000	---	---	e18500	---	---	---
31	18900	17900	18100	---	---	---	19200	18900	19100	---	---	---
MONTH	31300	17900	26600	30300	18200	27500	31900	10200	23700	26200	19200	21600

e Estimated

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	17800	17100	17500	22900	22400	22600	26900	26500	26600
2	---	---	---	18500	17800	18200	23000	22600	22800	27200	26600	26900
3	22200	21700	22000	18800	18400	18500	22600	22100	22400	27700	27000	27200
4	22500	16800	21200	20400	18700	19100	22500	22100	22300	28000	27500	27700
5	16200	11700	13500	19500	19100	19300	22800	22400	22600	27900	27800	27900
6	13100	11100	11800	19600	19100	19400	22800	22500	22700	28300	27900	28000
7	15300	13400	14300	20100	19700	19900	22800	22400	22600	28200	27800	28000
8	17300	15400	16300	20700	19900	20400	22900	20900	22600	28300	28000	28100
9	18500	17300	18000	21400	20400	20900	23300	22700	22800	28400	28000	28300
10	19100	18500	18800	21500	21300	21400	23800	20400	22800	28300	22800	28000
11	19700	19100	19400	21600	20900	21200	24100	23800	23900	---	---	---
12	20000	19300	19700	21900	21400	21600	24200	23900	24000	11200	3100	7500
13	20500	19900	20100	22100	21700	21900	24900	24100	24400	14500	11400	12800
14	20700	20500	20600	22900	21600	22200	25100	24300	24900	18800	14300	16300
15	20900	20700	20800	22500	22200	22300	25300	24800	25000	21700	19000	20100
16	21500	20800	21200	22600	22300	22400	25400	24900	25300	22400	21300	21800
17	21600	21200	21300	22600	22300	22500	24500	24100	24300	23700	22200	22600
18	21900	21600	21800	22600	22400	22500	23900	21800	23100	24400	23800	24000
19	22300	21800	22100	22700	22400	22500	21400	19900	20600	---	---	---
20	22400	22200	22300	22500	22000	22300	21800	20200	21200	---	---	---
21	22700	22400	22600	22200	21700	21900	21800	21300	21500	25800	25500	25600
22	23000	22700	22800	22800	22200	22400	21600	20600	21100	26200	25600	25800
23	23100	23000	23000	22900	22500	22700	22000	21400	21500	26500	26100	26300
24	23100	20600	21600	22900	22600	22700	22900	22000	22600	26400	25800	26100
25	---	---	---	23200	22700	23000	23800	22800	23300	26400	25800	26100
26	---	---	---	23500	23000	23200	24800	23800	24400	26000	24000	25200
27	13200	13000	13100	23400	23200	23300	25400	24700	25100	25800	24600	25300
28	15600	13300	14300	23400	23100	23300	25900	25200	25500	24600	20900	22700
29	17100	15600	16400	23400	23000	23200	26100	25700	26000	23700	20600	22700
30	---	---	---	22900	22700	22800	26600	26100	26300	23500	21800	22600
31	---	---	---	22800	22300	22500	---	---	---	22100	20500	21300
MONTH	23100	11100	19200	23500	17100	21500	26600	19900	23300	28400	3100	24000

07311782 SOUTH WICHITA RIVER AT LOW FLOW DAM NEAR GUTHRIE, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21500	20900	21000	---	---	---	29600	29200	29400	29800	27800	29300
2	21400	20800	21200	25700	24200	25000	29900	28300	29200	29000	28200	28700
3	21400	13200	19600	---	---	---	29100	28700	28900	29000	28400	28900
4	20800	19300	20200	---	---	---	29400	28900	29100	---	---	---
5	19500	17400	18400	---	---	---	29700	29200	29300	---	---	---
6	17800	7190	16900	---	---	---	30100	29300	29700	---	---	---
7	18600	7190	17700	29000	26800	27800	30700	30000	30300	---	---	---
8	15700	8800	10400	28300	27700	27900	31000	30400	30700	---	---	---
9	12200	9020	11200	28700	28100	28300	31300	30700	31000	---	---	---
10	13900	12000	13000	29100	28500	28700	31500	31200	31300	31000	28200	30500
11	15400	13900	14800	29400	28800	29100	31500	30800	31200	29500	28300	28900
12	18600	15400	17000	29700	29200	29400	31800	30800	31200	31300	28100	30700
13	18600	18000	18300	29700	29300	29500	31700	31100	31400	---	---	---
14	20000	18300	18900	30300	29600	29900	31400	31200	31400	32000	31200	31600
15	21700	19900	20600	---	---	---	31400	31000	31200	32200	31800	32000
16	22600	21500	22100	30000	29400	29600	31200	30600	30800	32200	31500	31900
17	22400	21900	22100	29400	28900	29300	31500	30600	30800	32000	29800	30600
18	23100	22100	22400	29600	29000	29300	31000	30600	30800	30700	30100	30400
19	23900	22900	23300	30700	29000	29600	31400	30900	31100	31400	30200	31100
20	24200	23700	24000	30400	28900	29300	32000	30900	31200	31700	30300	31300
21	24600	23700	24100	29500	29200	29400	31900	30700	31100	31900	30000	31000
22	---	---	---	29700	29300	29500	31500	30700	30900	31800	31700	31800
23	---	---	---	29800	29500	29700	31700	30600	30900	31500	31200	31400
24	---	---	---	29800	29600	29700	31300	30700	31000	31400	30500	31100
25	---	---	---	---	---	---	31400	30600	31100	31500	30800	31200
26	---	---	---	---	---	---	31500	28600	30500	31700	30800	31100
27	---	---	---	---	---	---	31300	29000	30700	31700	31300	31500
28	---	---	---	---	---	---	29200	27300	27900	31600	31300	31400
29	---	---	---	30800	30100	30500	29800	27700	28100	31500	31200	31400
30	---	---	---	30600	29400	29900	29600	28000	28600	31500	31200	31400
31	---	---	---	29500	29100	29300	31100	29000	29400	---	---	---
MONTH	24600	7190	18900	30800	24200	29100	32000	27300	30300	32200	27800	30800
YEAR	32200	3100	24800									

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.0	19.9	21.1	12.2	6.7	10.0	10.7	8.1	9.2	11.2	9.2	10.1
2	22.7	20.3	21.6	12.2	9.7	11.3	9.0	7.4	8.1	10.7	8.6	9.7
3	23.4	21.0	22.2	12.0	9.5	11.1	9.1	7.0	8.0	10.1	8.3	9.2
4	23.1	21.3	22.1	11.9	11.5	11.7	10.7	9.1	9.7	9.8	8.6	9.3
5	20.9	18.4	19.8	12.5	11.4	11.8	10.4	8.5	9.5	11.8	9.4	10.6
6	19.8	17.1	18.6	13.1	11.0	12.2	12.3	9.8	10.9	11.1	9.6	10.4
7	19.1	17.3	18.4	12.3	9.8	10.7	13.4	11.6	12.4	11.9	10.2	10.9
8	19.8	17.4	18.5	11.5	8.9	10.3	13.6	13.2	13.4	11.1	9.3	10.4
9	20.7	18.8	19.7	12.6	9.8	11.1	14.7	13.6	14.1	10.2	8.5	9.5
10	21.5	19.7	20.7	12.1	10.7	11.5	13.9	12.2	13.1	9.7	8.1	9.0
11	23.6	20.1	21.8	12.3	11.4	11.8	14.2	13.8	14.0	9.4	8.5	9.1
12	21.8	19.6	20.9	13.6	12.5	13.1	14.8	14.2	14.4	11.0	8.4	9.5
13	21.8	19.3	20.5	14.3	13.4	13.8	14.4	14.1	14.3	9.5	7.9	8.8
14	21.4	19.5	20.5	15.1	14.3	14.6	14.3	13.5	14.0	8.7	7.4	8.0
15	20.1	17.9	19.2	14.8	14.2	14.6	13.3	12.4	12.7	8.6	5.1	6.9
16	20.1	17.7	19.0	14.9	13.8	14.3	13.1	12.2	12.5	6.8	4.5	5.6
17	21.5	18.3	19.8	15.0	13.1	14.2	13.1	11.3	12.2	6.7	5.0	5.9
18	22.6	19.3	20.5	14.8	13.0	14.1	11.6	10.2	10.8	7.5	5.4	6.5
19	20.1	17.3	18.9	14.4	12.2	13.4	11.1	10.4	10.7	7.5	5.1	6.8
20	18.9	16.6	17.8	13.0	10.9	12.0	11.1	7.9	9.0	8.5	5.6	7.0
21	19.4	16.7	18.2	13.5	10.7	12.0	---	---	---	---	---	---
22	19.5	17.5	18.5	13.0	11.1	12.1	---	---	---	---	---	---
23	20.8	18.5	19.7	11.6	10.2	11.0	9.3	8.0	8.7	---	---	---
24	20.6	19.0	19.9	10.9	9.1	10.1	8.6	7.7	8.1	---	---	---
25	---	---	---	10.5	8.8	9.7	8.6	8.2	8.5	---	---	---
26	---	---	---	12.0	9.1	10.4	9.4	8.4	9.1	---	---	---
27	---	---	---	11.9	9.9	10.7	9.6	8.8	9.4	---	---	---
28	---	---	---	13.8	11.6	12.4	9.6	8.6	9.0	---	---	---
29	19.5	14.1	16.5	14.6	13.4	14.1	10.0	8.3	9.2	---	---	---
30	16.5	11.8	15.2	13.2	10.8	11.9	9.9	8.6	9.4	---	---	---
31	11.6	10.2	10.8	---	---	---	10.3	9.1	9.7	---	---	---
MONTH	23.6	10.2	19.3	15.1	6.7	12.1	14.8	7.0	10.8	11.9	4.5	8.7

07311782 SOUTH WICHITA RIVER AT LOW FLOW DAM NEAR GUTHRIE, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	16.2	14.4	15.2	17.2	13.9	15.5	26.8	21.1	23.4
2	---	---	---	17.2	15.0	16.1	15.5	14.0	14.7	25.2	22.2	23.7
3	12.5	11.9	12.2	17.7	16.7	17.2	18.1	12.6	14.8	24.5	21.6	23.0
4	12.5	10.8	11.9	18.1	16.0	16.9	19.0	14.6	16.3	25.0	20.4	22.4
5	11.5	10.3	11.2	17.9	15.7	16.5	17.4	16.2	16.9	26.8	19.8	22.9
6	11.4	10.1	11.0	18.5	15.1	16.4	17.8	15.9	16.8	24.4	19.9	22.0
7	11.0	9.6	10.5	18.0	15.4	16.5	22.0	16.2	18.7	23.7	19.2	21.2
8	10.6	9.9	10.3	19.7	16.4	17.6	22.7	18.9	20.3	23.7	19.3	21.3
9	11.8	10.2	11.0	18.3	13.5	16.7	21.9	19.6	20.5	23.0	19.7	21.2
10	13.3	10.8	12.1	15.5	11.9	13.5	23.2	19.4	21.0	23.5	20.2	21.6
11	13.8	12.2	13.0	14.2	11.0	12.7	25.7	20.3	22.6	---	---	---
12	14.1	12.7	13.3	15.9	11.9	13.7	22.1	19.0	20.0	24.9	20.5	22.2
13	12.6	11.7	12.1	16.3	13.3	14.6	20.0	17.8	18.9	24.7	22.9	23.7
14	14.0	11.2	12.5	19.3	14.6	16.5	21.8	18.6	19.9	26.3	22.7	24.3
15	13.6	11.8	12.8	17.6	15.2	16.5	22.9	19.2	20.8	25.2	24.2	24.7
16	15.3	12.4	13.7	19.3	16.3	17.7	23.8	20.4	21.8	24.9	23.7	24.4
17	15.0	12.3	13.6	19.0	17.8	18.3	22.7	20.7	21.7	25.4	21.9	23.4
18	14.6	11.5	13.0	19.5	16.3	17.8	23.2	20.1	21.4	23.7	22.4	23.1
19	13.6	10.6	12.2	18.5	15.1	16.7	20.8	18.3	19.6	---	---	---
20	14.0	11.1	12.5	17.8	14.4	16.0	19.5	16.8	18.1	---	---	---
21	15.4	12.4	13.8	17.6	15.1	16.2	21.6	16.6	18.6	24.6	22.7	23.7
22	15.2	13.3	14.4	17.1	14.3	15.7	22.1	18.0	20.0	25.1	22.3	23.5
23	15.7	13.5	14.6	16.6	13.2	14.9	24.9	19.3	21.7	23.9	22.4	23.2
24	15.2	10.2	13.5	17.7	13.6	15.5	23.6	20.2	21.7	22.7	21.3	21.8
25	---	---	---	19.1	14.2	16.1	22.4	19.2	20.9	21.3	20.0	20.7
26	---	---	---	19.2	15.4	17.2	23.6	18.3	20.6	22.2	19.0	20.4
27	14.6	10.3	12.2	18.5	17.3	17.9	23.8	18.6	20.8	21.5	19.2	20.7
28	15.4	12.1	13.3	19.6	16.4	17.9	26.6	19.6	22.2	20.4	15.9	18.4
29	15.4	12.9	14.3	19.1	17.0	18.2	27.0	20.7	23.4	18.2	15.3	16.8
30	---	---	---	19.8	15.9	17.7	25.1	21.1	23.0	19.6	16.8	18.2
31	---	---	---	17.5	15.4	16.3	---	---	---	20.8	18.4	19.2
MONTH	15.7	9.6	12.6	19.8	11.0	16.3	27.0	12.6	19.8	26.8	15.3	22.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	24.2	19.2	21.5	---	---	---	29.7	26.5	28.1	26.0	20.4	23.3
2	23.9	21.2	22.5	30.3	25.7	27.8	30.1	26.2	27.6	29.0	22.8	25.3
3	25.3	21.0	23.2	---	---	---	29.3	25.3	27.1	26.0	24.1	25.3
4	26.0	23.3	24.8	---	---	---	29.9	25.4	27.4	---	---	---
5	27.4	24.0	25.6	---	---	---	29.6	26.3	27.8	---	---	---
6	28.0	24.5	26.0	---	---	---	28.7	26.4	27.6	---	---	---
7	25.5	22.9	24.3	29.1	26.4	27.4	29.5	25.7	27.5	---	---	---
8	25.6	22.1	23.7	28.9	25.4	27.0	29.7	25.8	27.6	---	---	---
9	27.3	23.9	24.9	29.0	25.2	27.0	30.4	25.9	27.8	---	---	---
10	28.1	23.9	25.7	29.2	25.7	27.4	30.1	26.1	28.1	25.1	24.0	24.7
11	30.5	24.7	26.7	29.3	26.2	27.6	28.3	26.5	27.2	24.2	23.1	23.6
12	28.9	25.3	26.7	29.4	25.7	27.3	28.1	25.2	26.3	24.8	22.0	23.1
13	27.5	25.8	26.5	28.6	25.9	27.2	28.4	24.0	25.8	---	---	---
14	29.5	25.6	26.9	31.3	25.4	27.9	27.9	24.2	25.9	26.5	23.0	24.6
15	29.6	26.2	27.4	---	---	---	26.3	24.3	25.2	26.1	23.6	24.8
16	30.4	26.3	27.7	28.5	25.8	27.1	26.3	23.6	24.8	26.4	23.2	24.6
17	30.8	26.3	28.2	30.7	26.4	28.0	25.3	23.2	24.2	26.8	22.8	24.7
18	29.5	27.2	28.3	29.1	25.9	27.3	24.0	22.7	23.3	26.6	23.1	24.7
19	31.4	27.2	29.0	29.6	25.8	27.4	24.1	22.1	22.9	26.7	22.4	24.3
20	29.5	26.8	28.3	29.1	25.5	27.2	25.7	21.3	22.7	27.0	23.2	24.8
21	27.1	25.4	26.3	28.7	26.0	27.2	25.9	21.9	23.6	26.6	22.8	24.5
22	---	---	---	28.6	25.4	27.0	25.7	22.3	24.0	25.1	17.2	22.9
23	---	---	---	28.8	25.7	27.2	26.0	22.1	24.1	24.1	10.1	18.7
24	---	---	---	27.0	26.0	26.4	26.4	23.1	24.7	23.4	19.2	21.2
25	---	---	---	---	---	---	25.8	23.6	24.5	22.9	19.6	21.2
26	---	---	---	---	---	---	26.6	22.5	24.1	23.0	19.3	21.3
27	---	---	---	---	---	---	27.5	22.0	24.1	23.4	18.8	20.9
28	---	---	---	---	---	---	26.9	21.2	24.0	22.9	18.3	20.6
29	---	---	---	29.9	26.3	27.7	26.4	22.8	24.5	23.0	18.5	20.5
30	---	---	---	31.1	26.6	28.8	25.2	22.7	24.1	23.0	18.3	20.2
31	---	---	---	30.7	26.8	28.3	24.1	23.0	23.6	---	---	---
MONTH	31.4	19.2	25.9	31.3	25.2	27.4	30.4	21.2	25.5	29.0	10.1	23.0
YEAR	31.4	4.5	18.5									

07311783 SOUTH WICHITA RIVER BELOW DAM NEAR GUTHRIE, TX

LOCATION.--Lat 33°37'19", long 100°12'31", King County, Hydrologic Unit 11130205, on right bank 1.1 mi downstream from ranch road crossing, 2.8 mi upstream from Willow Creek, 6.6 mi east of Guthrie, and 91.4 mi upstream from confluence with North Wichita River.

DRAINAGE AREA.--223 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,590.0 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diversions from station 07311782 via pipeline to station 07311669 began in May 1987. Specific conductance and water temperature for October 1986 to April 1987 were collected at station 07311782 but are published at this station and used for computation of water quality loads at this station. Mini-monitor installed at this station in May 1987 and specific conductivity values for this probe used to compute water quality loads since that time. Continuous temperature and specific conductance records were discontinued September 30, 1989. Gage-height telemeter at station via Sutron data collection platform.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1950, 20.8 ft in May 1954, at station 07311780 located about 1.1 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	4.6	.05	3.6	14	10	4.3	.06	6.1	10	.05	2.5
2	.08	3.9	.05	3.2	15	9.6	4.4	.05	17	10	.06	.05
3	.13	3.7	.05	3.6	14	9.4	4.0	.05	12	11	.05	4.3
4	.13	3.3	.08	2.9	37	8.9	3.4	.05	13	12	.05	7.0
5	.13	4.1	.10	2.8	36	7.3	3.8	.05	7.8	13	.05	7.0
6	.19	2.0	.11	2.4	21	6.8	4.4	.06	7.9	14	.05	6.6
7	2.1	1.1	.07	2.1	12	6.6	4.4	.06	30	9.2	.06	7.0
8	2.5	.13	.06	1.5	9.2	5.9	3.1	.07	36	.05	.06	7.4
9	1.3	.12	.06	1.3	8.0	4.7	2.4	.07	9.9	.05	.06	7.4
10	.06	.12	.07	.93	7.4	4.2	2.0	1.8	8.2	.05	.06	4.0
11	.06	.13	.10	.78	6.8	4.5	1.6	142	4.8	.05	.06	.04
12	.06	.12	7.5	.96	6.2	4.7	2.1	24	6.2	.05	.06	2.0
13	.06	.08	6.3	6.0	6.6	4.5	4.6	2.2	4.8	1.2	.06	6.5
14	.06	.13	1.9	8.5	6.0	4.5	.65	2.0	3.7	.05	.10	3.3
15	.06	.13	.07	5.3	5.6	4.4	.73	1.3	3.6	6.1	.07	.04
16	.09	.16	.05	4.6	5.3	4.7	1.7	.29	3.5	11	.05	.04
17	.16	.16	.05	3.1	5.3	4.8	16	.06	3.6	.75	.06	.04
18	.13	.17	.05	4.4	5.0	4.9	9.3	4.2	.86	.05	.06	.04
19	.20	.15	3.3	4.5	4.3	5.3	4.9	9.6	.71	.05	.06	.04
20	.20	.09	94	8.5	4.5	4.2	5.2	9.3	.76	.04	.05	.04
21	.22	.13	54	12	4.7	4.2	4.1	5.6	13	.04	.05	.04
22	.42	.10	42	17	4.7	3.3	2.5	.09	11	.04	.06	9.7
23	.15	.09	19	16	4.7	3.3	.94	.08	10	.04	.05	2.8
24	.93	.12	16	14	70	3.1	.34	.06	10	.81	.05	.02
25	7.9	.14	7.5	14	114	2.9	.14	.54	10	7.0	.05	.03
26	8.2	.15	7.1	15	47	2.9	.05	1.4	10	7.9	.05	.04
27	8.9	.08	7.7	17	14	3.6	.06	5.8	11	9.8	.04	.04
28	17	.07	7.0	18	16	5.6	.07	23	12	9.6	.04	.04
29	13	.07	6.1	17	11	5.1	.06	6.4	11	8.6	.05	.04
30	12	.05	4.9	16	---	3.7	.06	3.6	11	4.3	.05	.05
31	6.3	---	4.3	15	---	3.6	---	2.5	---	.05	.05	---
TOTAL	82.82	25.39	289.62	241.97	515.3	161.2	91.30	246.34	289.43	146.87	1.72	78.13
MEAN	2.67	.85	9.34	7.81	17.8	5.20	3.04	7.95	9.65	4.74	.055	2.60
MAX	17	4.6	94	18	114	10	16	142	36	14	.10	9.7
MIN	.06	.05	.05	.78	4.3	2.9	.05	.05	.71	.04	.04	.02
AC-FT	164	50	574	480	1020	320	181	489	574	291	3.4	155

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1992, BY WATER YEAR (WY)

MEAN	7.78	2.39	3.47	4.56	4.87	2.47	2.55	10.1	6.24	24.6	3.75	13.0
MAX	30.6	8.51	9.34	9.16	17.8	5.20	9.16	53.2	13.8	154	14.9	49.6
(WY)	1987	1987	1992	1990	1992	1992	1990	1987	1991	1986	1991	1991
MIN	.030	.046	.028	.073	.077	.016	.074	.043	1.27	.31	.055	.016
(WY)	1989	1988	1989	1989	1989	1991	1989	1988	1988	1989	1992	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1986 - 1992	
ANNUAL TOTAL	3053.21		2170.09			
ANNUAL MEAN	8.36		5.93		7.18	
HIGHEST ANNUAL MEAN					20.8	1986
LOWEST ANNUAL MEAN					.75	1988
HIGHEST DAILY MEAN	857	Sep 18	142	May 11	3520	Jul 3 1986
LOWEST DAILY MEAN	.01	Feb 14	.02	Sep 24	.00	Jan 4 1986
ANNUAL SEVEN-DAY MINIMUM	.01	Feb 14	.04	Sep 24	.01	Sep 15 1990
INSTANTANEOUS PEAK FLOW			782	May 11	13100	Jul 3 1986
INSTANTANEOUS PEAK STAGE			7.61	May 11	19.01	Jul 3 1989
INSTANTANEOUS LOW FLOW			.02	Sep 23	.00	Jan 4 1986
ANNUAL RUNOFF (AC-FT)	6060		4300		5200	
10 PERCENT EXCEEDS	7.5		13		9.4	
50 PERCENT EXCEEDS	.08		3.1		.10	
90 PERCENT EXCEEDS	.01		.05		.03	

07311790 SOUTH WICHITA RIVER AT ROSS RANCH NEAR BENJAMIN, TX

LOCATION.--Lat 33°39'18", long 100°00'49", King County, Hydrologic Unit 11130205, on left bank 170 ft (52 m) upstream from ranch road, 1.6 mi (2.6 km) downstream from Ox Yoke Creek, 13.7 mi (22.0 km) northwest of Benjamin, and 64.5 mi (103.8 km) upstream from mouth.

PERIOD OF RECORD.--Chemical analyses: August 1970 to September 1979, March 1988 to current year. Sediment analyses: April 1978 to September 1979.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1970 to September 1979.

INSTRUMENTATION.--From October 1970 to September 1979, specific conductance was continuously recorded at this station.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 51,000 microsiemens July 28, 1978; minimum, 1,500 microsiemens May 28, 1975.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT									
02...	1330	12	13700	22.0	2400	2300	670	180	2000
FEB									
18...	1215	29	8910	10.0	2800	2600	680	260	1100
MAR									
10...	1440	36	8940	12.0	2500	2400	640	230	1100
MAY									
05...	1340	9.0	9740	23.0	2500	2400	630	230	1300
JUL									
13...	1320	14	11800	27.0	2800	2700	710	250	1800
AUG									
11...	1325	6.2	11000	29.0	2700	2600	700	230	1600

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT								
02...	18	17	140	2000	3000	2.3	6.7	7960
FEB								
18...	9	17	120	2200	1800	0.40	3.4	6130
MAR								
10...	9	15	160	2300	1900	0.20	3.7	6290
MAY								
05...	11	16	120	2400	2200	1.0	3.2	6850
JUL								
13...	15	17	120	2400	2700	0.80	5.6	7960
AUG								
11...	13	17	88	2400	2700	0.90	2.8	7700

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX

LOCATION.--Lat 33°38'39", long 99°48'02", Knox County, Hydrologic Unit 11130205, on right bank at upstream side of bridge on State Highway 6, 2 mi downstream from Panhandle and Santa Fe Railway Co. bridge, 4 mi north of Benjamin, and 41 mi upstream from confluence with North Wichita River.

DRAINAGE AREA.--584 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1952-57 (occasional low-flow measurements), December 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,334.23 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 2, 1960, nonrecording gage at same site and datum.

REMARKS.--Records good. There are low flow diversions upstream at the South Wichita River at Low Flow Dam near Guthrie (station 07311782) to evaporation lake (station 07311669). There were other minor diversions upstream from station during the year. Gage-height telemeter at station via Sutron data collection platform.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1903 occurred in September 1919 (stage and discharge unknown), from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 24	1900	1,300	11.72	June 2	1300	1,470	13.00
Apr. 17	0630	1,430	a/12.19	June 6	0500	1,610	13.46
Mar. 11	0800	1,260	11.55	June 9	0900	2,130	14.92

a/ From Highwater mark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	24	5.3	56	63	150	39	24	582	71	42	121
2	25	20	6.5	51	74	135	36	23	1130	59	32	59
3	24	17	5.5	50	142	137	35	22	399	56	27	31
4	23	15	5.5	50	547	137	32	20	235	50	22	19
5	22	12	5.8	52	240	108	31	19	565	47	16	15
6	21	10	5.7	46	225	96	44	18	906	44	15	13
7	20	10	5.3	44	167	89	37	18	654	40	13	13
8	19	10	5.5	41	130	83	34	18	1640	38	12	12
9	19	9.8	6.3	38	111	72	31	18	1860	36	11	12
10	19	9.5	5.8	36	100	62	30	40	588	30	10	11
11	19	9.2	7.3	36	91	60	29	656	351	27	11	12
12	19	8.6	58	36	83	61	28	341	348	25	11	12
13	18	8.0	17	67	74	59	27	114	329	26	10	10
14	17	8.1	21	79	73	56	26	99	240	25	10	8.4
15	15	8.3	19	64	64	54	29	48	207	22	9.5	7.3
16	13	9.0	15	49	60	51	37	33	176	22	9.0	8.0
17	12	9.1	12	50	56	49	721	31	151	22	9.0	7.7
18	12	8.7	11	59	50	49	153	29	130	83	9.1	5.6
19	11	8.0	109	57	45	44	86	25	115	33	9.2	4.3
20	11	7.5	486	62	44	41	63	38	100	22	9.3	4.1
21	11	7.5	308	80	42	40	50	40	106	20	9.1	5.0
22	12	7.2	364	76	43	40	40	28	102	19	8.6	4.0
23	11	6.8	200	65	40	37	35	25	100	19	8.1	4.0
24	10	6.6	160	64	687	36	32	27	90	18	7.9	4.2
25	13	6.6	113	60	649	35	30	25	80	17	7.3	5.2
26	54	6.6	102	68	466	34	30	24	75	17	16	6.4
27	28	6.3	81	108	246	35	29	19	253	27	20	5.2
28	294	5.9	69	92	196	42	28	170	358	24	19	4.5
29	35	5.8	68	85	169	38	26	86	112	25	14	4.3
30	30	5.4	64	79	---	36	26	53	84	23	11	4.0
31	30	---	60	68	---	35	---	37	---	30	15	---
TOTAL	893	286.5	2401.5	1868	4977	2001	1874	2168	12066	1017	433.1	432.2
MEAN	28.8	9.55	77.5	60.3	172	64.5	62.5	69.9	402	32.8	14.0	14.4
MAX	294	24	486	108	687	150	721	656	1860	83	42	121
MIN	10	5.4	5.3	36	40	34	26	18	75	17	7.3	4.0
AC-FT	1770	568	4760	3710	9870	3970	3720	4300	23930	2020	859	857
IN.	.06	.02	.15	.12	.32	.13	.12	.14	.77	.06	.03	.03

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1992, BY WATER YEAR (WY)

MEAN	82.5	18.3	13.0	12.6	16.8	20.6	31.5	76.5	90.6	23.0	38.9	79.7
MAX	656	65.1	77.5	60.3	172	88.7	187	256	458	162	360	502
(WY)	1984	1987	1992	1992	1992	1970	1990	1989	1990	1986	1966	1966
MIN	.17	1.14	.73	.68	1.39	.97	.073	.92	1.49	.013	.000	.034
(WY)	1980	1988	1989	1989	1989	1989	1989	1988	1976	1965	1963	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1961 - 1992	
ANNUAL TOTAL	17270.32		30417.3			
ANNUAL MEAN	47.3		83.1		42.1	
HIGHEST ANNUAL MEAN					107	1966
LOWEST ANNUAL MEAN					11.2	1988
HIGHEST DAILY MEAN	2410	Jun 3	1860	Jun 9	8260	Oct 20 1983
LOWEST DAILY MEAN	.00	Jul 23	4.0	Sep 22	.00	Aug 31 1961
ANNUAL SEVEN-DAY MINIMUM	.06	Jul 20	4.4	Sep 19	.00	Aug 12 1962
INSTANTANEOUS PEAK FLOW			2130	Jun 9	14900	Jun 1 1990
INSTANTANEOUS PEAK STAGE			14.92	Jun 9	17.07	Jun 1 1990
INSTANTANEOUS LOW FLOW			3.3	Sept 20	.00	at times
ANNUAL RUNOFF (AC-FT)	34260		60330		30460	
ANNUAL RUNOFF (INCHES)	1.10		1.94		.98	
10 PERCENT EXCEEDS	79		168		47	
50 PERCENT EXCEEDS	7.3		31		7.2	
90 PERCENT EXCEEDS	1.3		7.5		.45	

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: July 1949 to March 1959, July 1966 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to September 1991.
WATER TEMPERATURE: October 1967 to September 1991.

INSTRUMENTATION.--From August 1968 to September 1991, specific conductance was recorded continuously at this station. From April 1983 to September 1991, water temperature was recorded continuously at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum and minimum specific conductance values are not shown, mean values are estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 48,900 microsiemens May 13, 1971; minimum, 427 microsiemens Sept. 11, 1989.
WATER TEMPERATURE: Maximum, 39.0°C July 31, 1989; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 19,900 microsiemens July 27; minimum, 900 microsiemens, Sept. 18.
WATER TEMPERATURE: Maximum, 37.0°C Aug. 8; minimum, 0.0°C on several days during December and January.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
NOV										
18...	1120	8.7	14000	7.7	14.0	9.1	98	2700	2500	690
DEC										
04...	1040	6.0	14500	--	6.0	--	--	3000	2800	750
JAN										
17...	1030	49	7790	8.2	3.5	14.0	113	2500	2300	580
FEB										
27...	1600	224	4200	--	13.5	--	--	1600	1500	400
MAR										
13...	1020	59	8790	8.0	12.5	10.4	105	2500	2400	590
APR										
17...	1045	1230	2540	7.5	15.5	--	--	940	860	240
MAY										
01...	1045	24	10500	8.0	21.5	9.5	116	2900	2700	660
JUL										
06...	1015	44	10100	8.0	26.0	9.0	120	2600	2500	660
AUG										
03...	1105	26	10300	8.0	26.0	9.3	124	2500	2400	640

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV										
18...	240	2100	18	17	170	2500	3500	1.1	5.5	9160
DEC										
04...	270	2100	17	16	180	2500	3700	2.4	5.0	9450
JAN										
17...	250	920	8	14	190	2200	1500	0.80	5.7	5580
FEB										
27...	150	360	4	13	150	1500	520	0.30	7.3	3040
MAR										
13...	260	1000	9	16	180	2300	1700	0.20	4.5	5980
APR										
17...	82	200	3	10	74	870	310	0.30	7.9	1760
MAY										
01...	300	1400	11	19	170	2500	2300	0.50	4.7	7280
JUL										
06...	240	1500	13	16	160	2400	2400	<0.10	7.8	7320
AUG										
03...	210	1600	14	16	110	2200	2600	0.70	5.7	7340

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)
NOV 18...	--	<0.010	<0.050	0.040	--	<0.20	0.020	<0.010	--	--
DEC 04...	--	--	--	--	--	--	--	--	--	--
JAN 17...	--	0.030	<0.050	0.070	0.13	0.20	0.050	0.050	3	<100
FEB 27...	--	--	--	--	--	--	--	--	--	--
MAR 13...	--	0.030	<0.050	0.060	--	<0.20	0.020	0.120	--	--
APR 17...	--	--	--	--	--	--	--	--	--	--
MAY 01...	--	0.040	<0.050	0.100	--	<0.20	0.020	--	--	--
JUL 06...	--	<0.010	<0.050	0.100	0.40	0.50	0.090	<0.010	8	<100
AUG 03...	0.037	0.020	0.057	0.070	0.33	0.40	0.200	0.010	--	--

DATE	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 18...	--	--	--	--	--	--	--	--	--	--
DEC 04...	--	--	--	--	--	--	--	--	--	--
JAN 17...	<2.0	2	2	<10	<1	10	0.3	3	<1.0	<10
FEB 27...	--	--	--	--	--	--	--	--	--	--
MAR 13...	--	--	--	--	--	--	--	--	--	--
APR 17...	--	--	--	--	--	--	--	--	--	--
MAY 01...	--	--	--	--	--	--	--	--	--	--
JUL 06...	<1.0	2	3	<10	<1	20	<0.1	2	<1.0	<10
AUG 03...	--	--	--	--	--	--	--	--	--	--

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	893	7390	4990	12000	1800	4290	1400	3300	1600
NOV.	1991	286.5	13600	9250	7150	3500	2700	2400	1820	*
DEC.	1991	2401.5	4800	3200	20800	1000	6770	980	6340	1100
JAN.	1992	1868	7860	5270	26600	1800	9010	1500	7770	1800
FEB.	1992	4977	5260	3510	47200	1100	15400	1100	14400	1300
MAR.	1992	2001	7700	5170	27900	1800	9470	1500	8150	1800
APR.	1992	1874	6220	4170	21100	1400	7130	1200	6180	1400
MAY	1992	2168	5990	4010	23500	1300	7840	1200	6970	1400
JUNE	1992	12066	3230	2150	70000	670	21800	680	22300	800
JULY	1992	1017	9680	6520	17900	2300	6310	1800	5000	2200
AUG.	1992	433.1	10700	7240	8460	2600	3040	2000	2300	*
SEPT	1992	432.2	7550	5070	5920	1800	2050	1400	1690	1700
TOTAL		30417.3	**	**	288000	**	95800	**	86300	**
WTD.AVG.		83	5250	3510	**	1200	**	1100	**	1200

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	11700	11300	11500	11900	9330	9890	14700	14300	14500	---	---	e7500
2	11600	10900	11300	14300	12100	13500	14400	13600	14000	---	---	e7800
3	11600	11200	11300	14400	13100	13800	14200	14000	14100	---	---	e7900
4	11700	11400	11500	13500	12000	12800	14200	13900	14100	---	---	e8000
5	11900	11600	11700	11900	11100	11700	14300	13800	14200	---	---	e8100
6	12000	11600	11700	13100	11800	12400	14300	14200	14300	8330	8100	8270
7	11900	11600	11800	14500	13200	13900	14300	14100	14200	8580	8330	8400
8	12100	11700	11900	14800	14400	14600	14200	13500	14100	8730	8480	8620
9	12300	11800	12000	14700	14500	14600	14000	13500	13800	9100	8730	8900
10	12500	12000	12200	14700	14600	14600	14000	13800	13900	9260	8990	9110
11	12700	12200	12400	14700	14600	14600	13900	5580	12000	9300	9150	9220
12	12900	12500	12600	14700	14600	14600	11200	2430	4600	9360	9100	9260
13	12900	12500	12700	14800	14600	14700	---	---	e6000	9150	5980	7440
14	12900	12600	12800	14700	14500	14600	---	---	e8000	6720	5110	5980
15	12800	12500	12700	14500	14300	14400	---	---	e10000	7680	6720	7270
16	13000	12600	12800	14400	13700	14100	11300	11200	11200	8160	7590	7850
17	13200	12700	12900	14000	13800	13900	11600	11300	11400	8080	7590	7810
18	13300	12900	13100	14100	13700	13900	11600	10500	11400	7810	6800	7300
19	13300	13100	13200	14200	14000	14100	8950	2110	5250	7480	6920	7150
20	13300	13000	13100	14300	14100	14100	2760	1590	2050	7500	6940	7170
21	13300	13000	13100	14400	14000	14200	8550	2870	5610	7400	6830	7090
22	13400	13100	13200	14300	14100	14200	6090	2570	3640	8660	6840	7360
23	13400	13100	1330	14400	14200	14300	4450	3120	3880	8770	6950	7890
24	13500	13300	13400	14500	14000	14300	5240	2400	4490	8180	6380	7280
25	13600	12200	13200	14400	14100	14300	5130	2400	4700	9060	8180	8510
26	13400	2760	5510	14400	13900	14200	5890	4910	5560	9720	7600	8950
27	5330	2110	4110	14300	14100	14200	6220	5780	6010	7820	7150	7510
28	2610	1000	1550	14300	14100	14100	6650	6000	6200	7910	7370	7650
29	---	---	e4000	14400	14100	14200	6870	6650	6750	8330	7900	8050
30	---	---	e8000	14600	14400	14500	---	---	e7000	8850	8330	8540
31	10600	9750	10200	---	---	---	---	---	e7300	9370	8850	9090
MONTH	13600	1000	10700	14800	9330	13900	14700	1590	9170	9720	5110	7970

e Estimated

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9670	9460	9550	5850	5510	5710	9200	8780	9060	11400	10600	10900
2	9450	7520	8740	6180	5750	5940	9450	9110	9290	11400	10700	11200
3	7940	3270	7050	6200	2280	5820	9830	9360	9520	11500	11000	11300
4	4060	2480	3120	6230	5220	5900	10100	9570	9820	11700	11200	11500
5	6200	4060	5140	6820	6350	6550	10100	9560	9850	11800	11200	11600
6	8700	6310	7660	7310	6820	7050	9610	8710	9220	12000	11400	11700
7	7870	5180	6350	7680	7310	7450	9640	8870	9220	12200	11700	11900
8	---	---	e6300	8070	7600	7820	9960	9430	9650	12400	11900	12100
9	---	---	e6300	8460	7980	8210	9860	9540	9760	12400	12100	12300
10	---	---	e6400	8790	8460	8640	9970	9540	9720	12600	1400	11200
11	---	---	e6600	8850	8710	8770	10400	9650	9940	10200	1510	3500
12	---	---	e6800	8950	8730	8810	10200	10100	10100	8290	2950	4640
13	---	---	e7000	8980	8770	8840	10500	9980	10200	---	---	e9500
14	---	---	e7200	8930	8730	8810	10600	10200	10400	---	---	e7000
15	---	---	e7400	8950	8760	8860	10300	9980	10100	6370	5600	6020
16	---	---	e7600	9080	8790	8910	10100	9670	9920	6780	6250	6520
17	---	---	e7800	8940	8550	8790	3830	1490	2740	7310	6770	7000
18	---	---	e8100	8700	8430	8590	5960	3830	5010	7720	7190	7440
19	8430	8210	8340	8900	8560	8720	6490	5640	6110	8070	7590	7770
20	8660	8320	8500	8920	8670	8830	7030	6380	6780	7910	2480	5720
21	8880	8550	8650	8930	8740	8850	7130	6710	6920	---	---	e6000
22	8660	8220	8460	8950	8760	8850	7670	7030	7310	---	---	e7000
23	8770	8550	8590	9050	8890	8960	8410	7560	7920	---	---	e8000
24	8440	1670	3820	9210	8900	9000	8720	7560	8250	---	---	e8500
25	4780	2000	3330	9360	8950	9120	9230	8710	8940	---	---	e9000
26	7220	3860	5480	9620	9110	9310	9740	9010	9320	---	---	e9500
27	4520	3860	4100	9380	9200	9300	10400	9420	9740	---	---	e10000
28	5390	4410	4960	9150	8830	9000	11000	10000	10600	---	---	e4000
29	5830	5280	5580	9410	8880	9140	11100	10600	10800	8880	5500	7400
30	---	---	---	9570	9230	9370	11200	10500	10800	9080	6270	7220
31	---	---	---	9530	9050	9440	---	---	---	6960	6310	6470
MONTH	9670	1670	6720	9620	2280	8300	11200	1490	8900	12600	1400	8510

e Estimated

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7050	1110	2670	---	---	e7500	10200	5800	8370	8870	1800	4710
2	3150	1130	2100	---	---	e8000	8900	5200	7620	8000	3460	5380
3	3930	2740	3300	---	---	e7500	12100	8900	10300	7700	6200	6630
4	---	---	e4800	---	---	e8500	12800	11900	12300	6700	6400	6570
5	5000	1590	2930	---	---	e9060	12500	11400	11800	6800	6500	6580
6	3280	954	2100	---	---	e10200	11700	11200	11400	6800	6400	6600
7	3590	1790	3040	10600	10200	10400	11900	11100	11400	7100	6600	6700
8	2110	1470	1820	---	---	e10800	12200	11400	11700	7600	6900	7170
9	3460	1710	2350	---	---	e11000	12500	11500	11900	8300	7500	7800
10	4020	3470	3730	---	---	e11200	12400	11400	11900	8300	8100	8210
11	---	---	e4000	---	---	e11300	12500	8800	11600	8600	8300	8450
12	---	---	e3800	---	---	e11400	12200	11800	12000	9100	8600	8760
13	---	---	e3500	11800	11400	11600	12100	11600	11800	9400	8900	9060
14	---	---	e4500	12000	10800	11400	12400	11700	11900	10300	9400	9800
15	---	---	e5500	12000	11500	11700	12100	11800	11900	10800	10200	10400
16	---	---	e5800	12000	11500	11700	12300	11800	12100	11600	10700	11000
17	---	---	e6000	11700	11400	11600	12400	12100	12200	13300	11500	12400
18	---	---	e6000	11500	2400	8030	12400	12100	12200	13700	13200	13400
19	---	---	e6500	---	---	e9000	12400	12100	12200	14000	13500	13700
20	---	---	e7000	---	---	e10500	12500	12100	12300	13900	7400	13600
21	---	---	e6000	---	---	e10800	12800	12300	12500	13100	7700	9880
22	---	---	e6900	11500	11000	e11000	12800	12500	12600	13900	11900	13000
23	---	---	e7000	11300	10900	11100	13000	11000	12500	14400	14000	14200
24	---	---	e7200	11300	10800	11100	13300	11100	13000	14800	14300	14600
25	---	---	e7600	11300	10800	11000	13400	12800	13200	15400	14700	14900
26	---	---	e8000	11300	10900	11100	13100	9530	12100	15900	15200	15500
27	---	---	e4000	11200	5700	9210	10400	3170	5730	15800	15500	15600
28	---	---	e3500	9700	5100	7190	11400	10200	10900	15600	15300	15400
29	---	---	e5500	10800	8900	9900	11700	11100	11300	15500	15200	15300
30	---	---	e6000	11500	8500	10800	11700	3730	10500	15400	15100	15200
31	---	---	---	11200	6000	9790	10300	3520	7810	---	---	---
MONTH	7050	954	4770	12000	2400	10200	13400	3170	11300	15900	1800	10700
YEAR	15900	954	9270									

e Estimated

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	24.8	18.0	21.6	8.5	3.5	5.9	6.7	3.9	5.2	9.5	7.4	8.6
2	25.4	19.6	22.6	7.6	4.7	6.0	7.1	3.0	4.8	8.9	5.5	7.4
3	26.3	19.9	23.2	7.3	3.5	5.5	8.1	4.8	6.1	8.5	4.9	6.8
4	23.4	19.1	21.7	8.5	4.9	6.9	8.9	5.1	6.3	8.5	6.0	7.3
5	19.6	14.0	17.3	10.5	5.9	8.6	10.0	5.0	7.0	10.7	8.1	9.3
6	20.0	13.2	17.2	11.5	7.6	10.0	12.4	6.9	9.3	9.9	6.8	8.7
7	20.6	14.4	18.1	11.2	5.5	8.0	14.8	9.6	11.6	11.9	8.0	9.6
8	22.1	15.3	19.2	8.8	3.6	6.3	13.9	12.3	12.7	9.5	5.4	7.6
9	23.7	17.6	21.2	11.3	6.9	9.4	14.6	11.0	12.7	8.9	3.5	6.4
10	24.3	18.1	21.9	11.0	8.9	10.0	12.2	9.0	10.7	8.5	3.5	6.2
11	24.7	19.2	22.6	9.7	8.4	9.1	13.7	11.7	12.8	7.6	5.0	6.5
12	23.7	17.8	21.5	12.7	9.2	11.0	14.6	12.6	13.6	11.2	5.8	8.3
13	22.3	17.9	20.7	14.7	12.3	13.4	12.2	8.8	10.8	8.4	3.1	5.6
14	21.6	17.8	19.7	15.3	14.2	14.6	10.6	6.8	8.4	5.3	2.0	3.7
15	20.0	15.3	18.0	14.5	13.6	14.1	8.9	4.0	6.6	3.3	.9	2.4
16	21.3	15.2	18.5	14.2	12.4	13.1	9.9	5.0	7.6	4.4	.0	1.8
17	23.3	17.7	20.6	14.6	11.2	12.9	9.8	7.3	8.8	4.1	1.2	2.7
18	24.0	18.6	21.0	15.1	10.7	13.1	9.0	6.4	7.2	4.2	.5	2.3
19	18.8	14.7	17.1	14.0	10.4	12.5	7.5	6.0	6.7	5.3	.0	2.3
20	19.1	14.4	16.6	12.1	8.0	9.9	7.7	7.1	7.4	7.0	.7	3.7
21	20.8	15.6	18.0	11.8	7.9	9.8	7.3	7.0	7.2	5.9	3.7	4.9
22	22.5	16.8	19.5	12.6	9.6	10.7	8.6	6.2	7.3	9.0	4.1	6.3
23	23.5	18.7	20.8	10.1	6.9	8.6	8.2	6.8	7.5	8.6	3.8	6.0
24	23.5	19.1	21.0	9.2	5.1	7.0	7.6	4.8	6.3	9.0	3.5	6.2
25	20.2	16.0	17.9	8.2	6.5	7.2	6.8	4.1	5.5	10.1	4.9	7.3
26	19.0	14.4	16.8	10.5	6.2	8.0	6.9	5.8	6.3	7.6	6.5	7.2
27	19.0	16.9	17.9	12.6	8.1	10.0	6.9	6.0	6.4	8.3	7.3	7.8
28	19.3	16.1	17.6	15.1	10.6	12.8	8.4	5.6	6.8	9.6	7.9	8.6
29	18.2	13.1	14.7	15.4	12.4	14.5	8.9	4.5	6.6	11.6	8.8	10.0
30	13.0	8.8	10.6	12.1	6.9	9.4	7.8	6.5	7.1	12.8	7.6	10.1
31	8.6	5.1	6.9	---	---	---	8.8	6.3	7.3	13.3	7.5	10.2
MONTH	26.3	5.1	18.8	15.4	3.5	9.9	14.8	3.0	8.1	13.3	.0	6.5

07311800 SOUTH WICHITA RIVER NEAR BENJAMIN, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.8	8.0	10.0	16.7	11.9	14.3	17.8	10.2	13.8	29.5	18.7	23.8
2	11.1	10.1	10.6	18.3	13.7	15.8	14.2	10.3	12.2	26.5	20.8	23.6
3	11.6	10.0	10.7	18.1	13.3	16.5	20.8	8.3	14.1	25.5	18.2	21.7
4	10.2	8.1	9.5	18.9	13.6	16.0	23.6	12.2	17.6	26.9	17.5	21.9
5	10.6	6.5	8.3	17.7	12.8	15.3	18.9	13.9	16.1	28.6	16.5	22.5
6	10.1	6.5	8.2	19.3	12.6	15.8	18.9	14.2	16.2	25.4	16.5	21.2
7	10.0	5.9	7.9	19.1	13.0	16.1	25.4	13.2	19.1	26.3	14.9	20.4
8	9.2	5.1	7.3	21.3	15.6	17.9	26.1	17.6	21.4	26.3	16.6	21.4
9	11.9	7.0	9.2	18.0	11.0	15.3	23.4	17.6	20.8	24.4	17.1	20.7
10	14.5	9.2	11.6	14.1	7.1	10.5	26.2	17.5	21.6	24.4	14.9	20.1
11	14.3	10.9	12.4	15.1	7.3	11.1	27.8	18.5	22.7	20.2	9.2	16.2
12	12.6	10.8	11.8	16.7	9.0	12.7	22.7	15.3	17.7	24.3	19.3	21.5
13	10.4	8.4	9.2	18.7	10.2	14.4	23.1	14.4	17.9	28.0	22.2	24.6
14	14.3	9.3	11.4	20.5	11.8	16.0	24.7	17.4	21.0	24.9	22.6	23.7
15	14.5	9.3	11.8	21.1	12.8	16.8	26.0	18.2	21.5	29.6	22.9	25.8
16	14.6	10.1	12.3	21.9	13.7	17.8	24.8	18.9	21.8	24.6	20.6	22.4
17	14.2	9.6	12.0	19.2	16.0	17.7	20.9	13.1	17.0	24.8	19.5	21.7
18	14.3	8.2	11.1	20.0	13.5	16.3	23.4	18.7	20.7	24.1	20.6	22.4
19	14.2	6.8	10.5	18.7	11.2	15.0	21.9	17.3	19.0	27.5	20.9	23.9
20	16.0	8.2	11.9	19.0	10.4	14.7	19.1	14.0	16.4	26.4	21.5	23.6
21	17.1	9.8	13.5	19.7	12.5	15.8	24.0	13.7	18.2	25.2	21.8	23.1
22	16.2	11.7	13.9	16.5	10.9	14.0	25.1	15.6	20.2	24.7	21.2	22.7
23	16.8	11.4	13.9	18.0	8.7	13.3	27.8	17.0	22.0	24.0	22.0	22.6
24	14.5	8.2	10.6	20.3	10.5	15.2	24.5	18.2	21.4	22.0	20.8	21.3
25	9.9	7.1	8.5	21.3	11.8	16.3	22.8	14.9	18.9	21.0	20.1	20.7
26	11.0	7.8	9.4	23.1	12.4	17.7	25.8	14.2	19.6	20.9	19.2	19.9
27	13.1	9.0	10.8	18.4	14.9	16.7	26.9	16.1	21.2	20.4	19.4	19.8
28	15.2	9.9	12.4	22.3	14.5	18.0	28.9	17.8	22.8	19.3	13.7	15.8
29	16.4	11.1	13.7	21.3	14.4	17.7	28.2	18.2	22.9	17.2	13.2	15.0
30	---	---	---	20.7	12.1	16.3	28.4	18.6	23.4	20.5	14.4	17.5
31	---	---	---	15.4	11.9	13.7	---	---	---	20.2	17.5	18.7
MONTH	17.1	5.1	10.8	23.1	7.1	15.5	28.9	8.3	19.3	29.6	9.2	21.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.6	16.1	19.2	33.5	25.9	29.2	31.3	25.1	28.1	23.0	19.1	21.3
2	21.0	17.9	19.4	33.3	27.3	30.0	31.3	25.1	27.6	29.4	22.8	26.3
3	23.3	19.8	21.6	30.3	25.0	27.5	31.9	23.3	27.1	31.9	24.6	28.0
4	25.4	21.6	23.0	31.2	24.7	27.8	32.6	24.6	28.3	29.9	23.8	26.9
5	25.4	17.9	22.2	27.9	25.6	26.6	30.7	24.7	27.6	29.0	23.4	26.3
6	26.3	17.9	22.1	31.3	25.4	27.9	29.6	25.4	27.8	27.8	24.4	26.1
7	25.6	20.5	22.4	29.9	24.4	27.1	29.7	24.6	27.1	30.2	22.8	26.5
8	23.6	19.8	21.2	30.9	22.9	26.6	29.1	25.2	27.2	31.1	22.9	26.9
9	25.0	21.3	22.9	30.7	23.5	26.8	28.8	25.3	27.2	30.0	22.5	26.2
10	25.6	22.9	24.4	30.9	24.1	27.6	28.7	25.8	27.4	26.2	21.1	23.6
11	26.7	24.1	25.5	30.2	23.8	26.7	28.6	24.2	26.3	24.4	20.0	21.9
12	26.4	24.2	25.3	29.0	23.0	26.3	28.9	22.4	25.4	28.6	20.3	24.2
13	26.9	24.5	25.7	28.8	23.7	26.1	30.3	21.9	26.0	28.7	21.2	24.9
14	28.2	24.6	26.1	34.5	22.9	28.0	29.6	23.0	26.4	29.4	21.6	25.5
15	28.4	25.6	26.9	30.8	24.0	27.5	28.0	21.3	24.8	29.7	22.3	25.8
16	29.7	25.6	27.5	27.5	23.2	25.3	27.2	21.2	24.4	29.3	21.6	25.2
17	30.9	25.4	27.8	31.6	22.3	26.5	26.1	20.9	23.2	28.9	20.7	24.8
18	31.6	26.7	29.0	28.9	20.8	25.8	23.7	20.4	21.6	27.9	21.3	23.9
19	31.8	26.5	28.9	28.9	23.6	25.6	23.7	19.9	21.2	27.6	19.3	23.3
20	29.1	25.9	27.4	31.5	24.4	27.6	27.3	17.8	22.8	30.2	22.8	25.8
21	26.5	24.0	25.1	31.4	23.9	27.3	29.2	20.1	24.9	29.2	20.8	24.6
22	28.2	23.7	25.8	31.5	23.4	27.5	28.0	20.5	24.7	25.8	20.2	22.4
23	31.2	25.0	27.7	32.5	24.1	28.0	28.7	20.3	24.6	24.6	16.0	20.3
24	31.1	26.7	29.0	32.6	24.6	28.4	28.9	21.4	25.2	24.0	15.1	19.6
25	30.2	26.0	28.1	33.0	23.5	28.0	29.7	22.4	25.5	24.3	16.5	20.7
26	29.9	25.0	27.3	34.5	24.3	28.9	27.0	20.9	23.6	24.5	17.6	21.0
27	28.4	22.3	25.7	31.6	23.9	27.5	27.8	19.6	23.5	24.0	14.8	19.7
28	28.4	22.2	25.5	32.8	24.7	28.6	29.5	18.8	24.2	23.6	15.0	19.5
29	30.4	24.9	27.5	33.1	25.5	29.1	28.9	20.5	24.9	25.0	15.7	20.3
30	30.9	25.6	28.2	33.0	25.3	28.7	27.9	21.0	24.5	24.8	16.3	20.3
31	---	---	---	31.9	25.2	28.1	25.1	22.1	23.8	---	---	---
MONTH	31.8	16.1	25.3	34.5	20.8	27.5	32.6	17.8	25.4	31.9	14.8	23.7
YEAR	34.5	.0	17.7									

07312000 LAKE KEMP NEAR MABELLE, TX

LOCATION.--Lat 33°45'30", long 99°09'03", Baylor County, Hydrologic Unit 11130206, in outlet gate tower near center of dam on Wichita River, 6.2 mi north of Mabelle, 13 mi northeast of Seymour, and 126.7 mi upstream from mouth.

DRAINAGE AREA.--2,086 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1922 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1972, nonrecording gage at different site and at datum 2.40 ft higher.

REMARKS.--The lake is formed by a rolled earthfill dam 8,890 ft long. The original dam was completed Aug. 25, 1923, but deliberate impoundment had begun Oct. 1, 1922. Enlargement of the dam was completed in November 1973. The 3,000-foot-wide uncontrolled spillway is located approximately 600 ft to right and slightly upstream from right end of dam. The controlled outlet works near center of dam consist of two hydraulically operated slide gates 5 ft 8-in by 13 ft with a 13-foot-diameter conduit and spillway basin. The dam and lake are owned by the city of Wichita Falls and the Wichita County Water Improvement District No. 2. Water is used for irrigation in the Wichita River Valley, oil field operation, municipal, and industrial uses. The capacity table is based on a resurvey made in 1973. Data collection platform at station. Figures given herein represents total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	1,183.0	-
Crest of spillway	1,160.0	603,000
Top of flood-control pool	1,156.0	502,900
Top of conservation pool	1,144.0	268,000
Lowest gated outlet (invert)	1,090.0	1,400

COOPERATION.--Capacity table No. 4-C was provided by the U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 420,900 acre-ft June 30, 1941 (elevation, 1,152.0 ft), present datum; minimum since first appreciable storage, 26,160 acre-ft June 30, 1953 (elevation, 1,108.0 ft), present datum.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 292,100 acre-ft Dec. 24-26 (elevation, 1,145.49 ft); minimum, 232,000 acre-ft Sept. 30 (elevation, 1,141.56 ft).

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

1,141.0	224,200	1,143.0	252,800	1,145.0	284,000
1,142.0	238,200	1,144.0	268,000	1,146.0	300,500

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	272700	270100	268300	285200	267500	275800	268500	262200	258300	272000	248600	241000
2	271800	269400	268200	283200	267200	275000	267700	260400	261600	268300	249100	242000
3	271000	268600	268500	281600	271500	274700	267800	258600	265300	263900	249000	242400
4	269000	268300	268500	280200	278200	275400	267100	257200	267400	259500	248600	242000
5	268000	268800	268600	278600	281900	274400	266800	254800	273600	254900	248100	243000
6	267000	268400	268800	276500	283400	273200	266000	253700	278900	253100	247500	242600
7	266900	268800	269800	275400	282200	272200	266200	252700	289900	252800	246900	242400
8	266300	268600	269600	273100	280000	273100	265700	251900	301500	252700	246200	242100
9	266800	268800	269600	271200	277900	272000	265700	251800	311200	252700	245600	241600
10	267000	269000	269600	269300	275700	270000	265100	251900	319900	253100	245500	241100
11	267200	268500	271400	267100	274400	268900	265300	253300	324900	252500	244500	240800
12	267200	269300	271200	265600	270900	267600	263900	254200	327500	252400	244800	240500
13	266900	269600	271400	267200	269400	267100	263500	256900	327700	252700	244200	240100
14	266900	269800	269800	268000	268600	266100	263100	255200	326500	252400	244000	239700
15	266600	269900	269300	268300	267400	265400	263000	255500	324500	251900	243000	239500
16	266500	270400	268200	268000	266900	265700	262500	254900	321800	253600	242600	239200
17	266400	270700	268000	268500	265600	267000	266900	254800	316800	253000	241700	238600
18	265700	270400	268300	269600	263900	267300	269900	254400	312500	253700	241600	238100
19	265400	270100	273100	269800	262500	267100	271700	254800	307900	253000	240900	238100
20	264700	269600	281300	270400	263100	267300	271700	254600	302900	252800	240500	237500
21	264700	269300	285000	271500	263600	267500	271500	254000	298800	253300	240000	237200
22	264700	269300	289900	272300	262800	266800	271700	254500	294400	252400	239500	236200
23	264700	268300	291600	271200	263400	267500	270700	254500	289100	252400	238900	235800
24	264000	268000	292100	270200	266800	268100	268800	254500	282200	251500	238200	235300
25	263600	268000	291900	269800	271900	268200	268200	254000	276300	251200	238200	234100
26	263700	268000	291800	269900	276200	268900	267200	254200	271000	250900	237400	234000
27	265900	268600	290800	270200	277600	270100	266000	252700	269700	250300	237800	233700
28	271000	269000	290100	269700	277200	271500	264800	256100	272800	250000	237400	233000
29	271500	268500	289900	269300	276500	271200	264700	256600	274700	250000	236400	232900
30	271700	268200	288100	268800	---	270200	262800	256600	274700	249300	236900	232000
31	272300	---	286500	268200	---	269100	---	256800	---	249100	238200	---
MAX	272700	270700	292100	285200	283400	275800	271700	262200	327700	272000	249100	243000
MIN	263600	268000	268000	265600	262500	265400	262500	251800	258300	249100	236400	232000
(†)	1144.27	1144.01	1145.15	1144.01	1144.53	1144.07	1143.66	1143.26	1144.42	1142.75	1142.00	1141.56
(ϕ)	-1300	-4100	+18300	-18300	+8300	-7400	-6300	-6000	+17900	-25600	-10900	-6200

CAL YR 1991 MAX 297900 MIN 231100 (ϕ) +39100
WTR YR 1992 MAX 327700 MIN 232000 (ϕ) -41600

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

07312000 LAKE KEMP NEAR MABELLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: August 1989 to current year.

334520099092101 - LAKE KEMP SITE AC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	RESERVOIR STORAGE (AC-FT)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
FEB												
11...	1014	1.00	274000	4180	8.2	8.5	2.07	9.5	86	760	670	200
11...	1016	10.0	--	4190	8.2	8.5	--	9.5	86	--	--	--
11...	1018	20.0	--	4190	8.2	8.5	--	9.5	86	--	--	--
11...	1020	30.0	--	4200	8.2	8.5	--	9.4	85	--	--	--
11...	1022	40.0	--	4210	8.2	8.5	--	9.4	85	--	--	--
11...	1024	50.0	--	4220	8.2	8.0	--	9.2	82	--	--	--
11...	1026	58.0	--	4240	8.2	8.0	--	9.2	82	770	670	210
MAY												
19...	1115	1.00	255000	4230	8.3	22.5	1.40	6.9	84	810	700	250
19...	1117	10.0	--	4230	8.3	22.0	--	6.8	82	--	--	--
19...	1119	20.0	--	4220	8.2	22.0	--	6.0	72	--	--	--
19...	1121	30.0	--	4200	8.2	21.5	--	4.0	48	--	--	--
19...	1123	40.0	--	4190	8.0	20.5	--	5.6	65	--	--	--
19...	1125	50.0	--	4180	7.8	20.0	--	4.1	47	--	--	--
19...	1127	55.0	--	4180	7.5	19.5	--	2.6	30	860	750	230
AUG												
25...	1010	1.00	238000	3860	8.2	25.0	0.60	6.0	76	760	670	200
25...	1012	10.0	--	3850	8.2	25.0	--	5.9	75	--	--	--
25...	1014	20.0	--	3860	8.2	24.5	--	5.8	73	--	--	--
25...	1016	30.0	--	3860	8.2	24.5	--	5.7	72	--	--	--
25...	1018	40.0	--	3980	7.6	24.0	--	2.2	27	--	--	--
25...	1020	45.0	--	4060	7.4	23.0	--	0.3	4	--	--	--
25...	1022	52.0	--	4220	7.3	21.5	--	0.5	6	930	790	250

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	ARSENIC DISSOLVED (UG/L AS AS)
FEB											
11...	64	550	9	6.8	97	730	860	0.30	6.8	2470	5
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	59	580	9	7.0	100	720	920	0.30	7.3	2560	--
MAY											
19...	45	590	9	8.3	110	770	870	0.20	6.3	2600	2
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	69	570	8	8.0	110	750	870	0.20	7.5	2570	--
AUG											
25...	64	520	8	7.8	98	780	790	0.50	7.9	2430	4
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	73	590	8	8.5	140	780	920	0.50	8.8	2710	--

07312000 LAKE KEMP NEAR MABELLE, TX--Continued

334520099092101 - LAKE KEMP SITE AC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
FEB											
11...	100	<1.0	<1	<1	<10	<1	10	0.2	1	<1.0	<10
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	<100	<1.0	<1	1	<10	<1	<10	0.2	<1	<1.0	<10
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
AUG											
25...	100	<1.0	1	<1	10	<1	<10	<0.1	<1	<1.0	<10
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--

334533099112801 - LAKE KEMP SITE BC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
FEB											
11...	1140	1.00	3980	8.2	9.5	1.50	9.5	88	700	600	190
11...	1142	10.0	4010	8.2	9.0	--	9.5	87	--	--	--
11...	1144	20.0	4050	8.2	8.5	--	9.5	86	--	--	--
11...	1146	30.0	4110	8.2	8.5	--	9.4	85	--	--	--
11...	1148	40.0	4150	8.2	8.0	--	9.3	83	--	--	--
11...	1150	46.0	4150	8.2	8.5	--	9.4	85	710	610	190
MAY											
19...	1230	1.00	4250	8.4	23.0	1.31	6.8	84	860	760	230
19...	1232	10.0	4260	8.3	22.5	--	6.7	82	--	--	--
19...	1234	20.0	4240	8.3	22.0	--	6.6	80	--	--	--
19...	1236	30.0	4230	8.1	21.0	--	5.7	67	--	--	--
19...	1238	40.0	4250	7.9	20.5	--	4.3	50	--	--	--
19...	1240	45.0	4260	7.9	20.5	--	4.5	53	900	790	240
AUG											
25...	1135	1.00	3830	8.4	25.0	0.60	6.1	78	850	750	220
25...	1137	10.0	3830	8.4	25.0	--	6.1	78	--	--	--
25...	1139	20.0	3820	8.3	25.0	--	6.1	78	--	--	--
25...	1141	30.0	3830	8.3	25.0	--	5.8	74	--	--	--
25...	1143	41.0	3840	8.2	25.0	--	5.5	70	870	770	230

07312000 LAKE KEMP NEAR MABELLE, TX--Continued

334533099112801 - LAKE KEMP SITE BC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
FEB										
11...	55	560	9	6.9	97	690	860	0.30	7.4	2430
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	56	580	9	7.3	97	710	900	0.30	7.4	2500
MAY										
19...	70	600	9	8.0	110	760	870	0.30	6.3	2610
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	73	600	9	8.1	110	760	880	0.30	6.8	2630
AUG										
25...	72	510	8	8.7	97	650	780	0.40	7.9	2310
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	72	520	8	8.5	98	790	800	0.50	8.0	2490

334702099100201 - LAKE KEMP SITE P1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
FEB							
11...	1108	1.00	4050	8.2	9.0	9.6	87
11...	1110	10.0	4110	8.2	9.0	9.6	87
11...	1112	20.0	4100	8.2	8.5	9.6	86
11...	1114	30.0	4120	8.2	8.5	9.7	87
11...	1116	36.0	4130	8.2	8.5	10.1	91
MAY							
19...	1200	1.00	4220	8.3	22.5	6.6	80
19...	1202	10.0	4220	8.3	22.0	6.5	78
19...	1204	20.0	4220	8.2	21.5	6.3	75
19...	1206	30.0	4220	8.2	21.5	5.9	70
19...	1208	33.0	4210	8.0	21.0	4.9	58
AUG							
25...	1100	1.00	3810	8.3	26.0	6.0	78
25...	1102	10.0	3820	8.3	26.0	5.9	76
25...	1104	20.0	3810	8.3	26.0	5.9	76
25...	1106	30.0	3810	8.3	26.0	5.8	75

334655099121701 - LAKE KEMP SITE CC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
FEB							
11...	1340	1.00	3990	8.1	9.5	9.7	90
11...	1342	10.0	4020	8.1	9.0	9.6	88
11...	1344	20.0	4050	8.1	9.0	9.8	89
11...	1346	28.0	4100	8.1	9.0	9.8	89
MAY							
19...	1305	1.00	4260	8.3	23.5	6.6	82
19...	1307	10.0	4270	8.3	22.5	6.5	79
19...	1309	20.0	4280	8.3	22.5	6.3	77
19...	1311	28.0	4280	8.2	22.0	5.5	66
AUG							
25...	1250	1.00	3960	8.4	25.0	6.3	80
25...	1252	10.0	3960	8.4	25.0	6.3	80
25...	1254	23.0	3950	8.3	25.0	6.0	76

07312000 LAKE KEMP NEAR MABELLE, TX--Continued

334505099131601 - LAKE KEMP SITE DC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
11...	1305	1.00	3750	8.1	10.0	9.5	89
11...	1307	10.0	3810	8.1	10.0	9.5	89
11...	1309	20.0	3880	8.1	9.5	9.7	90
11...	1311	27.0	4000	8.1	9.5	10.1	93
MAY							
19...	1330	1.00	4270	8.4	24.0	6.8	85
19...	1332	10.0	4340	8.3	23.0	6.6	81
19...	1334	20.0	4340	8.3	23.0	6.5	80
19...	1336	26.0	4400	8.3	23.0	6.4	79
AUG							
25...	1230	1.00	3800	8.4	26.0	6.1	79
25...	1232	10.0	3800	8.4	26.0	6.2	80
25...	1234	20.0	3810	8.4	25.5	6.1	78
25...	1236	26.0	3820	8.3	25.5	5.9	76

334417099140701 - LAKE KEMP SITE EC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
FEB											
11...	1330	1.00	4000	8.1	10.0	0.55	9.2	86	770	660	210
11...	1332	5.00	4360	8.2	10.5	--	9.2	87	910	800	250
MAY											
19...	1350	1.00	4440	8.4	24.0	0.46	7.0	88	940	830	250
19...	1352	4.00	4540	8.4	24.0	--	7.1	89	--	--	--
AUG											
25...	1315	1.00	3990	8.3	26.0	0.30	6.3	82	910	820	240

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	ARSENIC DISSOLVED (UG/L AS AS)
FEB											
11...	59	560	9	7.3	100	700	840	0.30	6.9	2450	1
11...	69	550	8	7.2	110	790	860	0.30	7.3	2600	--
MAY											
19...	76	620	9	8.6	110	830	920	0.30	6.2	2780	2
19...	--	--	--	--	--	--	--	--	--	--	--
AUG											
25...	76	540	8	8.0	95	810	820	0.50	7.8	2560	3

DATE	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
FEB											
11...	100	<1.0	<1	<1	<10	<1	<10	0.2	1	<1.0	<10
11...	--	--	--	--	<10	--	<10	--	--	--	--
MAY											
19...	200	<1.0	<1	1	<10	<1	10	<0.1	<1	<1.0	<10
19...	--	--	--	--	--	--	--	--	--	--	--
AUG											
25...	100	<1.0	<1	1	90	<1	20	<0.1	2	<1.0	<10

07312000 LAKE KEMP NEAR MABELLE, TX--Continued

334244099130901 - LAKE KEMP SITE FC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
11...	1356	1.00	3850	8.1	10.0	9.4	88
11...	1358	10.0	3880	8.1	10.0	9.4	88
11...	1400	17.0	3990	8.1	10.0	9.6	90
MAY							
19...	1415	1.00	4410	8.4	24.0	6.9	87
19...	1417	10.0	4420	8.3	23.0	6.4	79
19...	1419	15.0	4420	8.2	23.0	5.8	71
AUG							
25...	1340	1.00	4500	8.3	25.5	6.2	80
25...	1342	13.0	4520	8.1	25.0	5.2	66

07312100 WICHITA RIVER NEAR MABELLE, TX

LOCATION.--Lat 33°45'36", long 99°08'33", Baylor County, Hydrologic Unit 11130206, near left bank at downstream side of bridge on U.S. Highways 183 and 283, 0.3 mi downstream from Lake Kemp Dam, 6.2 mi north of Mabelle, and 13 mi northeast of Seymour.

DRAINAGE AREA.--2,086 mi², all of which is above Lake Kemp Dam.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1952-58 (occasional discharge measurements), October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,062.72 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Lake Kemp (station 07312000) 0.3 mi upstream. Water is released from Lake Kemp to supply Lake Diversion, 12.5 mi downstream. Water from Lake Diversion is released for mining, recreation, and irrigation in the vicinity of Wichita Falls.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	588	417	1.2	1180	568	892	557	808	122	2610	205	6.0
2	588	420	1.1	1180	568	892	371	873	123	2750	203	1.1
3	588	419	1.0	1180	595	892	261	873	123	2900	204	1.0
4	587	185	.97	1180	591	891	261	873	164	2900	204	1.0
5	587	3.0	.97	1180	572	890	261	873	195	2880	203	.93
6	587	2.5	.95	1180	570	891	261	591	198	1420	203	.87
7	232	2.7	.94	1180	1160	891	260	391	231	5.9	203	.84
8	2.7	2.4	.93	1180	1730	896	261	319	93	3.8	203	.84
9	2.3	2.2	1.0	1180	1730	893	261	126	321	3.1	203	80
10	2.2	2.2	.96	1180	1730	890	261	125	1210	2.5	201	127
11	2.2	1.9	1.4	1180	1730	888	261	126	1500	2.3	200	126
12	2.1	1.8	1.5	1180	1730	675	261	127	1710	2.1	200	126
13	2.1	1.7	330	431	1200	559	260	128	2000	2.1	199	126
14	2.2	1.7	521	2.0	859	560	260	127	2000	2.1	200	127
15	2.2	1.8	522	1.3	862	564	260	127	2000	2.1	199	127
16	2.1	1.7	522	1.0	867	217	260	128	2210	2.8	198	126
17	2.0	1.6	185	.98	865	6.4	261	128	2220	2.2	199	126
18	42	85	1.9	1.1	868	3.4	260	127	2790	35	200	126
19	158	137	19	.98	872	1.5	260	126	2790	129	199	125
20	158	138	29	1.1	304	1.3	259	126	2780	128	199	124
21	157	138	2.2	2.4	2.0	1.3	259	126	2770	128	199	124
22	155	138	4.2	333	1.7	1.4	458	126	2760	127	199	124
23	156	138	1.7	575	1.6	1.2	582	125	3200	127	198	124
24	157	99	350	574	6.7	1.2	583	125	3530	127	175	122
25	158	1.6	570	573	3.2	1.2	578	123	3520	147	158	122
26	65	1.3	570	576	1.5	1.2	576	125	3500	165	154	123
27	2.7	1.2	570	577	527	2.1	579	124	3490	165	154	124
28	9.5	1.1	570	575	893	1.7	579	127	2630	197	155	138
29	2.5	1.0	571	574	892	1.2	580	124	1740	210	156	143
30	2.5	1.3	915	572	---	334	579	123	2090	206	156	143
31	233	---	1180	572	---	554	---	122	---	205	92	---
TOTAL	5235.3	2348.7	7446.92	20102.86	22299.7	13294.1	10970	8492	54310	17587.0	5821	2765.58
MEAN	169	78.3	240	648	769	429	366	274	1810	567	188	92.2
MAX	588	420	1180	1180	1730	896	583	873	3530	2900	205	143
MIN	2.0	1.0	.93	.98	1.5	1.2	259	122	93	2.1	92	.84
AC-FT	10380	4660	14770	39870	44230	26370	21760	16840	107700	34880	11550	5490

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1992, BY WATER YEAR (WY)

MEAN	138	122	45.0	68.1	65.7	142	174	162	299	324	245	169
MAX	952	1271	247	648	769	659	659	1246	1810	923	490	915
(WY)	1987	1987	1987	1992	1992	1968	1968	1990	1992	1967	1967	1986
MIN	.66	.39	.42	.60	.51	.50	.89	6.53	2.59	140	30.9	1.66
(WY)	1985	1974	1974	1979	1979	1989	1981	1977	1989	1975	1978	1974

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1960 - 1992	
ANNUAL TOTAL	63412.99		170673.16			
ANNUAL MEAN	174		466		163	
HIGHEST ANNUAL MEAN					522	1987
LOWEST ANNUAL MEAN					59.9	1981
HIGHEST DAILY MEAN	1190	Sep 24	3530	Jun 24	3530	Jun 24 1992
LOWEST DAILY MEAN	.40	Jan 4	.84	Sep 7	.09	May 8 1989
ANNUAL SEVEN-DAY MINIMUM	.57	Mar 20	.94	Sep 2	.14	May 7 1989
INSTANTANEOUS PEAK FLOW			3600	Jun 28	4290	Mar 24 1976
INSTANTANEOUS PEAK STAGE			9.57	Jun 28	10.47	Mar 24 1976
INSTANTANEOUS LOW FLOW			.84	Dec 6	.09	May 8 1989
ANNUAL RUNOFF (AC-FT)	125800		338500		118300	
10 PERCENT EXCEEDS	570		1180		416	
50 PERCENT EXCEEDS	121		190		11	
90 PERCENT EXCEEDS	.74		1.4		.71	

07312100 WICHITA RIVER NEAR MABELLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: December 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1968 to current year.
WATER TEMPERATURE: July 1968 to current year.

INSTRUMENTATION.--From 1968 to 1975, specific conductance was continuously recorded at this station.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 7,110 microsiemens May 13, 14, 1980; minimum daily, 561 microsiemens May 28, 1975.
WATER TEMPERATURE: Maximum daily, 32.0°C Sept. 4, 1972, June 26, July 5, 1975; minimum daily, 0.0°C Dec. 20, 1973, Feb. 9, 17, 1980.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 5,800 microsiemens Nov. 25; minimum daily, 2,550 microsiemens Jan. 10.
WATER TEMPERATURE: Maximum daily, 28.0°C Aug. 3; minimum daily, 3.0°C Dec. 22, 23, 30.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
DEC									
03...	0930	0.98	4880	9.0	920	780	240	77	730
FEB									
25...	0945	2.8	4120	8.5	680	500	180	56	530
MAY									
18...	1000	127	4230	21.5	880	780	240	69	590
JUN									
29...	0955	1770	3770	26.0	780	680	210	61	430
AUG									
10...	0905	204	3730	27.5	800	710	210	68	470

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
DEC								
03...	10	6.0	140	580	1100	0.50	7.8	2820
FEB								
25...	9	5.7	180	550	880	0.20	9.0	2320
MAY								
18...	9	8.2	110	770	900	0.50	6.3	2650
JUN								
29...	7	7.3	99	680	700	0.50	7.2	2160
AUG								
10...	7	7.5	96	770	780	0.50	8.0	2370

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	5235.3	4230	2550	36100	960	13500	640	8980	770
NOV.	1991	2348.7	4160	2510	15900	940	5960	630	3970	750
DEC.	1991	7446.92	4180	2520	50600	940	19000	630	12600	760
JAN.	1992	20102.0	4130	2490	135000	930	50500	620	33800	750
FEB.	1992	22299.7	4070	2450	148000	910	55000	610	37000	740
MAR.	1992	13294.1	4030	2420	87000	900	32400	610	21900	730
APR.	1992	10970	4100	2470	73200	920	27300	620	18300	740
MAY	1992	8492	4170	2520	57700	940	21600	630	14400	760
JUNE	1992	54310	3720	2220	326000	820	119900	570	83300	680
JULY	1992	17587.0	3560	2120	101000	780	36800	550	26000	650
AUG.	1992	5821	3720	2230	35000	820	12900	570	8950	680
SEPT	1992	2765.58	3940	2360	17700	880	6550	600	4460	720
TOTAL		170673.16	**	**	1083000	**	401000	**	274000	**
WTD.AVG.		466	3910	2350	**	870	**	590	**	710

07312100 WICHITA RIVER NEAR MABELLE, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY EQUIVALENT MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4220	4120	4820	4150	4070	4020	4030	4160	4260	3570	3620	2710
2	4220	4140	4740	4150	4080	4040	4080	4140	4260	3570	3620	4030
3	4230	4130	4820	4150	4110	4030	4040	4150	4260	3560	3620	4650
4	4230	4130	4810	4140	4130	4030	4050	4150	4260	3520	3640	4710
5	4220	4550	4830	4140	4140	4030	4050	4160	3080	3520	3640	4730
6	4210	4340	4830	4140	4150	4030	4050	4160	4140	3520	3640	4770
7	4210	4340	4840	4140	4060	4030	4050	4180	3490	4490	3640	4770
8	4670	4330	4830	4130	3990	4030	4060	4170	4030	4600	3650	4750
9	4570	4490	4820	4140	4030	4000	4060	4200	2450	4810	3660	4780
10	4520	4400	4860	4130	4120	4010	4060	4190	4070	4900	3660	3900
11	4520	4430	4840	4120	4100	4010	4070	4160	3900	4850	3680	3880
12	4500	4580	3830	4130	4090	4060	4080	4200	3970	4910	3670	3880
13	4470	4600	4620	4350	4080	4010	4090	4180	4010	4920	3670	3890
14	4450	4610	4180	4360	4050	4000	4090	4200	3960	4920	3690	3890
15	4510	4510	4190	4610	4050	4000	4090	4200	3900	4910	3710	3890
16	4470	4430	4190	4740	4060	4000	4090	4210	3910	4830	3740	3890
17	4520	4520	4190	4770	4060	4790	4090	4210	3760	4810	3740	3900
18	4520	4630	4680	4570	4050	4110	4100	4210	3690	4870	3760	3900
19	4210	4150	3230	4650	4050	4600	4120	4220	3640	3620	3780	3900
20	4210	4150	1100	4720	4050	4930	4120	4220	3760	3630	3800	3900
21	4210	4160	3860	4110	4780	4810	4120	4210	3630	3620	3810	3910
22	4210	4160	1960	4140	4720	4730	4130	4220	3660	3630	3800	3920
23	4210	4160	3880	4100	4780	4630	4120	4220	3670	3630	3810	3920
24	4230	4160	4480	4100	4620	4830	4120	4220	3640	3620	3810	3920
25	4210	4800	4120	4100	2970	4580	4140	4230	3660	3630	3820	3920
26	4200	4800	4120	4100	4100	4480	4150	4230	3610	3630	3820	3930
27	4590	4810	4160	4100	4250	4110	4140	4230	3580	3630	3820	3940
28	2990	4810	4160	4100	4030	3290	4140	4180	3590	3620	3820	3950
29	4440	4770	4150	4100	4020	4530	4140	4220	3560	3620	3830	3950
30	4420	4880	4150	4060	---	4290	4150	4230	3540	3620	3830	3970
31	4450	---	4150	4070	---	4050	---	4230	---	3620	3820	---
MEAN	4320	4440	4210	4240	4130	4230	4090	4200	3760	4070	3730	4070
MAX	4670	4880	4860	4770	4780	4930	4150	4230	4260	4920	3830	4780
MIN	2990	4120	1100	4060	2970	3290	4030	4140	2450	3520	3620	2710

WTR YR 1992 MEAN 4120 MAX 4930 MIN 1100

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	15.0	8.0	9.0	8.0	11.0	14.0	19.0	20.0	26.0	27.0	19.0
2	21.0	15.0	8.0	8.0	8.0	12.0	14.0	20.0	20.0	27.0	27.0	21.0
3	22.0	14.0	8.0	9.0	8.0	12.0	14.0	20.0	21.0	27.0	27.0	21.0
4	22.0	13.0	8.0	9.0	7.0	12.0	15.0	20.0	21.0	27.0	27.0	21.0
5	20.0	10.0	9.0	9.0	7.0	12.0	15.0	21.0	20.0	27.0	27.0	21.0
6	20.0	10.0	10.0	9.0	8.0	12.0	14.0	20.0	21.0	27.0	27.0	21.0
7	20.0	10.0	10.0	9.0	7.0	12.0	15.0	20.0	21.0	21.0	27.0	21.0
8	16.0	7.0	15.0	8.0	7.0	13.0	15.0	20.0	21.0	21.0	27.0	21.0
9	18.0	9.0	14.0	8.0	7.0	13.0	16.0	20.0	21.0	20.0	27.0	21.0
10	18.0	10.0	12.0	8.0	8.0	12.0	16.0	20.0	21.0	21.0	27.0	25.0
11	18.0	10.0	15.0	9.0	9.0	12.0	17.0	20.0	23.0	21.0	27.0	24.0
12	18.0	12.0	15.0	9.0	9.0	12.0	17.0	21.0	23.0	21.0	27.0	24.0
13	18.0	13.0	12.0	e9.0	9.0	12.0	17.0	20.0	23.0	21.0	26.0	24.0
14	17.0	15.0	10.0	9.0	9.0	13.0	17.0	21.0	23.0	20.0	26.0	24.0
15	15.0	14.0	10.0	8.0	9.0	12.0	18.0	20.0	24.0	21.0	25.0	24.0
16	15.0	14.0	10.0	6.0	9.0	13.0	18.0	21.0	24.0	22.0	25.0	24.0
17	17.0	14.0	10.0	e6.0	9.0	15.0	18.0	21.0	25.0	20.0	25.0	24.0
18	18.0	11.0	11.0	6.0	9.0	13.0	18.0	22.0	26.0	21.0	25.0	25.0
19	19.0	11.0	9.0	7.0	e10.0	11.0	18.0	22.0	26.0	26.0	24.0	24.0
20	19.0	11.0	9.0	5.0	10.0	13.0	17.0	21.0	25.0	26.0	24.0	25.0
21	19.0	11.0	11.0	8.0	12.0	13.0	17.0	21.0	25.0	26.0	24.0	25.0
22	19.0	11.0	8.0	9.0	13.0	11.0	18.0	21.0	25.0	26.0	24.0	24.0
23	20.0	10.0	9.0	7.0	13.0	10.0	18.0	21.0	26.0	26.0	24.0	23.0
24	20.0	e10.0	8.0	7.0	13.0	12.0	18.0	22.0	26.0	26.0	24.0	23.0
25	19.0	10.0	9.0	7.0	8.0	13.0	18.0	21.0	26.0	26.0	24.0	23.0
26	20.0	10.0	9.0	7.0	9.0	14.0	19.0	21.0	26.0	27.0	24.0	23.0
27	18.0	11.0	9.0	7.0	10.0	15.0	18.0	21.0	26.0	27.0	24.0	22.0
28	17.0	14.0	9.0	7.0	10.0	15.0	18.0	20.0	25.0	27.0	24.0	22.0
29	13.0	16.0	9.0	7.0	11.0	15.0	18.0	19.0	25.0	27.0	24.0	22.0
30	11.0	11.0	9.0	8.0	---	12.0	19.0	19.0	27.0	27.0	24.0	22.0
31	9.0	---	9.0	8.0	---	15.0	---	20.0	---	26.0	24.0	---
MEAN	18.0	11.7	10.1	7.8	9.2	12.6	16.8	20.5	23.5	24.3	25.4	22.8
MAX	22.0	16.0	15.0	9.0	13.0	15.0	19.0	22.0	27.0	27.0	27.0	25.0
MIN	9.0	7.0	8.0	5.0	7.0	10.0	14.0	19.0	20.0	20.0	24.0	19.0

WTR YR 1992 MEAN 16.9 MAX 27.0 MIN 5.0

e Estimated

07312110 SOUTH SIDE CANAL NEAR DUNDEE, TX

LOCATION.--Lat 33°48'50", long 98°55'57", Archer County, Hydrologic Unit 11130206, on left bank, 125 ft downstream from Lake Diversion headgates, and 5.3 mi northwest of Dundee.

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

GAGE.--Water-stage recorder. Datum of gage is 1,039.70 ft above National Geodetic Vertical Datum of 1929 (Wichita County Water Improvement District bench mark).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Water diverted from Lake Diversion is used for mining, industrial, recreation, and irrigation uses. Several observations of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	2.3	.25	1.0	.25	41	82	104	107	e168	137	107
2	53	2.3	.25	1.0	.28	45	82	102	126	e163	138	106
3	53	2.3	.30	1.0	.32	43	82	100	140	e157	140	110
4	51	2.3	.32	1.0	.32	44	83	100	148	e152	140	125
5	51	2.3	.32	1.2	.25	44	83	99	148	e147	139	124
6	51	2.2	.32	1.2	.20	44	83	98	149	e143	136	123
7	50	1.9	.38	1.2	.20	45	83	98	153	e139	137	115
8	51	1.9	.46	1.2	.20	50	81	100	168	e136	136	99
9	51	1.9	.46	1.2	.20	45	79	122	169	e132	136	97
10	57	1.9	.46	1.0	.18	41	79	133	165	e129	135	97
11	64	1.8	.46	.91	.14	42	80	130	166	e124	135	97
12	65	1.5	.46	.91	.14	42	78	121	171	e121	133	97
13	46	1.5	.43	.98	.10	42	78	113	179	e120	133	97
14	27	1.5	.40	.91	.15	43	78	97	187	114	134	97
15	68	1.5	.43	.91	.32	44	78	90	154	108	134	97
16	88	1.5	.46	.83	.32	45	78	90	160	106	134	95
17	88	1.7	.45	.67	.32	45	78	91	169	108	134	96
18	85	1.9	.63	.44	.31	43	76	93	177	106	129	96
19	60	1.9	.71	.29	.46	42	74	92	183	105	126	96
20	57	1.9	.86	.32	20	44	74	93	187	105	124	96
21	48	1.7	.91	.21	26	44	75	94	189	105	124	97
22	3.9	4.8	.86	.26	3.4	42	78	92	191	104	124	97
23	3.7	27	.46	.32	3.0	42	77	93	190	104	125	88
24	3.7	.48	.53	.20	3.0	44	78	93	191	106	125	81
25	3.7	.46	.75	.26	3.4	42	76	93	196	110	125	82
26	3.7	.46	.79	.31	3.4	43	77	94	194	110	125	79
27	3.8	.47	.80	.40	3.4	45	78	94	e192	113	125	87
28	3.7	.46	.87	.23	14	45	77	97	e189	120	125	94
29	3.7	.38	.96	.15	39	50	76	96	e182	133	125	95
30	3.7	.27	1.0	.24	---	79	83	97	e174	134	125	96
31	3.1	---	1.0	.25	---	81	---	98	---	136	123	---
TOTAL	1253.7	74.48	17.74	21.00	123.26	1431	2364	3107	5094	3858	4061	2963
MEAN	40.4	2.48	.57	.68	4.25	46.2	78.8	100	170	124	131	98.8
MAX	88	27	1.0	1.2	39	81	83	133	196	168	140	125
MIN	3.1	.27	.25	.15	.10	41	74	90	107	104	123	79
AC-FT	2490	148	35	42	244	2840	4690	6160	10100	7650	8050	5880

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1992, BY WATER YEAR (WY)

MEAN	64.6	12.2	15.5	21.1	15.0	22.6	58.7	76.6	123	209	182	119
MAX	141	41.0	76.3	66.1	52.2	75.6	150	218	240	344	282	219
(WY)	1978	1978	1978	1989	1975	1980	1972	1984	1984	1974	1980	1983
MIN	3.10	.000	.000	.000	.000	.000	2.56	17.6	20.1	124	50.8	45.2
(WY)	1977	1985	1985	1985	1985	1985	1979	1982	1982	1992	1989	1986

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1972 - 1992	
ANNUAL TOTAL	22080.56		24368.18			
ANNUAL MEAN	60.5		66.6		77.1	
HIGHEST ANNUAL MEAN					120	1984
LOWEST ANNUAL MEAN					46.6	1989
HIGHEST DAILY MEAN	227	Jul 26	196	Jun 25	374	Jul 22 1974
LOWEST DAILY MEAN	.03	Jan 1	.10	Feb 13	.00	Oct 20 1973
ANNUAL SEVEN-DAY MINIMUM	.03	Jan 1	.16	Feb 8	.00	Oct 20 1973
ANNUAL RUNOFF (AC-FT)	43800		48330		55870	
10 PERCENT EXCEEDS	151		139		207	
50 PERCENT EXCEEDS	53		76		48	
90 PERCENT EXCEEDS	.46		.32		.32	

07312200 BEAVER CREEK NEAR ELECTRA, TX

LOCATION.--Lat 33°54'21", long 98°54'17", Wichita County, Hydrologic Unit 11130207, near right bank at downstream side of bridge on Farm Road 2326, 6.5 mi northwest of Kamay, 8 mi upstream from Wichita River, and 9 mi south of Electra.

DRAINAGE AREA.--652 mi².

PERIOD OF RECORD.--February 1960 to current year.
Water-quality records.--Chemical analyses: October 1968 to June 1970. Water temperatures: October 1968 to June 1970. Sediment records: April 1966 to September 1975.

GAGE.--Water-stage recorder. Datum of gage is 991.3 ft above National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation reference point).

REMARKS.--Records fair. Some regulation by Santa Rosa Lake (capacity, 11,570 acre-ft) about 30 mi upstream. There are several diversions above station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1925, 36.0 ft, probably occurred Oct. 2, 1941 (partly caused by breaching of Santa Rosa Dam to avoid its failure), from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 20	2255	3,670	27.79	June 9	0920	4,830	29.64
Feb. 5	0130	2,780	25.90	Sept. 1	1930	3,060	26.39

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	36	11	92	73	600	29	19	13	112	14	2560
2	42	23	11	79	63	e478	26	19	26	213	7.2	1730
3	36	19	11	67	88	e238	23	18	26	523	9.6	168
4	33	17	10	58	1890	e276	21	13	14	714	4.9	75
5	32	15	9.8	52	2440	e313	20	12	13	643	4.5	51
6	24	15	9.9	48	939	e297	19	10	133	324	3.3	43
7	21	14	9.9	43	491	e238	18	9.5	338	139	3.9	76
8	19	13	10	41	390	e227	16	8.2	2630	88	3.9	44
9	18	12	10	35	371	e325	16	7.3	4560	57	2.9	32
10	17	13	9.9	30	337	e133	15	7.9	2880	43	3.1	26
11	15	12	17	28	222	e83	14	132	992	33	4.1	23
12	14	11	202	27	149	e63	13	52	815	27	4.5	20
13	13	10	61	126	107	e52	14	19	1140	23	3.8	17
14	12	11	23	341	91	e47	12	13	1270	18	4.2	16
15	12	11	15	135	84	e41	13	12	1070	14	3.5	14
16	12	11	13	74	65	e34	76	9.1	799	45	3.5	13
17	11	12	12	63	59	e45	319	8.3	484	98	4.0	12
18	11	11	12	60	53	e301	514	9.7	217	24	4.3	11
19	11	11	415	59	44	e84	338	76	129	16	4.1	11
20	11	10	2740	74	37	e48	183	49	108	13	3.2	11
21	10	9.9	3030	153	36	e36	175	13	90	12	2.6	27
22	9.9	9.9	1260	261	36	e36	156	9.7	69	10	1.8	18
23	9.6	9.9	845	167	33	e27	111	33	57	9.0	2.6	11
24	9.4	9.8	579	97	42	e26	76	25	45	8.1	2.0	10
25	9.8	9.7	568	79	436	e25	50	12	34	6.7	3.6	10
26	20	9.7	630	65	405	e23	41	12	35	5.9	4.2	10
27	31	10	578	164	312	e27	35	12	27	6.5	3.7	10
28	735	9.9	380	185	325	e108	28	65	132	6.0	5.5	10
29	142	9.9	203	129	470	e70	24	56	199	4.8	3.2	10
30	34	9.4	137	104	---	e43	21	24	184	6.6	4.8	10
31	27	---	105	87	---	e30	---	14	---	63	505	---
TOTAL	1450.7	385.1	11927.5	3023	10088	4374	2416	779.7	18529	3305.6	715.5	5079
MEAN	46.8	12.8	385	97.5	348	141	80.5	25.2	618	107	23.1	169
MAX	735	36	3030	341	2440	600	514	132	4560	714	585	2560
MIN	9.4	9.4	9.8	27	33	23	12	7.3	13	4.8	1.8	10
AC-FT	2880	764	23660	6000	20010	8680	4790	1550	36750	6560	1420	10070
CFSM	.07	.02	.59	.15	.53	.22	.12	.04	.95	.16	.04	.26
IN.	.08	.02	.68	.17	.58	.25	.14	.04	1.06	.19	.04	.29

e Estimated

07312200 BEAVER CREEK NEAR ELECTRA, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1992, BY WATER YEAR (WY)

MEAN	130	38.0	28.3	22.2	38.1	71.6	60.3	129	128	70.2	43.4	125
MAX	1108	319	385	185	348	592	760	921	618	727	388	1107
(WY)	1987	1973	1992	1985	1992	1961	1990	1987	1992	1975	1966	1986
MIN	.14	.82	.71	.27	.84	.65	.89	3.10	3.37	1.84	1.35	1.14
(WY)	1964	1966	1971	1966	1963	1965	1982	1988	1966	1964	1983	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1961 - 1992	
ANNUAL TOTAL	43712.54		62073.1			
ANNUAL MEAN	120		170		73.8	
HIGHEST ANNUAL MEAN					296	1987
LOWEST ANNUAL MEAN					11.4	1983
HIGHEST DAILY MEAN	3030	Dec 21	4560	Jun 9	11000	May 29 1987
LOWEST DAILY MEAN	.64	May 17	1.8	Aug 22	.00	May 11 1962
ANNUAL SEVEN-DAY MINIMUM	1.0	May 12	2.8	Aug 19	.00	May 11 1962
INSTANTANEOUS PEAK FLOW			4830	Jun 9	11700	Mar 17 1961
INSTANTANEOUS PEAK STAGE			29.64	Jun 9	34.94	May 29 1987
INSTANTANEOUS LOW FLOW			1.4	Aug 24	.00	at times
ANNUAL RUNOFF (AC-FT)	86700		123100		53450	
ANNUAL RUNOFF (CFSM)	.18		.26		.11	
ANNUAL RUNOFF (INCHES)	2.49		3.54		1.54	
10 PERCENT EXCEEDS	297		394		114	
50 PERCENT EXCEEDS	11		27		5.1	
90 PERCENT EXCEEDS	3.3		8.0		.69	

07312500 WICHITA RIVER AT WICHITA FALLS, TX

LOCATION.--Lat 33°54'34", long 98°32'00", Wichita County, Hydrologic Unit 11130206, near center of stream at downstream side of bridge on Beverly Drive in Wichita Falls, 4 mi upstream from Fort Worth and Denver Railway Co. bridge, 8.4 mi upstream from Holliday Creek, and 55.3 mi upstream from mouth.

DRAINAGE AREA.--3,140 mi², of which 2,086 mi² is above Lake Kemp Dam.

PERIOD OF RECORD.--February 1901 to January 1902 (monthly discharge only, published in WSP 1311, 1901 water year no longer used in computation of average discharge because of poor accuracy of record. October 1910 to September to December 1911 (gage heights only), March 1938 to current year.
Water-quality records.--Chemical analyses: April 1966 to July 1975. Chemical and biochemical analyses: November 1981 to August 1989. Sediment analyses: April 1966 to July 1975. Specific Conductance: October 1981 to September 1989. Water temperature: October 1981 to September 1989.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 924.26 ft above National Geodetic Vertical Datum of 1929. February 1900 to February 1902 and Oct. 1, 1910, to Dec. 31, 1911, nonrecording gages at site 4 mi downstream at different datum. Mar. 30, 1938, to Dec. 1, 1959, nonrecording gage at present site and datum.

REMARKS.--Records good. Flow from 2,086 mi² above station is regulated by Lake Kemp (capacity 603,000 acre-ft) 71 mi upstream. Since completion of Lake Kemp in 1923, no outflow has been permitted to pass over spillway. Water is diverted from Lake Diversion (capacity 40,000 acre-ft) 41 mi upstream for the irrigation of 42,000 acres under permit in the vicinity of Wichita Falls. During the water year, Wichita County Water Improvement District No. 2 diverted 50,290 acre-ft from Lake Diversion for mining, industrial use, recreation, and irrigation. Gage-height telemeter at station via Sutron data collection platform.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 50,000 ft³/s June 8, 1915, computed by Vernon L. Sullivan, engineer for Big Wichita River Irrigation Co.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	557	107	86	1170	687	727	153	416	163	3110	218	1460
2	550	116	72	1270	639	1060	175	424	167	2840	182	2460
3	547	211	62	1210	634	1140	250	834	223	2590	177	2730
4	544	318	56	1160	1440	1250	299	918	224	2620	159	633
5	541	343	55	1130	2340	1350	289	853	231	2710	151	294
6	540	343	52	1120	2840	1280	265	812	445	2830	149	247
7	536	192	52	1100	3090	1180	244	796	939	2870	153	228
8	526	105	51	1080	2310	1080	237	795	3190	2680	140	239
9	292	91	51	1070	1790	1230	228	800	3690	1670	130	163
10	147	82	50	1050	1890	1780	227	787	3980	1130	125	146
11	126	72	59	1040	1910	1480	230	851	4280	1050	120	142
12	118	68	267	1040	1840	1070	227	1040	4230	1010	123	135
13	110	66	388	1150	1740	963	237	860	3390	953	122	130
14	109	65	168	1580	1680	828	211	819	2420	906	124	121
15	112	66	111	1690	1590	710	206	789	2340	849	125	116
16	129	88	104	1090	1350	625	209	772	2290	e858	119	107
17	138	102	156	377	1110	589	292	646	2050	e721	119	100
18	125	81	224	244	1020	598	599	260	1720	e367	125	99
19	120	71	878	228	956	662	805	170	1570	e233	133	94
20	128	65	3870	239	905	377	600	259	1880	209	131	93
21	123	57	4680	333	888	270	435	238	2160	194	120	97
22	118	61	5020	546	818	228	408	153	2320	191	107	90
23	108	53	5120	536	310	201	382	139	2340	173	101	97
24	84	59	4080	374	192	179	356	201	2460	162	90	88
25	75	56	2070	390	280	161	354	166	2490	144	98	85
26	137	72	1160	422	632	151	357	138	2540	143	100	86
27	139	63	1190	567	531	149	393	133	2630	136	107	86
28	1100	63	1170	894	430	159	412	208	2820	136	108	90
29	1470	61	977	953	452	248	417	310	2950	132	92	89
30	397	66	785	839	---	218	420	237	3050	139	89	85
31	137	---	750	749	---	175	---	180	---	181	188	---
TOTAL	9883	3263	33814	26641	36294	22118	9917	16004	65182	33937	4025	10630
MEAN	319	109	1091	859	1252	713	331	516	2173	1095	130	354
MAX	1470	343	5120	1690	3090	1780	805	1040	4280	3110	218	2730
MIN	75	53	50	228	192	149	153	133	163	132	89	85
AC-FT	19600	6470	67070	52840	71990	43870	19670	31740	129300	67310	7980	21080

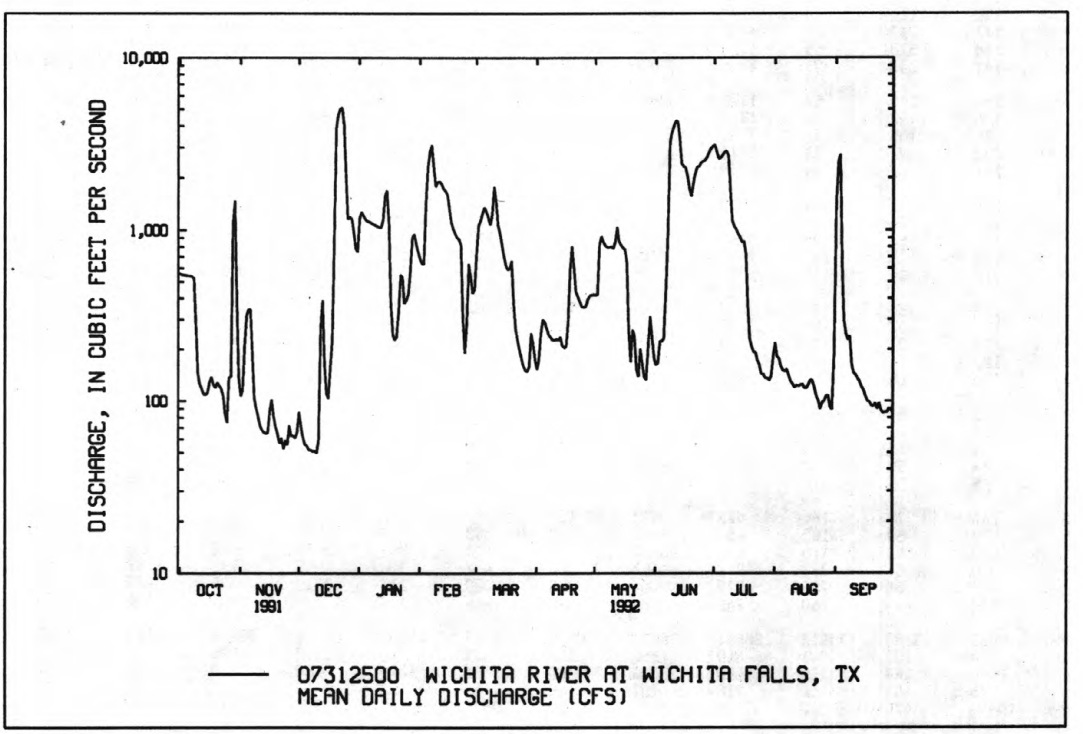
e Estimated

07312500 WICHITA RIVER AT WICHITA FALLS, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1992, BY WATER YEAR (WY)

MEAN	445	216	120	95.2	136	175	232	549	501	245	237	341
MAX	4017	1784	1091	859	1252	1087	1450	4105	4475	1201	2791	2619
(WY)	1942	1973	1992	1992	1992	1990	1990	1941	1941	1975	1950	1950
MIN	55.1	34.9	25.3	22.5	28.7	26.9	37.3	52.0	71.0	60.6	61.9	64.6
(WY)	1983	1982	1979	1974	1982	1975	1989	1988	1944	1986	1986	1981

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1939 - 1992	
ANNUAL TOTAL	112215		271708			
ANNUAL MEAN	307		742		275	
HIGHEST ANNUAL MEAN					977	1941
LOWEST ANNUAL MEAN					64.3	1983
HIGHEST DAILY MEAN	5120	Dec 23	5120	Dec 23	17300	Oct 3 1941
LOWEST DAILY MEAN	31	Feb 26	50	Dec 10	7.7	Apr 9 1978
ANNUAL SEVEN-DAY MINIMUM	32	Feb 25	52	Dec 4	11	Mar 6 1975
INSTANTANEOUS PEAK FLOW			5300	Dec 23	17800	Oct 3 1941
INSTANTANEOUS PEAK STAGE			18.00	Dec 23	24.00	Oct 3 1941
INSTANTANEOUS LOW FLOW			46	Dec 11	.00	Oct 11 1960
ANNUAL RUNOFF (AC-FT)	222600		538900		199000	
10 PERCENT EXCEEDS	870		2300		557	
50 PERCENT EXCEEDS	94		293		83	
90 PERCENT EXCEEDS	40		87		36	



07312700 WICHITA RIVER NEAR CHARLIE, TX

LOCATION.--Lat 34°03'11", long 98°17'47", Clay County, Hydrologic Unit 11130206, on right bank at upstream side of bridge on Farm Road 810, 3.0 mi southeast of Charlie, and 5.7 mi northwest of Petrolia.

DRAINAGE AREA.--3,439 mi², of which 2,086 mi² is above Lake Kemp Dam and 143 mi² is above Lake Wichita Dam.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 872.71 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of estimated daily discharge which are poor. For statement regarding regulation and diversions, see station 07312500. Records furnished by the city of Wichita Falls show that 13,940 acre-ft was returned to river above this station as sewage effluent. Station is a special periodic water-quality station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	770	323	114	e961	967	693	315	535	253	2940	348	589
2	750	222	154	e1170	896	966	293	536	369	3000	392	1720
3	730	197	173	e1250	851	1230	327	594	563	3100	369	2200
4	720	345	128	1210	1100	1300	421	994	414	3030	380	2250
5	703	455	115	1170	1760	1420	467	1020	411	2800	325	837
6	697	481	114	1150	2240	1460	448	953	1050	2770	309	526
7	695	465	113	1140	2690	1390	419	923	1060	2820	308	449
8	692	276	110	1100	3040	1300	405	904	2390	2840	305	420
9	662	164	116	1080	2470	1390	395	909	3890	2610	277	420
10	404	136	114	1080	1910	1560	377	906	4090	1770	260	327
11	247	125	130	1060	1920	1830	361	931	4100	1420	259	349
12	204	117	627	1050	1910	1570	375	1040	4300	1330	250	302
13	193	112	765	1120	1850	1280	376	1130	4470	1260	252	270
14	184	112	575	1470	1790	1160	352	1010	4210	1180	249	247
15	173	109	331	1640	1740	1020	332	940	3170	1110	250	232
16	159	149	227	1610	1650	892	319	916	2400	1070	242	224
17	170	188	210	1080	1470	820	353	925	2240	1080	236	207
18	182	153	307	536	1300	1290	509	828	2040	683	242	194
19	164	127	1030	501	1220	1180	792	396	1770	533	249	189
20	153	117	3990	456	1140	976	903	272	1780	442	267	179
21	161	110	5290	543	1090	653	713	443	1980	418	262	293
22	154	103	5370	811	1080	512	642	368	2090	385	236	215
23	153	102	5690	850	926	429	566	248	2170	380	209	183
24	143	98	e5760	745	484	382	524	230	2270	339	205	182
25	116	98	5620	605	551	338	495	318	2330	310	193	158
26	211	99	4240	582	628	301	488	255	2350	289	203	143
27	335	115	1850	774	858	294	498	207	2400	264	214	137
28	986	115	1520	1030	728	279	528	307	2570	265	225	125
29	1720	114	1390	1180	646	290	541	596	2810	260	217	128
30	1410	108	1130	1160	---	404	545	477	2860	255	193	127
31	511	---	939	1050	---	348	---	360	---	273	197	---
TOTAL	14552	5435	48242	31164	40905	28957	14079	20471	68800	41226	8123	13822
MEAN	469	181	1556	1005	1411	934	469	660	2293	1330	262	461
MAX	1720	481	5760	1640	3040	1830	903	1130	4470	3100	392	2250
MIN	116	98	110	456	484	279	293	207	253	255	193	125
AC-FT	28860	10780	95690	61810	81140	57440	27930	40600	136500	81770	16110	27420

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992, BY WATER YEAR (WY)

MEAN	419	336	201	192	247	356	328	549	687	301	253	453
MAX	2032	2194	1556	1005	1411	1739	2377	3094	2736	1330	750	2598
(WY)	1987	1973	1992	1992	1992	1990	1990	1990	1987	1992	1971	1986
MIN	101	63.2	51.5	46.1	54.4	70.2	61.2	103	147	92.5	112	126
(WY)	1971	1982	1979	1974	1980	1972	1989	1988	1971	1972	1986	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1968 - 1992	
ANNUAL TOTAL	163287		335776			
ANNUAL MEAN	447		917		360	
HIGHEST ANNUAL MEAN					986	1987
LOWEST ANNUAL MEAN					125	1983
HIGHEST DAILY MEAN	5760	Dec 24	5760	Dec 24	7740	May 7 1990
LOWEST DAILY MEAN	51	Mar 4	98	Nov 24	24	Feb 4 1989
ANNUAL SEVEN-DAY MINIMUM	52	Mar 3	104	Nov 21	29	Jan 30 1974
INSTANTANEOUS PEAK FLOW			5780	Dec 24	7760	May 7 1990
INSTANTANEOUS PEAK STAGE			21.52	Dec 24	25.80	May 7 1990
INSTANTANEOUS LOW FLOW			94	Nov 24	24	Feb 18 1978
ANNUAL RUNOFF (AC-FT)	323900		666000		260800	
10 PERCENT EXCEEDS	1150		2240		837	
50 PERCENT EXCEEDS	159		527		144	
90 PERCENT EXCEEDS	71		153		66	

07312700 WICHITA RIVER NEAR CHARLIE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1967 to September 1981, October 1989 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to September 1981.
WATER TEMPERATURE: October 1967 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD
SPECIFIC CONDUCTANCE: Maximum daily, 10,000 microsiemens Apr. 25, 1972; minimum daily, 384 microsiemens Aug. 16, 1971.
WATER TEMPERATURE: Maximum daily, 34.5°C July 25, 1981; minimum daily, 0.0°C on many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
NOV										
14...	1530	112	4310	8.0	13.5	8.3	83	5.3	870	660
JAN										
24...	1245	743	2940	7.9	8.0	11.1	97	1.7	530	390
MAR										
19...	1120	1120	2850	7.9	15.5	8.7	90	2.0	570	460
MAY										
08...	1145	908	4030	8.0	21.5	9.0	106	1.1	760	650
JUL										
08...	0930	2850	3050	8.0	27.0	7.3	95	1.6	630	530
AUG										
06...	1245	307	3870	8.1	29.0	6.9	93	1.7	820	640

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV										
14...	210	85	570	8	8.2	210	480	1000	0.60	10
JAN										
24...	120	55	380	7	6.0	130	160	730	0.40	7.9
MAR										
19...	150	47	380	7	5.7	110	380	610	0.20	4.7
MAY										
08...	200	64	550	9	7.7	120	660	840	0.40	6.3
JUL										
08...	170	51	390	7	8.3	110	560	600	<0.10	9.4
AUG										
06...	200	77	510	8	6.9	180	480	940	0.60	10

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
NOV									
14...	2490	1.15	0.150	1.30	0.670	0.53	1.2	0.800	0.770
JAN									
24...	1540	0.750	0.040	0.790	0.230	0.57	0.80	0.180	0.130
MAR									
19...	1640	0.260	0.020	0.280	0.090	0.91	1.0	0.300	0.090
MAY									
08...	2400	0.220	0.060	0.280	0.140	0.16	0.30	0.100	0.180
JUL									
08...	1850	--	<0.010	0.084	0.020	0.68	0.70	0.180	0.050
AUG									
06...	2330	0.940	0.020	0.960	0.010	0.59	0.60	0.420	0.290

07314000 LAKE KICKAPOO NEAR ARCHER CITY, TX

LOCATION.--Lat 33°39'47", long 98°46'43", Archer County, Hydrologic Unit 11130209, on intake tower near left end of dam on North Fork Little Wichita River, 8.2 mi south of Mankins, and 9.2 mi northwest of Archer City.

DRAINAGE AREA.--275 mi².

PERIOD OF RECORD.--February 1946 to current year. Prior to October 1965, monthend contents only.
Water-quality records.--Chemical analyses: October 1969 to September 1984.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Nonrecording gage read twice daily prior to Feb. 17, 1974, once daily thereafter. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of Wichita Falls). Prior to Oct. 8, 1946, water-stage recorder at same site and datum.

REMARKS.--The lake is formed by a rolled earthfill dam 8,200 ft long, including a 483-foot-wide reinforced concrete ogee-type uncontrolled spillway near right end of dam. The dam was completed Dec. 15, 1945, and storage began Feb. 1, 1946. The service outlet consists of two gate-controlled 4- by 5-foot conduits. The dam and lake are owned by the city of Wichita Falls, which uses the water for their municipal supply. The capacity table is based on Geological Survey topographic maps, dated 1929. The capacity curve, dated November 1946, was entitled "Lake Kickapoo Area & Capacity Curve". Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	1,062.0	-
Design flood (2-foot freeboard)	1,060.0	221,000
Crest of spillway	1,045.0	106,000
Lowest gated outlet (invert)	1,000.92	0

COOPERATION.--Capacity curve, record of lake elevations, and diversions for municipal use are provided by the city of Wichita Falls.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents, 134,300 acre-ft Aug. 2, 1950 (elevation, 1,049.2 ft); minimum observed since first filling in July 1950, 35,660 acre-ft June 30, 1953 (elevation, 1,029.8 ft).

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents, 121,200 acre-ft June 9 (elevation, 1,047.3 ft); minimum, 68,420 acre-ft Oct. 25 (elevation, 1,038.4 ft).

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

1,038.0	66,500	1,042.0	87,700	1,046.0	112,500
1,040.0	76,500	1,044.0	99,700	1,048.0	126,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 08:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71300	73380	72340	96040	101000	110600	108600	105400	105400	108000	105400	104100
2	71300	73380	72860	96040	101000	110600	108600	106000	105400	108600	105400	106000
3	71300	73380	72340	96040	101000	110600	108600	105400	108000	109200	105400	105400
4	71300	74420	72860	96040	101000	109900	108600	105400	108000	113800	105400	105400
5	70820	73900	72340	96040	108000	109900	108600	105400	108000	114500	104700	105400
6	70340	73380	72340	96040	109200	109900	107300	104700	108600	113800	104700	105400
7	70340	73380	72340	96040	108600	109900	107300	105400	108600	113800	106000	106000
8	70340	73380	72340	96040	108600	109900	107300	104700	108000	113800	106000	106000
9	70340	73380	72340	96040	108600	108600	107300	105400	121200	113800	105400	106000
10	70340	72860	71820	95430	108600	108600	107300	104700	116500	113800	104700	106600
11	70340	72860	72340	96040	108600	107300	107300	104100	114500	113800	104100	106000
12	70340	72860	73380	96040	108600	107300	107300	104100	114500	113800	104100	106000
13	70340	72860	73380	96040	108600	108000	107300	104100	113800	108000	103500	106000
14	69860	72860	72340	97260	108000	107300	107300	104100	113800	107300	103500	105400
15	69860	72860	72860	97260	108000	107300	106000	104100	109900	107300	103500	104700
16	69860	72860	72860	97260	108000	107300	106600	104100	109900	107300	103500	104700
17	69860	72860	72860	97260	108600	107300	106600	103500	109200	106600	102800	104700
18	69860	72860	72860	97260	108000	108600	106600	103500	109200	e106600	102800	104700
19	69860	72860	72860	97870	108000	108600	106600	103500	108600	e106600	102800	104100
20	69860	72340	79250	97870	108000	108600	106600	103500	108000	e106600	102800	104700
21	69380	72340	91240	97870	107300	108600	106000	103500	107300	106600	102200	104700
22	69380	72340	94210	99090	107300	108600	106600	103500	108000	106000	103500	103500
23	68900	72340	96040	99090	107300	108000	106000	103500	108000	106000	102800	103500
24	68900	72340	96040	99090	107300	108600	106000	103500	108000	106600	102800	103500
25	68420	72340	96040	99090	108000	108000	106000	104100	107300	106600	102800	103500
26	68900	72340	96040	99090	109900	108000	106000	103500	107300	106000	102200	103500
27	69380	72340	96040	99700	110600	108000	106000	103500	107300	106000	102800	103500
28	69380	72860	96040	96040	110600	108600	106000	104100	108000	106000	102200	103500
29	73380	72340	96040	96040	110600	108600	105400	104700	108000	106000	102200	103500
30	73380	72340	96040	101000	---	108600	105400	105400	108000	106600	101600	103000
31	73900	---	96040	101000	---	108600	---	105400	---	106600	101000	---
MAX	73900	74420	96040	101000	110600	110600	108600	106000	121200	114500	106000	106600
MIN	68420	72340	71820	95430	101000	107300	105400	103500	105400	106000	101000	103000
(†)	1039.5	1039.2	1043.4	1044.2	1045.7	1045.4	1044.9	1044.9	1045.3	1045.1	1044.2	1044.6
(Φ)	+2600	-1560	+23700	+4960	+9600	-2000	-3200	0	+2600	-1400	-5600	+2500
(††)	915	482	421	618	215	845	831	1069	414	1240	945	596

CAL YR 1991 MAX 96040 MIN 66980 (Φ) +23700 (††) 7614
WTR YR 1992 MAX 121200 MIN 68420 (Φ) +32200 (††) 8591

(†) Elevation, in feet, at end of month.
(Φ) Change in contents, in acre-feet.
(††) Diversions, in acre-feet, for municipal use.

e Estimated

07314500 LITTLE WICHITA RIVER NEAR ARCHER CITY, TX

LOCATION.--Lat 33°39'45", long 98°36'46", Archer County, Hydrologic Unit 11130209, on left bank at downstream side of bridge on State Highway 79, 1.5 mi downstream from confluence of North and Middle Forks, and 4.8 mi north of Archer City.

DRAINAGE AREA.--481 mi², of which 275 mi² is above Lake Kickapoo.

PERIOD OF RECORD.--May 1932 to January 1956, August 1966 to current year.
Water-quality records.--Chemical analyses: January 1953 to January 1956. Water temperatures: January 1953 to January 1956. Sediment records: May 1968 to September 1975.

REVISED RECORDS.--WSP 827: 1932-35. WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 934.72 ft above National Geodetic Vertical Datum of 1929. Aug. 17, 1954, to Jan. 6, 1956, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation by Lake Kickapoo (station 07314000) on North Fork Little Wichita River. Records furnished by the city of Wichita Falls show that 8,590 acre-ft was diverted from Lake Kickapoo for municipal use by the city during the current year. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--13 years (water years 1933-45) 110 ft³/s (79,700 acre-ft/yr).
--10 years (water years 1946-55) 47.6 ft³/s (34,480 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1933-45).--Maximum discharge, 17,900 ft³/s Oct. 31, 1941 (gage height, 21.80 ft); no flow at times.

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1946-55).--Maximum discharge 15,100 ft³/s Aug. 2, 1950 (gage height, 25.91 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1930 reached a stage of about 28 ft, from information by State Department of Highways and Public Transportation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	6.2	.18	2.1	9.6	93	30	.48	e13	355	4.3	199
2	.07	e4.0	.26	1.9	5.4	77	29	.44	e93	245	1.8	133
3	.04	e3.5	.25	2.1	5.2	66	16	.38	e437	e544	.79	23
4	.00	e2.9	.23	1.4	284	193	16	.41	e542	e771	12	6.7
5	.00	e2.5	.20	1.1	551	618	15	.45	e173	e643	5.0	2.0
6	.00	e2.0	.19	1.0	295	314	6.6	.44	e575	e367	1.5	1.7
7	.00	e1.6	.17	.94	172	110	5.7	.34	e940	e154	.69	.82
8	.00	e1.3	.20	.81	122	81	4.8	.25	e1470	e59	.71	.39
9	.00	e.88	.22	.73	92	329	3.4	.14	e2610	e28	.57	.24
10	.00	e.70	.23	.73	76	548	2.8	.08	e3250	e20	.46	.17
11	.00	e.52	.35	.66	68	123	2.6	.41	3060	e18	.39	.22
12	.00	e.41	8.6	.71	59	51	2.2	15	2660	e17	.37	.22
13	.00	.26	74	11	54	35	1.9	12	1990	e17	.34	.05
14	.00	.25	29	e188	40	16	3.5	3.6	1300	10	.25	.03
15	.00	.33	10	e119	48	13	1.8	1.6	609	9.5	.30	.08
16	.00	.52	4.9	e35	22	7.7	1.3	.83	243	5.5	.33	.06
17	.00	.48	2.4	12	13	6.3	1.3	2.9	133	4.6	.32	.05
18	.00	.52	1.8	7.0	28	110	6.7	39	85	4.9	.33	.06
19	.00	.75	101	6.2	19	176	3.0	54	65	7.4	.41	.05
20	.00	.54	670	14	3.9	115	11	25	48	3.0	.43	.08
21	.00	.37	574	70	3.5	67	28	28	30	1.1	.39	.20
22	.00	.29	e2940	214	1.8	48	6.5	11	18	.68	.38	8.7
23	.01	.26	e1380	138	2.5	46	2.0	17	13	.55	.33	6.0
24	.01	.23	e144	45	3.2	19	1.4	48	13	.46	.27	1.7
25	.02	.18	e36	15	220	12	1.0	21	6.9	.43	.23	.62
26	.13	.11	18	8.1	535	11	.87	15	1.9	.39	.32	.35
27	331	.20	11	96	336	15	.81	8.8	.32	.36	.25	.26
28	267	.21	7.9	209	189	66	.62	273	37	.36	.23	.18
29	409	.25	5.6	94	122	89	.65	e498	207	.37	.22	.11
30	76	.14	3.9	41	---	90	.59	e209	271	.50	.10	.14
31	17	---	2.9	18	---	49	---	e49	---	.72	.28	---
TOTAL	1100.46	32.40	6027.48	1354.48	3380.1	3594.0	207.04	1335.55	20894.12	3288.82	34.29	386.18
MEAN	35.5	1.08	194	43.7	117	116	6.90	43.1	696	106	1.11	12.9
MAX	409	6.2	2940	214	551	618	30	498	3250	771	12	199
MIN	.00	.11	.17	.66	1.8	6.3	.59	.08	.32	.36	.10	.03
AC-FT	2180	64	11960	2690	6700	7130	411	2650	41440	6520	68	766

e Estimated

07314500 LITTLE WICHITA RIVER NEAR ARCHER CITY, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1992#, BY WATER YEAR (WY)

MEAN	55.2	17.0	25.4	19.8	25.8	51.5	52.9	183	156	20.8	16.0	68.4
MAX	771	160	194	154	169	309	637	1224	944	156	143	624
(WY)	1982	1987	1992	1990	1990	1990	1990	1982	1985	1990	1971	1989
MIN	.032	.046	.006	.000	.000	.000	.000	.000	1.65	.000	.000	.000
(WY)	1976	1989	1967	1967	1967	1967	1971	1984	1970	1974	1967	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1967 - 1992#	
ANNUAL TOTAL	10988.05		41634.92			
ANNUAL MEAN	30.1		114		57.7	
HIGHEST ANNUAL MEAN					252	1990
LOWEST ANNUAL MEAN					2.49	1984
HIGHEST DAILY MEAN	2940	Dec 22	3250	Jun 10	8250	Oct 13 1981
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 4	.00	Nov 3 1966
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 21	.00	Oct 4	.00	Dec 13 1966
INSTANTANEOUS PEAK FLOW			14700	Dec 22	20100	May 16 1989
INSTANTANEOUS PEAK STAGE			26.34	Dec 22	27.03	May 16 1989
INSTANTANEOUS LOW FLOW			.00	Oct 4	.00	at times
ANNUAL RUNOFF (AC-FT)	21790		82580		41800	
10 PERCENT EXCEEDS	38		252		77	
50 PERCENT EXCEEDS	.23		3.7		.42	
90 PERCENT EXCEEDS	.00		.12		.00	

Period of regulated streamflow.

07314800 LAKE ARROWHEAD NEAR HENRIETTA, TX

LOCATION.--Lat 33°45'51", long 98°22'17", Clay County, Hydrologic Unit 11130209, at intake tower near center of dam on Little Wichita River, 2.3 mi upstream from Lake Creek, 11 mi southwest of Henrietta, and 12.3 mi southeast of Wichita Falls.

DRAINAGE AREA.--822 mi².

PERIOD OF RECORD.--June 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 0.40 ft below National Geodetic Vertical Datum of 1929.

REMARKS.--The lake is formed by a rolled earthfill dam 15,900 ft long, including an uncontrolled reinforced concrete ogee spillway 1,581 ft wide located near the left end of dam. The dam was completed in December 1966 and storage began in June 1967. The service outlet works, located in a cylindrical service tower at upstream side of dam, consist of two gated 5-foot-diameter inlets that can be used for controlled releases. The dam was built by the city of Wichita Falls to impound water for municipal, industrial, and recreational uses. The area-capacity curves are based on Geological Survey topographic maps. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Gage height (feet)	Capacity (acre-feet)
Top of dam	944.4	-
Design flood	939.95	551,400
Crest of spillway (top of conservation pool)	926.4	262,100
Lowest gated outlet (invert)	874.1	-

COOPERATION.--Capacity table provided by Homer Hunter and Associates and Biggs and Mathews, Consulting Engineers, for the city of Wichita Falls. Area-capacity curves provided by Homer Hunter and Associates. Record of diversions provided by the city of Wichita Falls.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 287,500 acre-ft May 4, 1990 (gage height, 927.92 ft); minimum since first appreciable storage, 4,640 acre-ft Aug. 31 to Sept. 4, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 276,500 acre-ft June 12 at 1300 hours (gage height, 927.27 ft); minimum, 206,200 acre-ft Oct. 26 (gage height, 922.67 ft).

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

922.0	197,000	925.0	240,100	927.0	272,000
923.0	210,800	926.0	255,700	928.0	288,900
924.0	225,300				

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	212200	213200	210700	258600	263100	263900	260800	256700	263700	265600	255900	245700
2	212100	212600	210800	258400	262800	263400	260800	255200	268500	263600	256500	245400
3	211800	212900	211100	258400	262900	263400	261000	255400	269200	270000	255500	245500
4	210100	212800	210900	258700	262800	263400	260800	255200	269000	270000	255200	245400
5	210800	212500	210900	258600	264200	263700	260500	254100	268400	269900	254700	245400
6	210500	212300	211100	258300	264700	264200	260500	253900	270200	270500	254600	244800
7	210100	211900	211100	258300	264600	263900	260300	253600	272300	271000	254100	244500
8	210000	212100	210900	257900	264200	263600	260700	253200	276000	270300	253600	244500
9	209800	211900	210900	258100	263700	262600	260000	253000	275200	268000	253000	243700
10	209700	211600	211100	257900	263100	265200	260300	252400	274700	266400	252700	243100
11	209500	211800	211800	257900	262900	265400	260200	253500	275500	264700	251900	243200
12	209700	211800	212100	257000	261900	263700	259200	253500	276500	263600	251400	243100
13	209000	211900	211900	258900	262400	264100	259700	253000	276300	262600	251100	242800
14	208800	212100	211800	259700	262400	263100	259700	253000	274300	261800	250400	242100
15	208700	212200	211900	260500	262400	263300	259400	252900	272300	261600	250200	241800
16	208400	212500	211900	260800	262400	262600	258900	252900	269500	261000	249700	241700
17	208400	212600	211400	260200	261300	262600	259700	254300	267200	260800	249300	241400
18	207400	212500	211400	260800	261300	262300	259400	254400	265700	260700	249000	240300
19	207400	212500	215600	261300	261300	262800	258900	254700	264900	260800	249400	240800
20	207200	212100	229200	261300	261000	263300	258400	254600	264900	260200	249100	241400
21	207000	212100	238800	261900	260500	262300	258900	255400	263700	259500	248800	240600
22	206800	211600	248300	262400	260500	261800	259200	258300	263900	259100	248500	239800
23	206900	211500	254400	263300	260300	262100	258100	259200	263100	258700	248200	239700
24	206900	211500	257800	263300	260200	262100	257600	259200	263400	258400	247700	239500
25	207000	211200	258600	262800	261900	261900	257600	260000	262400	258300	246800	238900
26	207200	211200	258600	263100	263700	261600	257000	259900	262100	257900	246300	238300
27	207700	211400	258400	263300	264600	261800	257000	259400	262300	257300	246100	238100
28	212100	211400	258400	264100	264600	261800	255500	262800	263900	257000	246000	237800
29	212900	211200	258700	264200	264200	261100	256500	264600	264900	257000	245500	237500
30	213300	210000	258400	263600	---	261300	256300	265100	265400	256000	244900	237400
31	213700	---	258600	263600	---	261100	---	264600	---	256300	245200	---
MAX	213700	213200	258700	264200	264700	265400	261000	265100	276500	271000	256500	245700
MIN	206800	210000	210700	257000	260200	261100	255500	252400	262100	256000	244900	237400
(†)	923.21	922.94	926.18	926.49	926.53	926.34	926.04	926.55	926.60	926.04	925.33	924.82
(Φ)	+1500	-3700	+48600	+5000	+600	-3100	-4800	+8300	+800	-9100	-11100	-7800
(††)	1082	843	685	213	208	114	332	523	541	605	1163	1473

CAL YR 1991 MAX 258700 MIN 206800 (Φ) +24500 (††) 15832
WTR YR 1992 MAX 276500 MIN 206800 (Φ) +25200 (††) 7782

(†) Gage height, in feet, at end of month.
(Φ) Change in contents, in acre-feet.
(††) Diversions, in acre-feet, for municipal use by the city of Wichita Falls.

07314900 LITTLE WICHITA RIVER ABOVE HENRIETTA, TX

LOCATION.--Lat 33°49'36", long 98°14'23", Clay County, Hydrologic Unit 11130209, on right bank at downstream side of bridge on U.S. Highways 822 and 287, 1.0 mi downstream from Duck Creek, 2.8 mi west of Henrietta, 6.6 mi upstream from Turkey Creek, and 7.6 mi upstream from Dry Fork Little Wichita River.

DRAINAGE AREA.--1,037 mi².

PERIOD OF RECORD.--January 1953 to current year. Prior to October 1974, published as "near Henrietta".
Water-quality records.--Chemical analyses: December 1952 to January 1956, November 1959 to September 1966. January 1968 to September 1985.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 831.57 ft above National Geodetic Vertical Datum of 1929. Prior to June 26, 1953, nonrecording gage. Prior to July 11, 1975, at site 2.6 mi downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow largely regulated by Lake Arrowhead, 39 mi upstream (capacity, 262,100 acre-ft). The city of Wichita Falls diverted 8,590 acre-ft from Lake Kickapoo, and 7,780 acre-ft from Lake Arrowhead for municipal uses, and returned 13,940 acre-ft as sewage effluent and filter plant wash water to the Wichita River below station 07312500 at Wichita Falls and above station 07312700 near Charlie. The city of Henrietta diverted 363 acre-ft from pool at gage for their municipal use. Records of diversions were furnished by the cities of Wichita Falls and Henrietta respectively.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--13 years (water years 1954-66) prior to completion of Lake Arrowhead, 124 ft³/s (89,840 acre-ft/yr).

EXTREMES FOR PERIOD PERIOR TO REGULATION (WATER YEARS 1954-66).--Maximum discharge, 6,390 ft³/s May 2, 1957; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1908 reached a stage of 21 ft at former site, from information by State Department of Highways and Public Transportation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	14	.00	14	270	345	13	.00	449	443	.00	9.3
2	12	9.3	.00	14	212	303	9.0	.46	318	518	.00	4.6
3	13	6.0	.00	9.6	291	283	5.5	1.2	758	1300	.00	1.2
4	13	3.7	.00	5.3	279	287	5.2	.00	1310	1990	.00	.03
5	12	1.9	.00	2.5	164	335	5.8	.00	1400	2060	.00	.00
6	12	.32	.00	1.9	230	322	7.6	.00	1960	1920	.00	.25
7	11	.38	.00	4.2	357	291	4.2	.00	2160	1750	.00	.37
8	11	.17	.00	14	435	318	.59	.00	3840	1740	.00	.15
9	.00	.00	.00	14	435	673	.08	.00	5800	1740	.00	.00
10	.00	.00	.00	9.0	362	624	2.5	.00	4790	1530	.00	.00
11	.00	.00	.95	4.9	276	467	15	4.0	3640	902	.00	.00
12	.00	.00	23	4.2	207	527	21	4.8	2900	499	.00	.00
13	.00	.00	19	34	e170	359	7.3	.11	2840	322	.00	.00
14	.00	.00	3.9	134	e130	284	.04	.00	2950	137	.00	.00
15	.00	.00	1.2	121	e100	170	.33	.00	2930	48	.00	.00
16	.00	.00	.00	67	e80	143	9.8	1.7	2660	36	.00	.00
17	.00	.00	.00	67	e66	198	17	3.2	2370	31	.00	.00
18	.00	.00	.00	43	e54	249	9.6	37	1980	17	.00	.00
19	.00	.00	e180	30	e47	780	22	108	1020	12	.00	.00
20	.00	.00	e1400	42	e40	426	15	56	702	9.4	.00	.00
21	.00	.00	e2700	124	e34	235	1.8	24	635	10	6.2	.00
22	.00	.00	2070	398	e29	260	.00	46	338	7.8	20	.00
23	.00	.00	870	373	e27	57	6.9	88	251	6.7	20	.00
24	.00	.00	304	285	e24	76	17	64	e225	3.8	20	.00
25	.00	.00	90	273	65	135	3.3	38	165	1.0	20	.00
26	.00	.00	41	157	108	42	.00	33	110	.06	21	.00
27	.00	.00	24	224	261	43	.00	7.1	70	.00	21	.00
28	203	.00	17	354	351	70	.00	314	175	.00	21	.00
29	139	.00	13	435	378	148	.00	733	415	.00	17	.00
30	41	.00	12	434	---	37	.00	811	397	.00	8.8	.00
31	16	---	14	359	---	15	---	633	---	.00	11	---
TOTAL	493.00	35.77	7783.05	4051.6	5482	8502	199.54	3007.57	49558	17033.76	186.00	15.90
MEAN	15.9	1.19	251	131	189	274	6.65	97.0	1652	549	6.00	.53
MAX	203	14	2700	435	435	780	22	811	5800	2060	21	9.3
MIN	.00	.00	.00	1.9	24	15	.00	.00	70	.00	.00	.00
AC-FT	978	71	15440	8040	10870	16860	396	5970	98300	33790	369	32

e Estimated

07314900 LITTLE WICHITA RIVER ABOVE HENRIETTA, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1992#, BY WATER YEAR (WY)

MEAN	35.0	15.2	27.6	17.8	33.6	97.0	104	228	232	36.5	3.49	61.7
MAX	329	141	251	131	275	937	2169	2272	1652	549	37.8	549
(WY)	1982	1987	1992	1992	1987	1990	1990	1982	1992	1992	1971	1989
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1968	1967	1967	1967	1967	1967	1971	1971	1977	1968	1967	1967

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1967 - 1992#	
ANNUAL TOTAL	11961.88		96348.19			
ANNUAL MEAN	32.8		263		74.3	
HIGHEST ANNUAL MEAN					498	1990
LOWEST ANNUAL MEAN					2.30	1978
HIGHEST DAILY MEAN	2700	Dec 21	5800	Jun 9	10500	May 3 1990
LOWEST DAILY MEAN	.00	Jan 29	.00	Oct 9	.00	Oct 16 1966
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 29	.00	Oct 9	.00	Oct 19 1966
INSTANTANEOUS PEAK FLOW			6570	Jun 9	14200	May 3 1990
INSTANTANEOUS PEAK STAGE			24.20	Jun 9	24.96	May 3 1990
INSTANTANEOUS LOW FLOW			.00	Oct 4	.00	at times
ANNUAL RUNOFF (AC-FT)	23730		191100		53830	
10 PERCENT EXCEEDS	35		634		58	
50 PERCENT EXCEEDS	.00		12		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

Period of regulated streamflow.

07315200 EAST FORK LITTLE WICHITA RIVER NEAR HENRIETTA, TX

LOCATION.--Lat 33°48'46", long 98°05'05", Clay County, Hydrologic Unit 11130209, at downstream side of bridge on U.S. Highway 82, 5.8 mi upstream from Little Wichita River, 6.4 mi east of Henrietta, and 8.9 mi west of Ringgold.

DRAINAGE AREA.--178 mi².

PERIOD OF RECORD.--November 1963 to current year.

REVISED RECORDS.--WRD TX-72-1: 1966(M).

GAGE.--Water-stage recorder. Datum of gage is 825.32 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. There are no known diverions upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1941 reached a stage of 28.8 ft, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 21	1110	4,450	24.32	May 30	0700	1,400	20.57
Feb. 26	0100	588	15.00	June 3	1000	3,560	23.97
May 23	1000	9,440	26.72	June 9	0030	5,290	25.17

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	5.4	.49	11	41	31	9.8	2.0	93	57	1.0	.49
2	.02	3.0	.54	9.0	30	23	7.4	1.9	479	26	.87	.51
3	.02	1.5	1.0	8.2	24	19	6.5	1.9	2400	179	.80	.42
4	.02	.92	.91	7.6	21	105	6.0	1.7	1160	404	1.1	.35
5	.01	.59	2.8	7.4	20	294	6.3	1.9	128	164	1.7	.33
6	.01	.40	2.4	6.7	25	100	5.9	1.8	860	41	1.1	6.4
7	.01	.28	2.0	6.1	19	42	5.6	1.8	968	21	.80	2.7
8	.01	.20	.99	7.2	14	26	5.3	1.8	3200	13	.72	.94
9	.01	.21	.67	6.0	12	19	5.1	1.7	3710	9.4	.66	.52
10	.01	.21	.51	5.1	10	15	4.7	1.7	1330	7.4	.56	.46
11	.01	.19	.91	4.7	10	13	4.5	2.4	201	6.3	.50	.46
12	.01	.17	65	4.4	9.6	11	4.1	2.4	76	5.3	.48	.41
13	.01	.17	253	18	8.9	10	3.8	2.2	49	4.6	.47	.36
14	.01	.18	76	208	8.9	10	3.5	2.7	36	4.0	.44	.32
15	.01	.34	18	266	8.5	9.2	3.4	2.5	28	3.4	.39	.27
16	.01	115	6.7	131	8.1	8.5	3.3	2.3	23	5.1	.37	.25
17	.01	118	3.4	56	7.8	8.5	3.2	2.5	18	3.7	.36	.24
18	.01	21	2.2	38	7.0	9.7	3.2	3.5	14	3.0	.39	.20
19	.01	6.3	247	37	6.3	8.5	3.2	3.5	12	2.8	.44	.19
20	.01	2.6	1810	49	5.8	15	3.2	5.0	17	2.4	.44	.36
21	.01	1.6	3580	195	5.1	11	3.3	5.0	27	2.2	.44	8.0
22	.01	1.0	1730	275	4.9	8.4	3.4	231	24	2.1	.42	8.0
23	.02	.64	836	172	6.9	7.4	3.3	5070	15	2.0	.40	3.4
24	.04	.47	508	84	21	6.9	3.1	2200	12	1.8	.37	1.4
25	.03	.40	85	44	413	6.9	2.9	444	11	1.7	.36	.70
26	.06	.34	46	29	543	11	2.7	64	11	1.5	.36	.41
27	.04	.29	32	141	192	21	2.6	45	23	1.2	.34	.34
28	61	.28	23	381	71	13	2.4	398	67	1.0	.30	.28
29	242	.34	18	243	45	9.8	2.3	845	125	1.0	.29	.25
30	40	.46	14	108	---	8.6	2.1	1200	117	.95	.28	.20
31	8.8	---	12	60	---	11	---	245	---	1.0	.28	---
TOTAL	352.25	282.48	9378.52	2618.4	1598.8	892.4	126.1	10794.2	15234	978.85	17.43	39.22
MEAN	11.4	9.42	303	84.5	55.1	28.8	4.20	348	508	31.6	.56	1.31
MAX	242	118	3580	381	543	294	9.8	5070	3710	404	1.7	8.0
MIN	.01	.17	.49	4.4	4.9	6.9	2.1	1.7	11	.95	.28	.19
AC-FT	699	560	18600	5190	3170	1770	250	21410	30220	1940	35	78
CFSM	.06	.05	1.70	.47	.31	.16	.02	1.96	2.85	.18	.00	.01
IN.	.07	.06	1.96	.55	.33	.19	.03	2.26	3.18	.20	.00	.01

07315200 EAST FORK LITTLE WICHITA RIVER NEAR HENRIETTA, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1992, BY WATER YEAR (WY)

MEAN	45.0	10.9	24.3	14.5	16.3	49.0	48.3	106	76.2	7.63	4.62	14.6
MAX	902	97.3	303	139	143	295	686	453	508	123	41.3	102
(WY)	1982	1974	1992	1985	1987	1985	1990	1989	1992	1973	1973	1980
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1979	1972	1966	1966	1966	1967	1971	1971	1971	1971	1969	1979

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1965 - 1992	
ANNUAL TOTAL	11711.09		42312.65			
ANNUAL MEAN	32.1		116		34.9	
HIGHEST ANNUAL MEAN					128	1982
LOWEST ANNUAL MEAN					3.04	1984
HIGHEST DAILY MEAN	3580	Dec 21	5070	May 23	16900	Oct 13 1981
LOWEST DAILY MEAN	.00	Jan 1	.01	Oct 5	.00	Oct 16 1964
ANNUAL SEVEN-DAY MINIMUM	.01	Oct 5	.01	Oct 5	.00	Oct 16 1964
INSTANTANEOUS PEAK FLOW			9900	May 23	32500	Oct 13 1981
INSTANTANEOUS PEAK STAGE			26.72	May 23	a/31.70	Oct 13 1981
INSTANTANEOUS LOW FLOW			.01	Oct 5	.00	at times
ANNUAL RUNOFF (AC-FT)	23230		83930		25260	
ANNUAL RUNOFF (CFSM)	.18		.65		.20	
ANNUAL RUNOFF (INCHES)	2.45		8.84		2.66	
10 PERCENT EXCEEDS	23		183		21	
50 PERCENT EXCEEDS	.27		4.8		.14	
90 PERCENT EXCEEDS	.04		.21		.00	

a/ Maximum stage since at least 1920.

07315500 RED RIVER NEAR TERRAL, OK

LOCATION.--Lat 33°52'43", long 97°56'03", Jefferson County, Hydrologic Unit 11130201, on left bank at downstream side of bridge abutment on U.S. Highway 81, 0.5 mi downstream from Chicago, Rock Island, and Railroad Co. bridge, 1.2 mi south of Terral, 3.6 mi downstream from Little Wichita River, and at mile 872.

DRAINAGE AREA.--28,723 mi², of which 5,936 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 770.31 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 12, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period of estimated daily discharges, which are poor. There are many small diversions upstream from station for irrigation, oil field and municipal uses. Gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 19, 1935, reached a stage of 27.2 ft, although floods in 1891 and on May 1, 1908, are reported to have reached about the same stage.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 21,000 ft³/s.

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 21	2300	107,000	22.48	June 3	2400	23,700	15.98
May 30	1100	25,800	16.05	June 9	1900	71,700	19.95

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3220	4660	1060	6670	4060	3810	1770	1850	11500	14200	1860	2120
2	2310	3440	1080	6310	3760	3520	1770	1750	7660	9730	3350	3860
3	1900	2820	1100	6720	3780	3450	2060	1780	12500	12400	2900	5430
4	1740	2600	1370	6440	3810	3870	2380	1610	19100	11100	2380	5910
5	1540	2170	1860	6000	4970	7640	2190	1720	11300	9580	2070	5040
6	1420	1840	1530	5760	9070	10800	2080	1830	12200	8200	1710	3330
7	1380	1600	1100	5680	7470	7680	1860	1710	28400	6930	1320	2760
8	1360	1500	1040	5690	7120	5330	1720	1620	50300	6220	1200	2750
9	1300	1400	1010	5700	6670	6990	1630	1570	65500	5850	1170	2810
10	1230	1260	991	5570	6200	17300	1640	1530	55600	5440	1050	3080
11	1080	1170	1030	5370	5750	12500	1620	1530	39300	4480	973	3100
12	909	1120	1900	5250	5420	6600	1520	1710	27900	3710	938	2570
13	842	1100	7550	4730	5340	4950	1460	2080	25000	3040	903	1940
14	809	1080	6970	4970	5530	4030	1610	2120	21700	2560	876	1490
15	771	1100	5810	7880	5590	3730	1530	2210	17100	2280	962	1210
16	756	1370	4920	7870	5610	3670	1520	1900	12500	2660	1070	1080
17	748	1580	3780	5680	5310	3420	1750	1740	10700	3230	1160	995
18	728	1870	3360	4340	5100	5510	4760	2320	9860	2980	1090	955
19	701	2640	4810	3760	4800	4600	15800	2880	8810	2490	1030	1070
20	691	3050	28300	3650	4340	4070	14900	2380	8050	2790	1000	1040
21	682	2940	83800	3840	3510	3090	8140	1740	9150	2470	1010	1120
22	684	2540	73100	5570	2980	2580	5610	2910	9170	2210	1000	1090
23	678	1860	32900	5390	2580	2540	5000	6450	9310	1760	982	1080
24	654	1610	23000	4420	2470	2540	4870	8050	12800	1970	948	826
25	641	1370	16900	4000	2570	2380	4400	6810	9230	1630	918	760
26	682	1280	14500	3670	3540	2180	3650	4560	7740	1390	898	701
27	687	1240	11600	3670	6010	1890	3280	3470	6480	1270	924	650
28	1220	1180	8590	4680	4440	1750	2870	4780	5890	1250	909	615
29	9170	1150	7530	5710	4210	1700	2290	10500	7520	1150	1820	592
30	14500	1090	6870	5020	---	1770	2030	22600	9740	1680	3020	580
31	7260	---	6670	4490	---	1740	---	16500	---	2100	2470	---
TOTAL	62293	55630	366031	164500	142010	147630	107710	126210	542010	138750	43911	60554
MEAN	2009	1854	11810	5306	4897	4762	3590	4071	18070	4476	1416	2018
MAX	14500	4660	83800	7880	9070	17300	15800	22600	65500	14200	3350	5910
MIN	641	1080	991	3650	2470	1700	1460	1530	5890	1150	876	580
AC-FT	123600	110300	726000	326300	281700	292800	213600	250300	1075000	275200	87100	120100

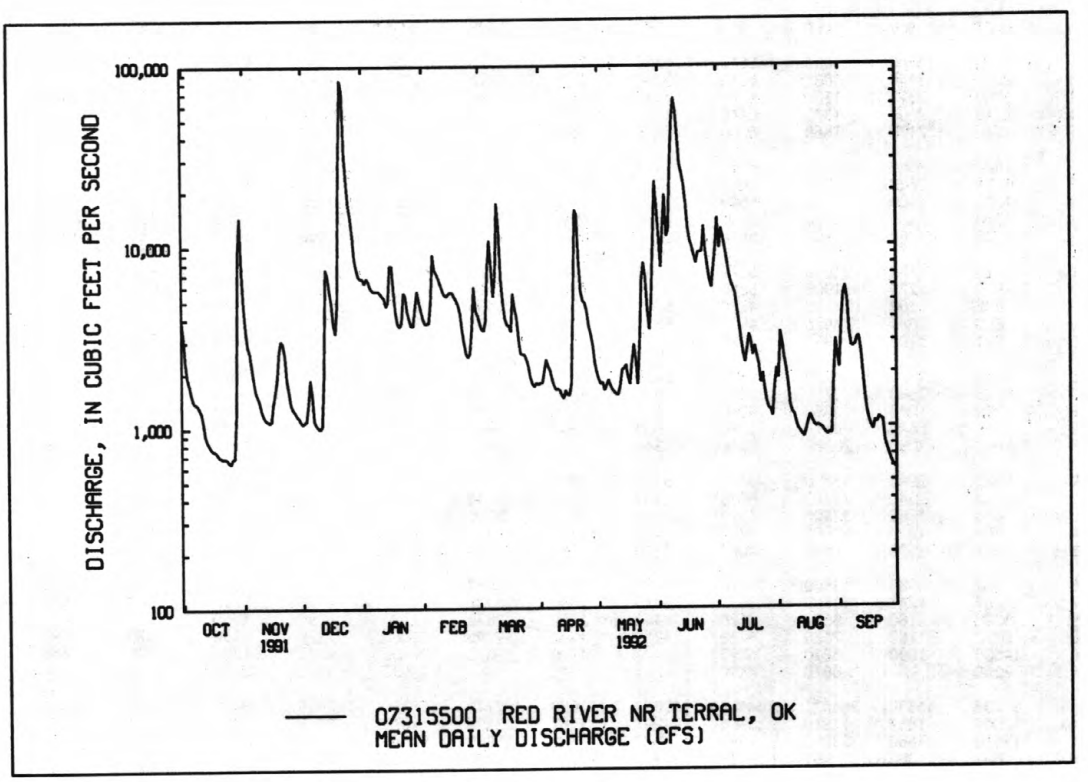
07315500 RED RIVER NEAR TERRAL, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1992, BY WATER YEAR (WY)

MEAN	3236	1422	1039	860	1144	1681	2428	6504	6098	1680	1113	2041
MAX	23900	9713	11810	5306	9320	12560	18080	43580	37460	8077	9267	9653
(WY)	1987	1987	1992	1992	1987	1990	1990	1957	1941	1950	1950	1986
MIN	108	102	91.2	76.5	136	66.1	142	134	517	158	155	109
(WY)	1953	1940	1939	1940	1953	1940	1971	1971	1966	1964	1970	1956

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1939 - 1992	
ANNUAL TOTAL	1521773		1957239			
ANNUAL MEAN	4169		5348		2441	
HIGHEST ANNUAL MEAN					8925	1987
LOWEST ANNUAL MEAN					523	1953
HIGHEST DAILY MEAN	83800	Dec 21	83800	Dec 21	211000	May 30 1987
LOWEST DAILY MEAN	280	Mar 13	580	Sep 30	46	Mar 20 1940
ANNUAL SEVEN-DAY MINIMUM	317	Mar 12	673	Oct 21	47	Mar 18 1940
INSTANTANEOUS PEAK FLOW			107000	Dec 21	225000	May 30 1987
INSTANTANEOUS PEAK STAGE			22.48	Dec 21	*33.60	Oct 22 1983
INSTANTANEOUS LOW FLOW			574	Sep 30	43	Mar 15 1939
ANNUAL RUNOFF (AC-FT)	3018000		3882000		1768000	
10 PERCENT EXCEEDS	9790		10600		5200	
50 PERCENT EXCEEDS	1260		2810		561	
90 PERCENT EXCEEDS	386		994		169	

* Maximum stage since at least 1891.



07315500 RED RIVER NEAR TERRAL, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1967 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to current year.
WATER TEMPERATURE: October 1967 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 13,000 microsiemens June 15, 1984; minimum daily, 255 microsiemens Jan. 1, 1985.
WATER TEMPERATURE: Maximum daily, 35.0°C Aug. 13, 16, 17, 1983; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 9,680 microsiemens July 19; minimum daily, 750 microsiemens Sept. 16.
WATER TEMPERATURE: Maximum daily, 30.0°C July 9, 21, Aug. 6: minimum daily, 1.0°C Dec. 24.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
DEC									
21...	1240	88800	749	6.5	150	70	45	10	78
JAN									
07...	1150	5680	3240	10.5	610	440	160	52	430
MAR									
10...	1340	20500	1720	12.0	340	220	88	28	210
JUN									
09...	1450	68900	1000	23.0	220	120	65	15	120

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
DEC								
21...	3	4.5	84	76	120	0.20	6.8	391
JAN								
07...	8	7.0	170	420	640	0.50	8.7	1820
MAR								
10...	5	5.4	120	230	330	0.20	7.2	968
JUN								
09...	3	6.1	110	120	170	<0.10	9.6	570

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	62293	3070	1780	299000	660	111200	430	72300	530
NOV.	1991	55630	4090	2430	366000	930	139200	590	88000	710
DEC.	1991	366031	1460	802	793000	280	280100	200	192900	250
JAN.	1992	164500	3360	1910	848000	700	310400	460	205400	570
FEB.	1992	142010	3890	2250	863000	840	320900	540	208400	670
MAR.	1992	147630	2830	1600	637000	580	231400	390	154300	480
APR.	1992	107710	3670	2130	619000	790	230800	510	149500	630
MAY	1992	126210	2840	1620	554000	600	203900	390	133900	480
JUNE	1992	536570	1760	958	1388000	340	487300	230	338200	290
JULY	1992	138750	2920	1650	617000	600	223900	400	149500	500
AUG.	1992	43911	3500	2000	238000	740	87400	480	57500	600
SEPT	1992	60554	2260	1250	204000	440	72600	300	49600	380
TOTAL		1951799	**	**	7424000	**	2699000	**	1799000	**
WTD.AVG.		5333	2500	1410	**	510	**	340	**	420

07315500 RED RIVER NEAR TERRAL, OK--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY EQUIVALENT MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2810	1180	e6150	3290	4110	3180	4780	4520	1410	3000	3280	1960
2	3370	1380	6130	3220	4490	3530	5020	4710	2540	3050	3230	2160
3	4050	e2140	5930	3110	5020	3880	4060	4490	2050	2510	2780	e1700
4	4160	2910	5730	2930	4670	3770	4070	4570	2750	2270	3160	1250
5	4410	3110	4030	3060	4620	3570	6250	4880	2130	e2120	3430	1420
6	4720	3550	4030	3130	4330	2110	5510	4830	2460	1980	3350	1820
7	4780	e4380	5520	3130	3470	2710	5460	4800	e2140	2220	3980	2240
8	4730	5220	5860	3070	3210	3060	5520	4800	1820	2500	3970	2260
9	4810	5670	5800	3070	4080	2630	5680	4980	1160	2740	3720	2370
10	4830	5890	5570	3010	4210	1630	5780	e4970	968	2850	4220	2520
11	4830	6010	e5380	3080	3770	1440	5260	4960	933	2720	4290	2260
12	4870	5770	5200	2970	3630	1970	5260	4670	923	2910	4000	1790
13	e5020	5850	1790	e3300	3610	2600	e5300	4660	1250	3310	4060	1970
14	5160	5840	1630	3630	3340	3020	e5450	4640	1550	3510	4210	2200
15	5250	5900	2070	e3460	3270	4800	5550	3820	1920	3740	4350	2700
16	5250	4780	4180	3280	3220	3240	6380	4370	1870	4250	4100	3220
17	5300	4170	3040	3270	3270	3260	4980	e3860	1800	6250	4120	3370
18	e5360	4110	2850	e3860	3210	1900	4250	3360	1880	3950	4120	e3350
19	5360	3650	e1960	e4060	3200	3050	2430	3270	2060	4010	3660	3330
20	5360	2730	1080	e4250	3330	2750	2260	3290	2050	4800	3560	3070
21	5430	3270	747	4440	3960	e3320	2920	3560	e2080	3260	3770	2640
22	5490	4470	803	3300	4340	3900	3710	3090	2120	3360	3600	3460
23	5610	6970	954	3190	4890	4130	3500	1490	2180	2890	e3660	3280
24	5710	6780	1250	3620	4900	4730	3270	e1460	2990	3230	3760	3600
25	5550	6210	1570	3910	4510	3920	3730	1420	3450	2640	3810	3520
26	5210	5840	1920	e4000	4080	3710	3150	3540	3550	3170	3810	3690
27	5290	5910	2170	4080	4880	4030	3110	7100	3720	3760	3920	4020
28	5010	5960	2310	3190	3700	4300	3470	4200	e3380	3600	3790	4210
29	1410	e6060	2410	3060	3590	e4380	3920	2570	2990	3660	3850	4320
30	1820	6170	2650	3280	---	4460	4380	1480	2470	4040	2550	4370
31	1170	---	3040	3800	---	4810	---	1600	---	2080	2440	---
MEAN	4580	4730	3350	3420	3960	3350	4480	3870	2150	3240	3700	2800
MAX	5710	6970	6150	4440	5020	4810	6380	7100	3720	6250	4350	4370
MIN	1170	1180	747	2930	3200	1440	2260	1420	923	1980	2440	1250

WTR YR 1992 MEAN 3640 MAX 7100 MIN 747

e Estimated

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	e8.0	e10.0	12.0	13.0	16.0	13.0	20.0	19.0	27.0	28.0	24.0
2	23.0	8.0	7.0	11.0	13.0	18.0	13.0	21.0	20.0	28.0	27.0	e24.0
3	23.0	8.0	9.0	10.0	12.0	19.0	16.0	24.0	25.0	26.0	27.0	e25.0
4	22.0	8.0	9.0	11.0	12.0	18.0	15.0	23.0	22.0	27.0	29.0	26.0
5	18.0	8.0	10.0	10.0	11.0	16.0	16.0	23.0	23.0	e27.0	27.0	26.0
6	19.0	9.0	11.0	10.0	10.0	19.0	18.0	21.0	23.0	27.0	28.0	26.0
7	18.0	e8.5	13.0	12.0	9.0	19.0	17.0	20.0	e20.0	25.0	26.0	25.0
8	18.0	8.0	16.0	12.0	9.0	20.0	18.0	19.0	17.0	27.0	28.0	26.0
9	20.0	e9.0	17.0	10.0	12.0	17.0	21.0	21.0	21.0	28.0	28.0	25.0
10	22.0	10.0	13.0	10.0	10.0	13.0	21.0	e22.0	23.0	28.0	29.0	26.0
11	21.0	10.0	e14.5	8.0	10.0	12.0	22.0	23.0	24.0	28.0	29.0	e24.0
12	22.0	12.0	16.0	9.0	14.0	13.0	21.0	25.0	24.0	27.0	25.0	23.0
13	e21.0	14.0	16.0	e8.5	11.0	13.0	e21.0	25.0	25.0	27.0	25.0	24.0
14	20.0	15.0	13.0	8.0	13.0	16.0	e22.0	25.0	26.0	27.0	29.0	25.0
15	18.0	17.0	12.0	e8.0	14.0	17.0	22.0	26.0	22.0	27.0	28.0	25.0
16	18.0	17.0	12.0	8.0	12.0	18.0	23.0	24.0	24.0	26.0	25.0	24.0
17	18.0	17.0	12.0	7.0	15.0	18.0	20.0	e24.0	23.0	26.0	24.0	25.0
18	e17.5	15.0	10.0	e7.0	13.0	16.0	25.0	23.0	24.0	26.0	24.0	e24.0
19	17.0	14.0	e9.0	e6.0	13.0	16.0	20.0	23.0	25.0	26.0	23.0	24.0
20	18.0	12.0	8.0	e7.0	12.0	15.0	18.0	24.0	24.0	27.0	23.0	27.0
21	18.0	10.0	9.0	7.0	14.0	e15.0	17.0	23.0	e24.0	28.0	26.0	26.0
22	19.0	12.0	10.0	8.0	15.0	15.0	18.0	22.0	25.0	27.0	e26.0	24.0
23	18.0	7.0	10.0	9.0	15.0	15.0	20.0	22.0	25.0	28.0	e25.0	22.0
24	22.0	9.0	24.0	10.0	13.0	15.0	21.0	e22.0	26.0	29.0	24.0	24.0
25	20.0	9.0	9.0	8.0	10.0	14.0	19.0	22.0	27.0	29.0	25.0	22.0
26	20.0	12.0	10.0	e8.0	10.0	16.0	20.0	20.0	27.0	29.0	26.0	23.0
27	20.0	12.0	e10.0	8.0	15.0	17.0	20.0	20.0	27.0	28.0	23.0	22.0
28	20.0	15.0	10.0	10.0	15.0	17.0	20.0	19.0	e26.0	29.0	22.0	20.0
29	17.0	e13.5	9.0	11.0	15.0	e16.0	19.0	17.0	25.0	28.0	25.0	20.0
30	14.0	12.0	12.0	11.0	---	15.0	20.0	16.0	26.0	29.0	e25.0	21.0
31	12.0	---	10.0	12.0	---	17.0	---	17.0	---	28.0	24.0	---
MEAN	19.2	11.3	11.6	9.2	12.4	16.2	19.2	21.8	23.7	27.4	25.9	24.1
MAX	23.0	17.0	24.0	12.0	15.0	20.0	25.0	26.0	27.0	29.0	29.0	27.0
MIN	12.0	7.0	7.0	6.0	9.0	12.0	13.0	16.0	17.0	25.0	22.0	20.0

WTR YR 1992 MEAN 18.5 MAX 29.0 MIN 6.0

e Estimated

07315950 MOSS LAKE NEAR GAINESVILLE, TX

LOCATION.--Lat 33°46'26", long 97°12'50", Cooke County, Hydrologic Unit 11130201, on top of upstream side of dam adjacent to guardrail of roadway about 250 ft from right end of Fish Creek dam on Fish Creek, 1.6 mi upstream from Bearhead Creek, 3.7 mi upstream from mouth, and 10 mi northwest of Gainesville.

DRAINAGE AREA.--65.0 mi².

PERIOD OF RECORD.--October 1967 to current year.
Water-quality records.--Chemical analyses: October 1969 to September 1984.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Apr. 20, 1979, recording gage at site about 150 ft upstream at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam 1,460 ft long. The dam was completed and storage began Dec. 2, 1966. An uncontrolled morning-glory-type spillway with a 7- by 7-foot opening is designed to discharge 2,500 ft³/s at a 10-foot head. A 400-foot-wide spillway has been cut through natural ground, and is located about 100 ft to left of the left end of dam. The dam was built by the city of Gainesville to impound water for municipal use. Area and capacity tables are based on a 1961 survey. There was no diversion from the lake during the current water year. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	740.0	-
Top of design flood pool	736.0	55,230
Crest of spillway	725.0	36,440
Crest of spillway morning-glory type (top of conservation pool)	715.0	23,210
Lowest gated outlet (invert)	666.0	78

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 50,990 acre-ft Oct. 13, 1981 (elevation, 733.72 ft); minimum since lake filled in May 1968, 11,490 acre-ft Jan. 18, 1990 (elevation, 702.08 ft, from graph).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 27,890 acre-ft Dec. 20 at 2100 hours (elevation, 718.88 ft); minimum, 18,590 acre-ft Oct. 21-23, 25 (elevation, 710.57 ft).

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

710.0	18,040	716.0	24,360
712.0	20,010	718.0	26,770
714.0	22,110	719.0	28,040

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18860	24080	23370	23360	23530	23510	23200	23120	23540	23220	23460	22760
2	18860	23740	23690	23310	23500	23490	23210	23120	24160	23210	23450	22890
3	18860	23530	23620	23310	23470	23460	23210	23110	23870	23340	23350	23680
4	18820	23410	23500	23320	23410	23800	23210	23130	23670	23210	23280	23510
5	18800	23310	23430	23290	23390	23750	23220	23100	23900	23190	23230	23420
6	18790	23270	23390	23290	23380	23650	23200	23100	23690	23180	23200	23360
7	18780	23200	23360	23290	23350	23600	23220	23100	23510	23150	23170	23310
8	18760	23170	23340	23260	23350	23540	23210	23100	23590	23140	23110	23260
9	18760	23140	23300	23240	23360	23460	23210	23100	23640	23120	23110	23210
10	18750	23140	23280	23240	23360	23380	23210	23100	23510	23110	23080	23290
11	18750	23120	23670	23260	23380	23370	23200	23100	23590	23090	23040	23270
12	18740	23130	24150	23270	23350	23360	23310	23100	23370	23080	23030	23240
13	18740	23140	23890	23990	23350	23360	23320	23100	23290	23070	23020	23260
14	18700	23170	23650	23920	23350	23350	23270	23100	23240	23060	23010	23230
15	18680	23170	23530	23810	23340	23340	23240	23100	23230	23040	23000	23220
16	18670	23310	23450	23670	23360	23340	23220	23100	23220	23030	22990	23220
17	18670	23350	23390	23600	23340	23360	23220	23100	23210	23030	22970	23220
18	18640	23340	23340	23600	23310	23340	23220	23100	23210	23020	22960	23190
19	18610	23320	24790	23600	23310	23300	23210	23100	23210	23020	22960	23180
20	18600	23240	27760	23680	23310	23280	23170	23100	23360	23010	22960	23170
21	18600	23230	25380	23960	23320	23300	23220	23310	23220	23020	22960	23180
22	18600	23180	25420	24000	23340	23230	23170	23270	23200	22970	22950	23140
23	18600	23150	24490	23810	23360	23230	23170	23590	23210	22960	22920	23120
24	18600	23120	24010	23670	23460	23270	23150	23570	23220	22960	22910	23110
25	18740	23130	23810	23590	24160	23260	23120	23600	23210	22950	22910	23110
26	18850	23130	23660	23540	23960	23270	23110	23500	23210	22930	22870	23090
27	19390	23140	23570	23840	23760	23270	23110	23390	23210	22930	22840	23070
28	22380	23170	23510	23810	23660	23280	23100	23830	23410	22920	22820	23060
29	22570	23140	23440	23720	23550	23240	23110	23730	23240	22920	22810	23030
30	22660	23080	23410	23640	---	23220	23110	23580	23220	22920	22780	23020
31	24700	---	23380	23570	---	23210	---	23520	---	22910	22760	---
MAX	24700	24080	27760	24000	24160	23800	23320	23830	24160	23340	23460	23680
MIN	18600	23080	23280	23240	23310	23210	23100	23100	23200	22910	22760	22760
(†)	716.29	714.88	715.15	715.31	715.30	715.00	714.91	715.27	715.01	714.73	714.59	714.83
(ϕ)	+5830	-1620	+300	+190	-20	-340	-100	+410	-300	-310	-150	+260

CAL YR 1991 MAX 27760 MIN 13710 (ϕ) +9640
WTR YR 1992 MAX 27760 MIN 18600 (ϕ) +4150

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

07316000 RED RIVER NEAR GAINESVILLE, TX

LOCATION.--Lat 33°43'40", long 97°09'35", in SW 1/4 sec.36, T.9 S., R.1 E., Love County, OK, Hydrologic Unit 11130201, on downstream right bank at end of bridge on Interstate 35, 0.2 mi downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 5.0 mi downstream from Fish Creek, 4.5 mi southwest of Thackerville, OK, 7.0 mi north of Gainesville, and at mile 791.5.

DRAINAGE AREA.--30,782 mi² of which 5,936 mi² probably is noncontributing.

PERIOD OF RECORD.--May 1936 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 627.91 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 17, 1939, and Feb. 13, 1965 to Nov. 14, 1966, nonrecording gage at same site and datum.

REMARKS.--Records fair. Flow slightly regulated by Lake Kemp (station 07312000 in Texas), since 1943 by Lake Altus (station 07302500 in Oklahoma), since 1946 by Lake Kickapoo (station 07314000 in Texas), since 1967 by Lake Arrowhead (station 07314800 in Texas), and since 1968 by Moss Lake (station 07315950 in Texas). U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 24,000 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 23	0700	94,100	28.69	June 10	1800	65,800	25.23
June 5	0200	28,100	19.04				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
2	4420	7170	2450	6910	4580	4190	e2300	e2630	17200	20100	2700	2240
3	3460	5570	3280	6750	4100	3790	e2680	e2660	16400	15000	3470	2400
4	2770	4340	3250	6750	3760	4560	e3090	e2440	21900	16800	3940	4740
5	2430	3890	2630	6850	3790	7740	e2850	e2600	25200	16900	2870	5610
6	2210	3440	2430	6280	3870	7530	e2700	e2730	20100	13800	2290	6370
7	2020	2940	2540	5890	7270	10900	e2420	e2600	23300	11100	1970	4490
8	1870	2570	2190	5700	7850	9840	e2240	e2470	37400	9130	1670	3090
9	1820	2350	1840	5580	7020	6690	e2430	e2380	53200	7710	1400	2590
10	1770	2190	1710	5620	6660	7570	e2460	e2330	63400	e6100	1280	2470
11	1710	2010	1710	5520	6170	15800	e2460	e2330	56000	e5050	1230	2440
12	1640	1840	3180	5330	6280	14400	3940	e2290	35700	e4500	1140	3120
13	1480	1740	5370	6070	6520	9770	4130	e2100	24100	e3950	1060	3200
14	1310	1690	8430	7930	5550	6660	4260	2050	19700	e3500	1030	2370
15	1210	1650	10000	8630	5440	5350	4110	2200	17400	e3200	999	1720
16	1180	1750	8720	10400	5380	4630	3640	e2250	16300	e3050	956	1410
17	1110	4750	7450	9610	5470	4630	2700	e2400	14800	e2900	970	1210
18	1080	e6000	4950	7330	5290	4580	e2550	e5000	13400	e2700	1050	1080
19	1030	e3430	5270	5520	5050	7360	3100	e4000	12800	e2600	1140	988
20	1000	e3960	19700	4550	4860	9110	14800	3460	11600	2500	1090	932
21	988	e3820	49300	4430	4550	7110	15600	3360	10500	2730	1010	1040
22	965	e3300	78400	6290	3940	4700	10600	2820	10800	2700	971	1110
23	952	e2420	89200	8480	3400	3660	7000	e2550	11100	2490	964	1110
24	941	e2180	53400	8430	3110	3310	5850	7160	11100	2170	959	996
25	971	e1780	28500	6410	4530	3170	5420	11400	14200	1910	933	978
26	1150	e1660	18800	4560	7780	3040	5280	10500	12900	1940	903	814
27	1220	e1610	13900	4250	7780	e2800	4490	7140	10300	1690	881	733
28	6220	e1530	10700	4950	6430	e2850	3930	5480	8740	1530	875	692
29	8490	e1600	8470	6880	5830	e2600	3580	6390	9100	1440	867	651
30	12600	e1700	7730	7950	---	e2300	2950	16000	14800	1420	848	610
31	15400	---	7200	7080	---	e2260	---	19900	---	1570	1320	---
TOTAL	90437	94850	464700	203800	157630	187560	135860	146360	630640	187980	44676	63684
MEAN	2917	3162	14990	6574	5436	6050	4529	4721	21020	6064	1441	2123
MAX	15400	9970	89200	10400	7850	15800	15600	19900	63400	20100	3940	6370
MIN	941	1530	1710	4250	3110	2260	2240	2050	8740	1420	848	610
AC-FT	179400	188100	921700	404200	312700	372000	269500	290300	1251000	372900	88610	126300

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1992, BY WATER YEAR (WY)

MEAN	4043	1908	1495	1159	1587	2504	3358	7944	8233	2125	1294	2353
MAX	31080	14020	14990	7152	9984	14690	27400	47780	43510	9857	12940	12880
(WY)	1942	1942	1992	1985	1987	1987	1990	1957	1941	1950	1950	1986
MIN	119	137	125	82.4	151	90.5	153	204	640	166	163	108
(WY)	1953	1955	1940	1940	1953	1940	1971	1971	1966	1964	1970	1956

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1937 - 1992	
ANNUAL TOTAL	1896407		2408177			
ANNUAL MEAN	5196		6580		3170	
HIGHEST ANNUAL MEAN					11890	1987
LOWEST ANNUAL MEAN					651	1953
HIGHEST DAILY MEAN	89200	Dec 23	89200	Dec 23	232000	May 31 1987
LOWEST DAILY MEAN	390	Mar 14	610	Sep 30	48	Jan 18 1940
ANNUAL SEVEN-DAY MINIMUM	415	Mar 10	782	Sep 24	48	Jan 18 1940
INSTANTANEOUS PEAK FLOW			94100	Dec 23	265000	May 31 1987
INSTANTANEOUS PEAK STAGE			28.69	Dec 23	40.08	May 31 1987
ANNUAL RUNOFF (AC-FT)	3762000		4777000		2296000	
10 PERCENT EXCEEDS	12600		14500		6920	
50 PERCENT EXCEEDS	1870		3790		780	
90 PERCENT EXCEEDS	664		1100		210	

07331500 LAKE TEXOMA NEAR DENISON, TX

LOCATION.--Lat 33°49'05", long 96°34'20", in NE1/4 sec.33, T.8 S., R.7 E., Bryan County, OK, Hydrologic Unit 11130210, in control tower of Denison Dam on Red River, 1.2 mi upstream from Shawnee Creek, 1.8 mi upstream from Sand Creek, 4.0 mi northwest of Denison, 6.0 mi southwest of Colbert, and at mile 725.9.

DRAINAGE AREA.--39,719 mi², of which 5,936 mi² is probably noncontributing.

PERIOD OF RECORD.--July 1942 to current year. Monthend contents only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Mar. 30, 1944, non-recording gage at same site and datum. Prior to Oct. 1, 1948, supplementary nonrecording gage in Cumberland pool at the same datum.

REMARKS.--The Lake is formed by a rolled earthfill dam. The controlled outlet consists of eight 20-foot-diameter conduits and the uncontrolled outlet is a concrete, ogee-type weir spillway. Flow was diverted through conduits July 27, 1942; regulated storage began Oct. 31, 1943; power pool was first filled March 15, 1945. Capacity, based on 1969 survey, 5,312,000 acre-ft at elevation 640.0 ft, crest of spillway, 2,643,000 acre-ft at elevation 617.0 ft maximum power pool; 1,031,000 acre-ft at elevation 590.0 ft, minimum power pool, in Denison pool. Dead storage 11,000 acre-ft at elevation 610.0 ft in Cumberland pool. When contents are below 2,105,000 acre-ft, the reservoir is divided into two pools by protective levees around the Cumberland oil field on the Washita River arm with bottom outlet channel for the upper pool (known as Cumberland pool) at elevation 610 ft. At higher elevations the two pools are considered as being at a common level, contents being computed from gage in Denison pool. Figures given herein represent total contents of both pools. Lake is used principally for flood control and power development. Revised capacity table, based on survey in 1969, used since Oct. 1, 1977. U.S. Army Corps of Engineers' satellite telemeter at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 6,028,000 acre-ft May 6, 1990 (elevation, 644.76 ft); minimum since power pool was first filled, 1,565,100 acre-ft Sept. 16, 1964; minimum elevation, 599.96 ft Mar. 1, 2, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,101,000 acre-ft Dec. 27 (elevation, 630.87 ft); minimum, 2,521,000 acre-ft Apr. 5, 6 (elevation, 615.55 ft).

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

614.0	2,399,000	626.0	3,538,000	638.0	5,029,000
620.0	2,920,000	632.0	4,240,000	645.0	6,066,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2646000	2931000	2774000	3820000	2700000	2643000	2547000	2550000	2921000	2965000	2781000	2584000
2	2642000	2945000	2785000	3755000	2693000	2639000	2533000	2554000	2958000	2968000	2780000	2590000
3	2635000	2944000	2783000	3689000	2688000	2631000	2522000	2554000	2954000	2953000	2777000	2602000
4	2630000	2933000	2775000	3620000	2688000	2653000	2523000	2556000	2952000	2937000	2775000	2597000
5	2628000	2908000	2768000	3555000	2678000	2669000	2522000	2553000	2949000	2919000	2775000	2592000
6	2622000	2881000	2759000	3483000	2672000	2679000	2524000	2551000	2958000	2903000	2770000	2587000
7	2619000	2858000	2756000	3412000	2665000	2679000	2524000	2549000	2958000	2892000	2764000	2579000
8	2615000	2841000	2758000	3340000	2657000	2678000	2525000	2547000	2989000	2881000	2758000	2579000
9	2613000	2828000	2756000	3265000	2648000	2696000	2527000	2553000	3086000	2874000	2750000	2580000
10	2611000	2818000	2748000	3187000	2647000	2686000	2525000	2555000	3232000	2870000	2739000	2611000
11	2608000	2804000	2752000	3108000	2648000	2684000	2526000	2572000	3367000	2866000	2731000	2615000
12	2614000	2786000	2767000	3032000	2672000	2682000	2530000	2575000	3431000	2861000	2722000	2614000
13	2618000	2777000	2791000	2987000	2672000	2676000	2538000	2586000	3433000	2854000	2714000	2615000
14	2619000	2773000	2804000	2925000	2669000	2669000	2546000	2595000	3401000	2860000	2706000	2615000
15	2612000	2769000	2821000	2876000	2663000	2653000	2551000	2601000	3366000	2863000	2695000	2613000
16	2604000	2787000	2827000	2844000	2650000	2646000	2556000	2613000	3318000	2896000	2684000	2607000
17	2601000	2810000	2833000	2834000	2643000	2658000	2551000	2631000	3265000	2910000	2675000	2601000
18	2599000	2830000	2813000	2819000	2639000	2658000	2542000	2651000	3213000	2906000	2670000	2597000
19	2595000	2839000	2834000	2795000	2638000	2653000	2544000	2664000	3158000	2902000	2663000	2587000
20	2591000	2837000	2977000	2773000	2636000	2653000	2550000	2676000	3121000	2895000	2654000	2581000
21	2588000	2833000	3157000	2766000	2636000	2652000	2565000	2688000	3068000	2891000	2645000	2580000
22	2585000	2833000	3459000	2766000	2641000	2650000	2576000	2695000	3021000	2883000	2634000	2572000
23	2584000	2828000	3766000	2753000	2637000	2641000	2582000	2714000	2986000	2875000	2625000	2562000
24	2594000	2821000	3971000	2744000	2640000	2632000	2581000	2732000	2956000	2867000	2615000	2555000
25	2609000	2813000	4067000	2738000	2665000	2624000	2575000	2756000	2963000	2854000	2607000	2556000
26	2626000	2802000	4100000	2731000	2664000	2616000	2568000	2779000	2954000	2841000	2602000	2560000
27	2648000	2791000	4086000	2725000	2660000	2601000	2559000	2797000	2946000	2825000	2591000	2564000
28	2720000	2784000	4049000	2715000	2655000	2592000	2546000	2825000	2937000	2811000	2583000	2567000
29	2769000	2782000	4001000	2708000	2651000	2585000	2548000	2834000	2955000	2800000	2582000	2567000
30	2822000	2775000	3944000	2703000	---	2570000	2546000	2845000	2958000	2809000	2585000	2569000
31	2901000	---	3881000	2701000	---	2559000	---	2888000	---	2787000	2583000	---
MAX	2901000	2945000	4100000	3820000	2700000	2696000	2582000	2888000	3433000	2968000	2781000	2615000
MIN	2584000	2769000	2748000	2701000	2636000	2559000	2522000	2547000	2921000	2787000	2582000	2555000
(†)	619.80	618.46	629.02	617.65	617.09	616.03	615.86	619.66	620.39	618.59	616.30	616.14
(ϕ)	+247000	-126000	+1106000	-1180000	-50000	-92000	-13000	+342000	+70000	-171000	-284000	-14000

CAL YR 1991 MAX 4100000 MIN 2584000 (ϕ) +1260000
WTR YR 1992 MAX 4100000 MIN 2522000 (ϕ) -85000

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

07335390 PAT MAYSE LAKE NEAR CHICOTA, TX

LOCATION.--Lat 33°51'09", long 95°32'40", Lamar County, Hydrologic Unit 11140101, on upstream side of dam on Sanders Creek, 2,800 ft to right of outlet channel, 2.0 mi southeast of Chicota, and 4.6 mi upstream from mouth.

DRAINAGE AREA.--175 mi².

PERIOD OF RECORD.--October 1967 to current year. Prior to October 1970, published as Pat Mayse Reservoir.
Water-quality records.--Chemical analyses: October 1969 to September 1984.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 10, 1968, non-recording gage at present site and datum. Digital recorder was put in operation Sept. 12, 1988.

REMARKS.--The lake is formed by a rolled earthfill dam about 7,080 ft long, including a spillway 100 ft wide located near the right abutment of dam. The dam was completed and deliberate impoundment began Sept. 28, 1967. The flood-control outlet works consist of an uncontrolled morning-glory-type drop-inlet spillway that is connected to a 7.25 foot-diameter concrete conduit through the dam. A 24- and 12-inch diameter low-flow pipe is provided for additional outlets. The lake was built for flood control, municipal, and industrial water supply, recreation, fish and wildlife conservation, and for channel improvement on Sanders Creek. Water is diverted from the lake for municipal and industrial uses by the city of Paris. Any resultant effluent is discharged into Pine Creek below Lake Crook (capacity, 11,010 acre-ft), which is located in another drainage basin. The capacity table is based on Geological Survey topographic maps dated 1949. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	488.5	
Crest of spillway	477.0	352,700
Top of flood-control pool	460.5	189,100
Crest of morning-glory drop-inlet spillway (top of conservation pool)	450.6	122,100
Streambed	393.0	0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 208,000 acre-ft Dec. 11, 12, 1971 (elevation, 462.87 ft); minimum since conservation pool was first reached on Apr. 20, 1968, 100,900 acre-ft Nov. 10, 1978 (elevation, 446.80 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 163,200 acre-ft Dec. 24 at 0700 hours (elevation, 456.97 ft); minimum, 118,900 acre-ft Oct. 25 (elevation, 450.06 ft).

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

450.0	118,600	453.0	136,800	456.0	156,500
451.0	124,500	454.0	143,200	457.0	163,400
452.0	130,600	455.0	149,800		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121200	142400	135300	151100	135300	134000	133500	127000	128500	136200	131200	125000
2	121100	142400	137300	150100	134800	133600	133100	126800	130200	135500	130800	125100
3	121000	141300	139300	148600	134300	133300	132800	126700	131500	134900	130700	126100
4	121000	140100	139200	147300	133800	134900	132400	126500	131600	134900	130300	126000
5	120900	139100	138600	145900	133400	137200	131900	126200	131300	134300	130200	125900
6	120800	138100	137800	144500	133000	137100	131800	126100	132000	133600	130200	126100
7	120700	137100	137200	143400	132500	136600	131500	125900	132900	132700	130100	126000
8	120600	136400	140400	142100	132100	136000	131400	125800	136700	132300	129700	125900
9	120500	135600	153900	141000	131800	136500	131200	125600	146500	131800	129600	125800
10	120400	134900	158500	140000	131500	136900	130800	125500	148300	131300	129200	125600
11	120300	134300	158100	139000	132200	136400	130600	126000	148300	130900	128900	125500
12	120300	133700	158300	138300	133400	135700	130500	126400	148200	130500	128600	125300
13	120200	133200	157900	137700	133500	135200	130300	126700	146800	130000	128300	125300
14	120000	132800	156400	137300	133500	134700	130100	126500	145200	129800	128100	125200
15	119900	132500	154900	136700	133200	134200	129900	126400	143900	130000	127800	125000
16	119700	133000	153300	136100	132800	133700	129600	126300	142500	130900	127800	124900
17	119600	136500	151700	135600	132500	135700	129400	126400	141200	133100	127300	124800
18	119500	140800	150000	135500	132100	141300	129200	126700	140100	135600	127100	125300
19	119300	141200	148900	135800	131800	143600	129400	128300	138900	136600	127000	126300
20	119200	141100	151300	136500	131400	142700	129400	129100	138200	136000	126800	126800
21	119200	140400	156800	137200	131100	141500	129100	129200	137200	135400	126700	126600
22	119100	139400	160700	138500	131500	140400	128800	129100	136400	134800	126500	126700
23	119000	138300	162900	139300	132700	139400	128400	128900	135700	134300	126200	126400
24	119000	137400	162700	139000	133100	138600	128000	129300	135000	133700	126100	126200
25	120300	136600	161300	138100	133900	137800	128400	129400	134600	133200	125900	126000
26	121200	135900	159900	137400	135400	137100	128200	129100	135100	132700	125900	125900
27	121900	135400	158300	137300	135200	136200	127200	128800	134700	132300	125600	125700
28	126500	134800	156800	137400	134900	135600	127000	128900	135100	131900	125500	125500
29	133400	134500	155500	137000	134500	135100	127200	128800	135700	131500	125300	125300
30	138000	134500	153900	136500	---	134500	127000	128700	136600	131200	125200	125200
31	140400	---	152400	135900	---	134100	---	128500	---	131000	125000	---
MAX	140400	142400	162900	151100	135400	143600	133500	129400	148300	136600	131200	126800
MIN	119000	132500	135300	135500	131100	133300	127000	125500	128500	129800	125000	124800
(†)	453.56	452.63	455.39	452.86	452.63	452.57	451.42	451.66	452.97	452.06	451.09	451.11
(ϕ)	+18900	-5900	+17900	-16500	-1400	-400	-7100	+1500	+8100	-5600	-6000	+200

CAL YR 1991 MAX 162900 MIN 119000 (ϕ) +32200
WTR YR 1992 MAX 162900 MIN 119000 (ϕ) +3700

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

07335500 RED RIVER AT ARTHUR CITY, TX

LOCATION.--Lat 33°52'30", long 95°30'06", in NW 1/4 sec.11.T.8 S., R.17 E., Choctaw County, OK, Hydrologic Unit 11140101, on right downstream bank of bridge on U.S. Highway 271 at Arthur City, 10.6 mi downstream from Muddy Boggy River, 26.0 mi upstream from Kiamichi River, and at mile 633.1.

DRAINAGE AREA.--44,531 mi², of which 5,936 mi² probably is noncontributing.

PERIOD OF RECORD.-- January to September 1905 (gage heights and discharge measurements only), October 1905 to December 1911, July 1936 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at same site since 1891 are contained in reports of the National Weather Service.

REVISED RECORDS.-- WSP 1241: Drainage area. WSP 1311: 1906-11.

GAGE.-- Water-stage recorder. Datum of gage is 380.07 ft above National Geodetic Vertical Datum of 1929. From 1905-11 nonrecording gage at St. Louis-San Francisco Railway Co. bridge 200 ft upstream at same datum. July 1, 1936, to Mar. 24, 1940, nonrecording gage at present site and datum.

REMARKS.--Records fair. Flow regulated since October 1943 by Lake Texoma (station 07331500), 92.8 mi upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--13 years (water years 1906-11, 1937-43) prior to regulation by Lake Texoma, 9,266 ft³/s (6,713,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1906-11, 1937-43).--Maximum discharge, 400,000 ft³/s May 28, 1908 (gage height, 43.2 ft), on basis of records for later years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10400	37600	13400	50800	20600	19100	13700	14600	22300	42100	16500	3950
2	10500	35000	18500	50600	18300	18200	13500	14100	23900	36100	14300	5380
3	10900	33500	28900	50200	17600	17500	13500	10100	24400	36000	12000	6080
4	9390	30300	30700	49400	17100	17100	13500	9780	34500	37500	10400	6840
5	8360	28500	25900	49000	15600	24700	12000	e9400	35200	34300	10500	7080
6	7860	31500	24100	48600	15100	32100	9890	e9000	37800	33500	13200	7910
7	5910	30500	23500	48300	14900	29100	9980	e8900	43700	31700	15800	11000
8	5570	27100	19800	47800	14800	27800	9600	e8800	50200	26100	17000	11900
9	5610	22100	23800	47200	16300	26600	e9500	e8600	62800	21400	17800	12200
10	4930	18600	32500	48600	17200	28300	e9000	e8500	57800	19700	17900	9560
11	4770	17300	28800	49400	17200	29700	e8800	e8400	48400	15300	16000	10400
12	4720	16900	22000	e50000	19300	28100	e8500	e8200	44300	13300	12500	15500
13	4680	16600	25000	e51000	21700	29700	e8500	e9000	48700	12200	10000	15200
14	2390	15800	26500	52400	23700	e25000	e8200	11500	54700	12000	9210	13300
15	1170	12900	21900	51500	24500	e23700	e8400	11700	55200	11400	8850	10200
16	1260	11500	19500	46100	22800	e21200	e8500	9960	50800	11900	9090	7920
17	3380	16300	18000	39400	20200	20300	e8300	e9600	48400	28400	8970	7310
18	4020	20400	16400	33300	19200	23600	9730	e9400	48400	40500	8580	7020
19	4040	22300	16700	31500	18300	27200	12900	11800	48000	37400	8430	6820
20	4050	25800	33800	35200	15100	24400	15900	22000	46300	30000	7940	6440
21	2330	26900	56200	32800	13800	19800	20800	23900	43300	26200	7800	6550
22	2820	26100	51200	35000	13500	18000	19300	18200	43500	24400	7840	9120
23	3030	23400	49500	34800	15100	16800	17400	16300	42200	21300	7960	8670
24	2710	18700	44500	34700	15900	16200	16100	17400	37100	16800	8110	7650
25	13600	15000	41800	30600	16700	15900	15400	19200	33500	13600	7160	7000
26	29800	14200	43000	24100	30400	15200	15100	16000	36400	12800	7020	6170
27	24900	14400	47600	22900	28000	14600	14900	13300	35900	12600	6800	3780
28	28300	14500	e51000	23800	23800	14200	14700	10600	32800	12400	6620	2840
29	49000	12900	e46600	24300	21600	14000	14800	9890	36500	13300	6570	2490
30	43200	12200	51700	22900	---	13900	14200	14200	43700	15700	6390	2260
31	36700	---	49700	21700	---	13700	---	21100	---	16200	4580	---
TOTAL	350300	648800	1002500	1237900	548300	665700	374600	393430	1270700	716100	321820	238540
MEAN	11300	21630	32340	39930	18910	21470	12490	12690	42360	23100	10380	7951
MAX	49000	37600	56200	52400	30400	32100	20800	23900	62800	42100	17900	15500
MIN	1170	11500	13400	21700	13500	13700	8200	8200	22300	11400	4580	2260
AC-FT	694800	1287000	1988000	2455000	1088000	1320000	743000	780400	2520000	1420000	638300	473100

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1992#, BY WATER YEAR (WY)

MEAN	7223	7130	6513	6339	7944	9662	11130	16370	18350	7795	4571	4680
MAX	40240	37170	32340	39930	24200	38610	55500	103900	83820	27700	34840	19010
(WY)	1982	1975	1992	1992	1946	1987	1990	1990	1957	1989	1950	1950
MIN	263	242	894	1126	1138	1118	1343	2837	2074	1586	1108	859
(WY)	1957	1957	1957	1964	1959	1967	1956	1980	1956	1956	1972	1988

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1945 - 1992#	
ANNUAL TOTAL	5394180		7768690			
ANNUAL MEAN	14780		21230		8968	
HIGHEST ANNUAL MEAN					23290	1990
LOWEST ANNUAL MEAN					2754	1964
HIGHEST DAILY MEAN	56200	Dec 21	62800	Jun 9	269000	May 4 1990
LOWEST DAILY MEAN	1170	Mar 13	1170	Oct 15	134	a/Dec 11 1956
ANNUAL SEVEN-DAY MINIMUM	1990	Mar 8	2890	Oct 15	134	Dec 11 1956
INSTANTANEOUS PEAK FLOW			64900	Jun 9	275000	May 4 1990
INSTANTANEOUS PEAK STAGE			18.38	Jun 9	34.21	May 4 1990
ANNUAL RUNOFF (AC-FT)	10700000		15410000		6497000	
10 PERCENT EXCEEDS	34100		46200		23000	
50 PERCENT EXCEEDS	11000		16800		4060	
90 PERCENT EXCEEDS	3290		7010		1300	

Period of regulated streamflow.
a/ Also occurred Dec. 12, 1956.

07336820 RED RIVER NEAR DE KALB, TX

LOCATION .--Lat 33°40'59", long 94°41'39", Bowie County, Hydrologic Unit 11140106, on right bank at downstream side of bridge on U.S. Highway 259, 4.8 mi upstream from North Mill Creek, 13 mi north of De Kalb, and at mile 556.9.

DRAINAGE AREA.--47,348 mi², of which 5,936 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 302.92 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair including those for estimated daily discharges. At times, flood peaks may be affected by Lake Texoma (station 07331500) located approximately 169 mi upstream, and low flows may be affected by releases for the generation of electric power. Storage and/or releases from Lake Hugo on the Kiamichi River, a tributary to the Red River about 45 mi upstream, may also affect flows. Gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since 1957, 205,000 ft³/s June 1957 (gage height, 32.2 ft), from rating curve extended above 186,500 ft³/s. The greatest flood since 1936 occurred in February 1938, stage unknown.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12600	45000	20400	59000	31900	e23900	17300	30300	22500	56400	28100	4980
2	11700	45000	25000	60400	29400	22900	17100	29500	24400	54900	28700	3940
3	11300	44200	35000	59100	23800	21900	17000	27900	24700	46700	25700	4420
4	11700	43100	45200	57800	19500	21900	16800	22400	30900	47100	22300	6830
5	e10600	42600	44800	57200	20300	23600	17000	16700	40700	48800	19700	9970
6	e9880	42700	39600	56900	e19000	31200	14900	12400	41800	45600	19300	11300
7	8930	43100	37000	58300	17800	37800	12700	11300	44400	41200	23300	7810
8	7890	42100	35000	61300	17200	37000	12000	10200	50400	37200	28000	10200
9	6970	39600	45400	60900	17000	36000	11400	9820	63300	31000	28600	11900
10	6830	35900	48400	56800	17800	39300	11000	9470	73600	23800	28300	12700
11	6330	33000	46600	52600	19100	39800	10800	9170	69300	20100	23800	12100
12	6070	31600	42900	51200	24800	41100	10600	8500	54200	15800	18700	14200
13	5920	31500	38200	51100	27000	38500	10500	7310	48800	13200	14600	19900
14	5840	31900	38400	51700	30100	36100	10400	9830	51300	11800	10700	19700
15	5230	31000	38100	56100	33700	32200	10300	15000	61100	11500	9400	16500
16	3700	26400	33600	57200	32400	25900	11200	15600	63200	11900	8560	13000
17	2930	23100	29600	50800	30600	25000	12300	13500	57100	13400	8180	9640
18	3150	28300	27600	48500	27300	30700	12000	10400	53700	30800	8170	8210
19	4550	35400	25500	45700	23800	37500	11600	8880	53200	44500	8010	7800
20	4960	42300	23000	45600	21100	e38900	16300	11600	55900	43400	7620	7570
21	5010	43100	50700	47900	18400	e32500	24800	28100	55800	36100	7010	9220
22	4700	41500	70500	47100	16600	26500	34100	35100	52200	31300	6580	19300
23	3460	36900	65700	47600	19900	26500	34100	32500	52100	28800	6570	26100
24	4070	32700	59600	46200	22300	24000	29000	29200	50800	26000	6800	26000
25	4050	28000	50300	42900	24400	21800	25500	29700	48100	21000	7400	22400
26	14600	22200	49900	37000	27600	20800	24200	31300	45900	16800	6940	16400
27	29700	18600	52800	32000	37600	20000	23300	27600	45100	15300	6290	11800
28	28500	17300	57000	31000	34300	20200	20600	23100	43400	16000	6230	9050
29	42200	17100	57900	34900	e27600	20000	20800	18300	43100	21400	6160	5920
30	57700	16600	56400	35700	---	17900	26500	14400	48400	24300	6120	3830
31	52100	---	56800	34000	---	17500	---	16500	---	27900	5960	---
TOTAL	393170	1011800	1346900	1534500	712300	888900	526100	575580	1469400	914000	441800	362690
MEAN	12680	33730	43450	49500	24560	28670	17540	18570	48980	29480	14250	12090
MAX	57700	45000	70500	61300	37600	41100	34100	35100	73600	56400	28700	26100
MIN	2930	16600	20400	31000	16600	17500	10300	7310	22500	11500	5960	3830
AC-FT	779900	2007000	2672000	3044000	1413000	1763000	1044000	1142000	2915000	1813000	876300	719400

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992, BY WATER YEAR (WY)

MEAN	9454	14240	12840	11020	14200	19120	18590	24140	26780	9510	5049	5644
MAX	39980	53170	45440	49500	31000	48590	62330	125500	67360	35030	14250	24010
(WY)	1982	1975	1972	1992	1969	1987	1990	1990	1987	1982	1992	1974
MIN	1783	2105	1608	1699	2876	2492	3005	4707	2909	2598	1418	1368
(WY)	1979	1980	1978	1981	1976	1980	1981	1972	1988	1972	1972	1988

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1968 - 1992	
ANNUAL TOTAL	6783530		10177140			
ANNUAL MEAN	18590		27810		14110	
HIGHEST ANNUAL MEAN					30100	1990
LOWEST ANNUAL MEAN					4690	1980
HIGHEST DAILY MEAN	70500	Dec 22	73600	Jun 10	278000	May 7 1990
LOWEST DAILY MEAN	1630	Sep 20	2930	Oct 17	254	Nov 29 1979
ANNUAL SEVEN-DAY MINIMUM	2760	Mar 10	4110	Oct 17	529	Aug 31 1972
INSTANTANEOUS PEAK FLOW			76400	Jun 10	*279000	May 6 1990
INSTANTANEOUS PEAK STAGE			25.17	Dec 22	34.42	May 6 1990
INSTANTANEOUS LOW FLOW			2680	Oct 18	213	Nov 30 1979
ANNUAL RUNOFF (AC-FT)	13460000		20190000		10220000	
10 PERCENT EXCEEDS	43000		52100		38900	
50 PERCENT EXCEEDS	13200		25500		6590	
90 PERCENT EXCEEDS	3520		7600		2040	

* The greatest flood since 1936 occurred in February 1938, but stage is unknown.

07336820 RED RIVER NEAR DE KALB, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January 1968 to current year. Pesticide analyses: October 1970 to July 1981. Sediment analyses: November 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1968 to September 1991.
WATER TEMPERATURE: January 1968 to September 1991.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,140 microsiemens July 13, 1980; minimum daily, 114 microsiemens Oct. 31, 1984.
WATER TEMPERATURE (1968-89): Maximum daily, 4.0°C on several days during July and August of 1969 and 1970; minimum daily, 0.0°C Jan. 11, 1977.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT											
02...	1005	11900	1350	8.4	23.0	8.4	99	2.6	290	160	75
NOV											
26...	1345	21500	590	7.7	14.0	9.6	94	0.8	150	71	43
JAN											
09...	1625	60900	961	7.8	12.0	10.3	96	0.6	220	130	61
APR											
22...	1637	34800	685	7.8	25.0	8.6	105	0.9	150	67	42
JUN											
04...	1640	34000	633	8.0	23.0	8.2	97	1.1	160	73	46
JUL											
23...	1535	28800	619	7.8	29.0	7.2	94	1.2	150	64	41

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT										
02...	24	150	4	5.4	120	210	250	0.50	7.2	797
NOV										
26...	11	60	2	3.6	82	79	89	0.20	7.4	342
JAN										
09...	17	110	3	4.8	93	130	170	0.20	7.3	557
APR										
22...	12	63	2	3.0	87	84	100	0.20	4.8	361
JUN										
04...	12	61	2	2.9	91	81	93	0.20	5.6	356
JUL										
23...	11	61	2	3.4	84	75	95	0.20	6.6	344

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT										
02...	--	0.030	<0.050	0.020	0.58	0.60	0.110	0.070	660	21200
NOV										
26...	0.180	0.020	0.200	0.040	0.56	0.60	0.120	0.040	115	6680
JAN										
09...	0.270	0.040	0.310	0.070	0.33	0.40	0.070	0.060	615	101000
APR										
22...	0.190	0.050	0.240	0.090	0.31	0.40	0.030	<0.010	449	42200
JUN										
04...	0.220	0.040	0.260	0.070	0.43	0.50	0.070	0.080	931	85500
JUL										
23...	--	<0.010	0.087	0.010	0.49	0.50	0.140	0.020	213	16600

07336820 RED RIVER NEAR DE KALB, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT 02...	24	--	--	--	--	--	--	--	--	--
NOV 26...	84	--	--	--	--	--	--	--	--	--
JAN 09...	88	2	150	<0.5	<1.0	<5	<3	<10	21	<10
APR 22...	89	--	--	--	--	--	--	--	--	--
JUN 04...	66	--	--	--	--	--	--	--	--	--
JUL 23...	97	2	82	<0.5	<1.0	<5	<3	<10	100	<10

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 02...	--	--	--	--	--	--	--	--	--	--
NOV 26...	--	--	--	--	--	--	--	--	--	--
JAN 09...	12	8	<0.1	<10	<10	<1	<1.0	610	<6	<3
APR 22...	--	--	--	--	--	--	--	--	--	--
JUN 04...	--	--	--	--	--	--	--	--	--	--
JUL 23...	5	3	<0.1	<10	<10	<1	<1.0	390	<6	7

07337000 RED RIVER AT INDEX
(National stream-quality accounting network station)

LOCATION.--Lat 33°33'07", long 94°02'28", in NW1/4, SW1/4 sec.7, T.14 S., R.28 W., Miller County, Hydrologic Unit 11140106, near right bank at downstream side of southbound bridge on U.S. Highway 71 at Index, 2.2 mi south of Ogden, 20.6 mi upstream from Little River, and at river mile 485.3.

DRAINAGE AREA.--48,030 mi², of which 5,936 mi² is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1936 to current year. Gage-height records collected at same site since 1917 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 246.87 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 12, 1939, nonrecording gage, and Dec. 12, 1939, to July 19, 1979, water-stage recorder, at site 500 ft downstream at present datum.

REMARKS.--No estimated daily discharges. Water-discharge records good. Some regulation since Oct. 31, 1943, by Lake Texoma (Texas), 241 mi upstream, capacity, 5,392,900 acre-ft, since Sept. 28, 1967, by Pat Mayse Lake (Texas), capacity, 352,700 acre-ft, and since Jan. 18, 1974, by Hugo Lake (Oklahoma) capacity, 966,700 acre-ft. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16500	56100	20400	62700	27700	28000	13400	20300	12200	48600	29600	6520
2	14200	51200	27000	64500	25500	24400	13200	23300	18600	51700	30100	6080
3	13100	50400	33700	65200	23700	21800	13100	22900	23000	49000	29800	5260
4	11900	48700	42700	64000	21400	22400	13000	21600	24900	43700	27000	5040
5	12200	47200	49100	62300	20200	24600	12800	18100	31400	44000	23800	6250
6	11900	46600	47100	61700	19400	25700	12800	13800	39400	44800	21200	8840
7	10300	45900	41900	61000	18000	31800	12300	9450	39600	42600	20400	11400
8	9250	45800	38800	61700	17000	35700	10000	8040	42400	39200	23200	9080
9	8160	44400	39500	62900	16500	36700	8910	7070	47600	36200	27600	9220
10	6840	41600	52200	61400	16200	45900	8320	6520	56900	31900	28700	11500
11	6420	38200	54100	57600	17200	44500	7810	6200	63800	26400	28300	12600
12	6050	35600	51700	54600	20800	39400	7510	5970	61200	22700	25100	12300
13	5560	34200	48800	53800	31300	36600	7250	5650	52000	18600	20600	12800
14	5340	33900	44900	53700	32300	32800	7110	4540	48000	15500	16900	18000
15	5200	33900	43700	54600	34200	30600	6980	4820	49700	13700	12600	19000
16	4990	32700	41800	57800	35300	27100	6850	8840	54900	13200	10700	16600
17	3770	28800	37500	56900	33600	22900	7060	11300	55500	14700	9680	13500
18	2760	27000	34200	52300	31500	22600	8160	9900	51700	17600	9020	10400
19	2350	32300	31800	51300	28400	32300	8420	7760	49800	32700	8950	8520
20	3130	45000	29900	48800	23900	35900	8080	6340	49700	41800	8810	7870
21	4170	50300	33500	49100	20300	35300	8850	6430	50600	39800	8370	7820
22	4400	48400	62800	50700	17000	30400	15700	19300	49600	34400	7850	8810
23	4410	44500	74600	51000	15100	25000	26200	28800	47600	31100	7360	17300
24	3660	39400	72900	50400	18400	22400	26600	28000	47500	29000	7160	24500
25	3150	34800	66500	47500	22500	19900	22600	24900	46100	26800	7230	25200
26	3620	30300	58500	42100	25700	17600	19800	25100	44600	22800	7650	22100
27	13500	25000	58400	36200	31700	16700	18900	26400	43200	18500	7620	17400
28	28900	20800	60000	32100	37600	15900	18200	23600	42500	16600	6910	12800
29	34500	18900	62700	31400	33800	15000	17300	19600	44200	16900	6780	10000
30	54100	18800	62600	31400	---	14300	16700	15800	46400	21500	6690	7090
31	60800	---	61800	30200	---	13800	---	11500	---	25900	6610	---
TOTAL	375130	1150700	1485100	1620900	716200	848000	383910	451830	1334600	931900	492290	363800
MEAN	12100	38360	47910	52290	24700	27350	12800	14580	44490	30060	15880	12130
MAX	60800	56100	74600	65200	37600	45900	26600	28800	63800	51700	30100	25200
MIN	2350	18800	20400	30200	15100	13800	6850	4540	12200	13200	6610	5040
AC-FT	744100	2282000	2946000	3215000	1421000	1682000	761500	896200	2647000	1848000	976500	721600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1992, BY WATER YEAR (WY)

MEAN	8624	10360	10070	10200	13990	14890	18700	24200	22370	9556	5215	5559
MAX	41690	47140	47910	52290	67760	67730	78110	121000	94400	33990	39230	30340
(WY)	1946	1975	1992	1992	1938	1945	1942	1990	1957	1989	1950	1950
MIN	586	618	618	586	1366	965	2096	4199	3098	1162	1025	909
(WY)	1940	1940	1940	1940	1940	1940	1956	1972	1988	1944	1944	1944

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1937 - 1992	
ANNUAL TOTAL	7834550		10154360			
ANNUAL MEAN	21460		27740		12790	
HIGHEST ANNUAL MEAN					30420	1990
LOWEST ANNUAL MEAN					4383	1964
HIGHEST DAILY MEAN	74600	Dec 23	74600	Dec 23	286000	Feb 23 1938
LOWEST DAILY MEAN	2350	Oct 19	2350	Oct 19	384	Nov 28 1956
ANNUAL SEVEN-DAY MINIMUM	3460	Mar 12	3550	Oct 18	397	Oct 19 1956
INSTANTANEOUS PEAK FLOW			76100	Dec 23	297000	Feb 23 1938
INSTANTANEOUS PEAK STAGE			16.64	Dec 23	32.25	Feb 23 1938
INSTANTANEOUS LOW FLOW			2310	Oct 19	378	Nov 28 1956
ANNUAL RUNOFF (AC-FT)	15540000		20140000		9264000	
10 PERCENT EXCEEDS	47100		52700		33700	
50 PERCENT EXCEEDS	15900		24900		5600	
90 PERCENT EXCEEDS	4360		7040		2040	

07337000 RED RIVER AT INDEX--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-1956, April 1980 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January to September 1981.
WATER TEMPERATURE: January to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)
NOV 26.	1545	80513	80020	27700	580	7.9	6.0	60	11.4	92	120
DEC 30.	1100	80513	80020	54300	795	7.7	9.0	250	10.3	89	420
MAR 19.	1400	80513	80020	33400	1020	8.0	15.5	150	9.2	93	740
APR 14.	1240	80513	80020	7600	1030	8.2	20.0	24	8.6	95	110
JUN 16.	1305	80513	80020	53100	1200	8.0	24.0	150	7.2	87	53
SEP 10.	0810	80513	80020	11100	1180	7.7	26.5	56	8.1	102	27

DATE	TIME	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS TOT FET FIELD MG/L AS CACO3 (00418)
NOV 26.	1545	340	--	--	--	--	--	--	--	3.9	65
DEC 30.	1100	980	190	100	55	13	75	46	2	3.4	87
MAR 19.	1400	1200	250	120	68	19	100	46	3	3.6	125
APR 14.	1240	220	290	110	80	22	99	42	3	3.7	174
JUN 16.	1305	300	280	160	74	22	130	50	3	4.1	114
SEP 10.	0810	86	270	140	73	21	110	47	3	4.5	132

DATE	TIME	CARBONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)
NOV 26.	1545	0	81	66	71	81	0.30	6.9	323	--	--
DEC 30.	1100	0	106	87	110	130	0.30	7.0	459	448	67300
MAR 19.	1400	0	154	126	120	160	0.20	6.7	556	555	50100
APR 14.	1240	0	214	175	140	160	0.20	4.0	644	614	13200
JUN 16.	1305	0	139	114	150	200	0.20	5.6	686	656	98400
SEP 10.	0810	0	160	131	150	180	0.30	3.4	644	622	19300

DATE	TIME	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)
NOV 26.	1545	--	0.170	0.030	0.010	0.180	0.180	0.050	0.040	0.45	0.50
DEC 30.	1100	0.62	--	0.010	<0.010	0.260	0.260	0.050	0.050	0.65	0.70
MAR 19.	1400	0.76	--	<0.010	<0.010	0.300	0.290	0.050	0.030	0.55	0.60
APR 14.	1240	0.88	--	<0.010	<0.010	<0.050	<0.050	0.020	0.010	--	<0.20
JUN 16.	1305	0.93	--	<0.010	<0.010	0.180	0.160	0.040	0.030	0.56	0.60
SEP 10.	0810	0.88	--	<0.010	<0.010	<0.050	<0.050	0.030	0.020	0.27	0.30

07337000 RED RIVER AT INDEX--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV											
26.	1545	0.150	0.060	0.060	0.040	--	--	--	--	--	--
DEC											
30.	1100	0.220	0.030	0.020	0.020	160	280	<3	100	11	8
MAR											
19.	1400	0.160	0.020	0.020	0.020	20	140	<3	24	13	5
APR											
14.	1240	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--
JUN											
16.	1305	0.170	0.050	0.020	0.020	20	180	<3	14	14	7
SEP											
10.	0810	0.050	<0.010	0.020	<0.010	30	150	<3	18	12	7

DATE	TIME	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV										
26.	1545	--	--	--	--	--	--	99	7400	96
DEC										
30.	1100	<10	11	<1	<1.0	450	<6	1640	240000	47
MAR										
19.	1400	<10	1	<1	<1.0	640	<6	490	44200	71
APR										
14.	1240	--	--	--	--	--	--	53	1090	98
JUN										
16.	1305	<10	1	<1	<1.0	740	<6	373	53500	99
SEP										
10.	0810	<10	<1	<1	<1.0	750	<6	110	3300	100

07342470 SOUTH SULPHUR RIVER NEAR COMMERCE, TX

WATER QUALITY RECORDS

LOCATION.--Lat 33°13'11", long 95°51'45", Hunt County, Hydrologic Unit 11140301, at State Highway 11, 0.7 mi upstream from St. Louis Southwestern Railroad bridge, 1.8 mi downstream from Dunbar Creek, and 3.0 mi southeast of Commerce.

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1987 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT											
09...	1145	6.5	730	8.3	18.5	11	20	9.8	105	1.6	65
DEC											
03...	1125	1360	210	7.4	7.0	5	15	10.6	89	2.8	69
JAN											
22...	1320	1630	241	7.5	10.0	170	150	10.0	90	2.5	73
MAR											
18...	1145	2820	130	7.4	20.0	100	85	9.3	105	2.4	53
MAY											
05...	1030	3.4	781	7.9	23.0	40	19	7.0	83	1.6	160
JUN											
23...	1100	14	519	8.3	27.0	50	29	7.9	101	2.6	160

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT											
09...	0	22	2.5	130	7	7.1	170	69	57	0.50	5.5
DEC											
03...	1	24	2.2	9.1	0.5	3.2	68	16	6.5	0.20	10
JAN											
22...	5	25	2.5	13	0.7	2.4	68	23	9.0	0.20	7.5
MAR											
18...	0	19	1.4	5.3	0.3	4.2	54	7.3	4.9	0.10	6.7
MAY											
05...	0	54	6.0	110	4	5.5	190	97	57	0.40	5.7
JUN											
23...	1	56	5.3	42	1	4.7	160	49	27	0.20	11

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
OCT											
09...	397	37	23	14	9.59	0.110	9.70	0.070	0.83	0.90	3.00
DEC											
03...	113	566	72	494	0.500	0.130	0.630	0.150	0.75	0.90	0.340
JAN											
22...	123	314	12	302	0.230	0.060	0.290	0.110	0.69	0.80	0.200
MAR											
18...	81	146	36	110	0.020	0.080	0.100	0.080	0.72	0.80	0.200
MAY											
05...	450	81	24	57	7.00	0.100	7.10	0.060	1.1	1.2	1.70
JUN											
23...	292	122	23	99	1.77	0.030	1.80	0.040	0.76	0.80	0.440

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT											
09...	2.70	7.3	--	--	--	--	--	--	--	--	--
DEC											
03...	0.290	20	3	31	<0.5	<1.0	<5	<3	10	330	<10
JAN											
22...	0.150	--	--	--	--	--	--	--	--	--	--
MAR											
18...	0.170	14	--	--	--	--	--	--	--	--	--
MAY											
05...	1.40	9.0	2	62	<0.5	<1.0	<5	<3	<10	6	<10
JUN											
23...	0.430	11	--	--	--	--	--	--	--	--	--

07342470 SOUTH SULPHUR RIVER NEAR COMMERCE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
09...	--	--	--	--	--	--	--	--	--	--
DEC										
03...	<4	11	<0.1	<10	<10	<1	1.0	220	<6	36
JAN										
22...	--	--	--	--	--	--	--	--	--	--
MAR										
18...	--	--	--	--	--	--	--	--	--	--
MAY										
05...	11	66	<0.1	20	<10	<1	<1.0	480	<6	7
JUN										
23...	--	--	--	--	--	--	--	--	--	--

07342480 MIDDLE SULPHUR RIVER AT COMMERCE, TX

LOCATION.--Lat 33°15'59", long 95°54'55", Hunt County, Hydrologic Unit 11140301, at right end of bridge on State Highway 11 at downstream side of highway embankment, 1.5 mi upstream from Willow Creek and 1.5 mi northwest of Post Office in Commerce.

DRAINAGE AREA.--44.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1991 to September 1992. October 1987 to September 1991 operated as a partial-record station.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage not determined.

REMARKS.--No estimated daily discharge. Records good. Gage-height telemeter and rain gage at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	503	336	107	19	12	1.2	.15	43	25	226	.00
2	.00	29	400	99	14	9.1	1.0	.15	39	8.3	103	.00
3	.00	6.2	386	43	12	8.1	.93	.13	76	3.4	515	.03
4	.00	2.2	28	27	9.2	425	.89	.10	23	1.7	100	.02
5	.00	1.0	9.2	19	7.4	336	.87	.07	7.7	1.1	15	.02
6	.00	.54	5.3	14	6.4	81	2.4	.05	6.2	.73	8.7	.01
7	.00	.46	3.5	13	5.5	30	4.0	.03	5.4	.50	3.0	.01
8	.00	.25	2.6	12	4.8	18	3.3	.03	1130	.37	1.4	.00
9	.00	.18	1880	11	4.5	741	2.1	.02	845	.26	.80	.00
10	.00	.17	425	9.1	4.1	514	1.3	.02	30	.19	.47	.00
11	.00	.15	105	7.3	3.9	39	.86	7.7	71	.12	.39	.00
12	.00	.11	451	7.0	112	21	.61	2230	41	.09	.58	.00
13	.00	.09	92	15	131	14	6.8	383	12	.08	.63	.00
14	.00	.09	18	40	34	9.9	7.4	21	5.2	.04	2.4	.00
15	.00	.08	6.6	32	22	8.1	3.0	32	2.8	5.3	.80	.00
16	.00	18	3.7	18	14	6.8	1.2	18	1.7	29	.34	.00
17	.00	715	2.3	12	9.9	51	.63	240	1.2	5.8	.22	.00
18	.00	258	1.5	275	7.7	1440	.45	1200	.82	2.1	.14	.00
19	.00	195	20	355	5.9	174	.49	1020	.67	4.4	.09	.00
20	.00	74	508	66	4.9	28	9.9	832	18	1.6	.07	.00
21	.00	12	1940	43	4.2	14	4.6	106	34	.74	.05	.00
22	.00	5.3	400	263	24	8.9	3.1	25	7.1	.39	.04	.00
23	.00	2.7	637	101	258	5.5	1.3	100	2.6	.23	.03	.00
24	.00	1.6	78	35	91	3.8	.66	920	1.3	.16	.02	.00
25	.00	1.0	36	21	438	4.2	.43	146	1.3	.09	.01	.00
26	1.9	.69	30	20	414	15	.31	178	36	.06	.01	.00
27	18	.49	38	372	50	11	.21	31	83	.15	.01	.00
28	664	.63	40	304	26	5.2	.21	23	231	1270	.01	.00
29	1760	3.0	31	105	17	3.2	.19	93	793	416	.00	.00
30	578	12	23	43	---	2.2	.18	39	232	81	.00	.00
31	197	---	18	27	---	1.5	---	15	---	857	.00	---
TOTAL	3218.90	1842.93	7954.7	2515.4	1754.4	4040.5	60.52	7660.45	3780.99	2715.90	979.21	0.09
MEAN	104	61.4	257	81.1	60.5	130	2.02	247	126	87.6	31.6	.003
MAX	1760	715	1940	372	438	1440	9.9	2230	1130	1270	515	.03
MIN	.00	.08	1.5	7.0	3.9	1.5	.18	.02	.67	.04	.00	.00
AC-FT	6380	3660	15780	4990	3480	8010	120	15190	7500	5390	1940	.2

CAL YR 1991 TOTAL --- MEAN --- MAX --- MIN --- AC-FT ---
WTR YR 1992 TOTAL 36523.99 MEAN 99.8 MAX 2230 MIN .00 AC-FT 72450

07342480 MIDDLE SULPHUR RIVER AT COMMERCE, TX--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1987 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
DEC											
03...	1700	191	144	6.8	7.0	15	68	9.0	75	1.8	65
JAN											
22...	1750	471	246	7.6	9.0	230	98	5.0	44	2.4	79
MAR											
18...	1800	1300	156	7.5	19.0	200	410	8.6	95	3.7	59
MAY											
05...	1450	0.07	641	8.2	25.0	40	13	8.3	102	1.2	260
19...	1550	913	181	7.5	23.0	110	43	7.6	89	1.3	73
JUN											
23...	1500	2.6	335	7.9	25.0	100	31	7.0	86	2.1	120

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
DEC											
03...	6	23	1.9	8.0	0.4	3.6	59	14	5.6	0.20	11
JAN											
22...	0	28	2.1	12	0.6	2.6	79	24	8.4	0.20	8.1
MAR											
18...	0	21	1.7	6.9	0.4	--	61	11	6.7	0.20	5.4
MAY											
05...	57	91	8.6	40	1	3.7	210	100	27	0.30	5.6
19...	3	26	1.9	8.2	0.4	3.3	70	10	4.2	0.20	11
JUN											
23...	18	42	4.1	16	0.6	4.5	100	38	12	0.20	9.7

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
DEC											
03...	103	143	36	107	0.380	0.120	0.500	0.150	0.85	1.0	0.400
JAN											
22...	133	1	<1	--	0.060	0.080	0.140	0.120	0.68	0.80	0.160
MAR											
18...	--	1400	150	1250	0.100	0.200	0.300	0.160	0.74	0.90	0.220
MAY											
05...	401	43	23	20	--	0.030	<0.050	0.040	0.46	0.50	0.060
19...	107	86	21	65	0.220	0.040	0.260	0.070	0.63	0.70	0.170
JUN											
23...	189	64	26	38	1.05	0.150	1.20	0.140	0.96	1.1	0.160

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
DEC											
03...	0.350	14	5	37	<0.5	<1.0	<5	<3	<10	300	<10
JAN											
22...	0.150	14	--	--	--	--	--	--	--	--	--
MAR											
18...	0.220	26	--	--	--	--	--	--	--	--	--
MAY											
05...	0.050	10	3	98	<0.5	<1.0	<5	<3	<10	16	<10
19...	0.160	13	6	35	<0.5	1.0	<5	<3	<10	91	<10
JUN											
23...	0.190	14	--	--	--	--	--	--	--	--	--

07342480 MIDDLE SULPHUR RIVER AT COMMERCE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC										
03...	<4	11	0.2	<10	<10	<1	<1.0	170	<6	8
JAN										
22...	--	--	--	--	--	--	--	--	--	--
MAR										
18...	--	--	--	--	--	--	--	--	--	--
MAY										
05...	5	18	<0.1	<10	<10	<1	<1.0	690	<6	5
19...	<4	<1	<0.1	10	<10	<1	2.0	210	<6	4
JUN										
23...	--	--	--	--	--	--	--	--	--	--

07342495 COOPER LAKE NEAR COOPER, TX

LOCATION.--Lat 33°20'00", long 95°37'30", Delta-Hopkins County line, Hydrologic Unit 11140301, in control room near center of dam on South Sulphur River, about 4.0 mi southeast of Cooper, and at river mile 23.2.

DRAINAGE AREA.--479.0 mi².

PERIOD OF RECORD.--October 1991 to September 1992.

GAGE.--Water-stage recorder and data collection platform (DCP). Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--The lake is formed by a rolled earthfill dam, 28,070 ft long, including the dike. Closure of dam and deliberate impoundment of water began Sept. 28, 1991. The spillway is a 700-foot wide vertical faced uncontrolled ogee weir located near the right abutment of the dam. The service spillway (outlet works) consists of both service and emergency gates and low-flow release facilities. The outlet works structures is 452 feet long, and consists of an approach chennel, approach chennel U-frame structure, intake structure and service bridge, over 10.5-foot diameter conduits, and a stilling basin and discharge channel. The emergency part of the outlet structure consists of five 40- x 20-foot tainter gates. The dam was built, and is owned by the U.S. Army Corps of Engineers in cooperation with the North Texas Municipal Water District, the Sulphur River Municipal Water District, and the city of Irving. The principal use of the dam and lake is for flood control, water supply, and for recreational purposes. Figures given herein represent total contents. Data regarding the dam and Lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	459.0	-
Top of Flood Control Pool	446.2	441,400
Top of Conservation Pool	440.0	310,000
Invert, lowest gated outlet	398.0	-

COOPERATION.--Area and capacity tables provided by the U.S. Army Corps of Engineers. Records of elevations and contents provided by the Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 383,000 acre-ft Aug. 4, 1992 (elevation, 443.58 ft); minimum daily, 77 acre-ft Oct. 1-3, 1991 (elevation, 395.00).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 383,000 acre-ft Aug. 4, 1992 (elevation, 443.58 ft); minimum daily, 77 acre-ft Oct. 1-3, 1991 (elevation, 395.00 ft).

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

395.0	77	419.0	57,050	435.0	222,800
405.0	5,970	425.0	102,500	440.0	310,300
413.0	26,210	430.0	155,100	444.0	392,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	65800	120000	284000	290000	310000	233000	193000	311000	358000	376000	310000
2	77	71600	130000	288000	289000	306000	226000	193000	311000	356000	377000	310000
3	77	74500	142000	289000	288000	303000	221000	193000	311000	351000	381000	311000
4	90	75300	148000	289000	287000	299000	215000	193000	312000	349000	383000	311000
5	90	75400	150000	290000	288000	307000	209000	193000	312000	348000	380000	311000
6	90	75500	150000	290000	287000	312000	204000	192000	312000	347000	375000	311000
7	114	75500	150000	290000	287000	309000	199000	192000	312000	345000	369000	311000
8	77	75500	150000	290000	287000	302000	197000	192000	314000	341000	362000	310000
9	111	75300	155000	289000	287000	299000	195000	192000	334000	338000	355000	310000
10	115	75200	175000	289000	287000	325000	195000	191000	337000	334000	348000	310000
11	108	75200	190000	289000	287000	331000	194000	191000	340000	331000	344000	310000
12	110	75200	196000	289000	289000	326000	194000	198000	342000	328000	339000	310000
13	110	78000	205000	289000	294000	320000	194000	212000	340000	326000	338000	309000
14	110	78000	207000	289000	294000	313000	195000	227000	336000	324000	335000	309000
15	110	78000	209000	289000	292000	306000	195000	229000	332000	322000	331000	309000
16	110	78000	209000	289000	290000	300000	194000	231000	329000	323000	328000	309000
17	115	79500	209000	289000	290000	294000	194000	232000	327000	323000	325000	309000
18	108	90000	209000	290000	290000	292000	194000	238000	323000	325000	322000	308000
19	108	96900	209000	296000	290000	304000	193000	267000	322000	325000	319000	308000
20	108	105000	212000	296000	289000	304000	195000	282000	322000	325000	318000	308000
21	108	110000	227000	293000	289000	298000	194000	290000	322000	325000	317000	309000
22	100	111000	252000	294000	289000	292000	194000	292000	321000	322000	316000	309000
23	100	112000	271000	297000	299000	286000	194000	292000	319000	320000	315000	308000
24	99	112000	278000	294000	303000	279000	194000	294000	319000	318000	314000	308000
25	98	111000	280000	291000	303000	274000	194000	300000	320000	317000	314000	307000
26	106	111000	281000	289000	314000	268000	193000	307000	320000	315000	313000	307000
27	116	111000	281000	290000	319000	262000	193000	309000	320000	315000	313000	306000
28	131	111000	282000	299000	318000	256000	193000	308000	321000	322000	312000	306000
29	4560	111000	283000	300000	314000	250000	193000	310000	334000	349000	311000	306000
30	36700	114000	283000	298000	---	246000	193000	310000	357000	353000	311000	305000
31	56200	---	283000	294000	---	238000	---	310000	---	361000	311000	---
MAX	56200	114000	283000	300000	319000	331000	233000	310000	357000	361000	383000	311000
MIN	77	65800	120000	284000	287000	238000	193000	191000	311000	315000	311000	305000
(†)	418.87	426.25	438.57	439.12	440.20	435.96	432.99	440.00	442.35	442.54	440.02	439.74
(Φ)	+56120	+57800	+169000	+11000	+20000	-76000	-45000	+117000	+47000	+4000	-50000	-6000

CAL YR 1991 MEAN --- MAX --- MIN -- (Φ) ---
WTR YR 1992 MEAN 244000 MAX 383000 MIN 77 (Φ) +304900

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

07342495 COOPER LAKE NEAR COOPER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and Biochemical analyses: September 1992.

331938095374701 - COOPER LAKE SITE AC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
SEP											
15...	1515	1.00	202	8.4	27.5	1.00	7.5	96	K1	K1	73
15...	1521	10.0	203	7.4	26.5	--	4.9	62	--	--	--
15...	1527	20.0	205	7.1	26.0	--	2.0	25	--	--	--
15...	1532	30.0	208	7.0	25.5	--	1.4	17	--	--	--
15...	1538	43.0	277	6.7	24.0	--	0	0	--	--	92

DATE	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
SEP											
15...	0	25	2.5	9.0	0.5	3.5	77	9.4	5.8	0.20	3.0
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	0	31	3.5	9.8	0.4	3.8	120	2.8	6.9	<0.10	9.0

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
SEP										
15...	105	<0.010	<0.050	0.020	0.68	0.70	0.090	0.030	18	14
15...	--	<0.010	<0.050	0.060	0.44	0.50	0.040	0.040	40	30
15...	--	--	--	--	--	--	--	--	--	--
15...	--	0.010	<0.050	0.140	0.46	0.60	0.090	0.060	250	270
15...	147	0.010	<0.050	2.00	0.80	2.8	1.00	0.580	6300	2200

332110095422201 - COOPER LAKE SITE BC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
SEP									
15...	1628	1.00	203	8.5	28.5	8.2	107	K6	20
15...	1632	5.00	204	8.3	28.0	7.7	99	--	--
15...	1636	13.0	211	6.9	27.0	1.4	18	--	--

331818095422501 - COOPER LAKE SITE CC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
SEP											
15...	1838	1.00	203	7.4	27.0	0.70	5.3	67	K4	K13	73
15...	1841	10.0	203	7.4	26.5	--	4.7	59	--	--	--
15...	1844	20.0	221	6.6	24.5	--	0	0	--	--	--
15...	1847	30.0	226	6.5	24.5	--	0	0	--	--	--
15...	1850	35.0	226	6.5	24.5	--	0	0	--	--	83

07342495 COOPER LAKE NEAR COOPER, TX--Continued

331818095422501 - COOPER LAKE SITE CC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
SEP											
15...	0	25	2.5	9.0	0.5	3.6	78	9.4	5.5	0.20	2.6
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	0	29	2.6	9.5	0.5	4.1	98	6.0	6.1	0.20	5.3

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
SEP										
15...	105	<0.010	<0.050	0.020	0.58	0.60	0.060	0.030	36	16
15...	--	<0.010	<0.050	0.020	0.48	0.50	0.040	0.020	80	30
15...	--	<0.010	<0.050	0.400	1.0	1.4	0.330	0.110	980	220
15...	--	--	--	--	--	--	--	--	--	--
15...	123	<0.010	<0.050	0.600	0.60	1.2	0.270	0.200	1200	230

332019095441901 - COOPER LAKE SITE DC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
SEP									
15...	1750	1.00	208	7.6	28.5	6.7	87	K13	48
15...	1753	5.00	212	7.0	27.0	2.9	37	--	--
15...	1757	11.0	235	6.8	25.0	0	0	--	--

331838095465601 - COOPER LAKE SITE EC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
SEP							
16...	1203	1.00	205	7.0	26.5	3.2	40
16...	1206	5.00	204	6.9	26.0	2.3	29
16...	1209	12.0	205	6.7	25.5	0	0

331718095480601 - COOPER LAKE SITE GC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
SEP							
16...	1311	1.00	212	6.9	26.0	2.6	32
16...	1314	5.00	223	6.9	--	0.6	--
16...	1317	11.0	238	7.0	24.5	0	0

Cooper Lake AC (315814098291201)

Phytoplankton Analyses October 1991 to September 1992

Date	9-15-92
Time	1518
TOTAL CELLS/mL	263,354
NUMBER OF SPECIES	18
DEPTH COLLECTED (ft.)	1.6

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	122
Melosira varians	547
Order Pennales	
Diatoma vulgare	2,674
Navicula sp.	2,005
Synedra ulna	2,674
CHLOROPHYTA	
Ankistrodesmus falcatus	14,037
Chlamydomonas sp.	4,010
Pediastrum duplex	3,342
Scenedesmus bijuga	668
Staurastrum sp.	668
CHRYSOPHYTA	
Mallamonas sp.	1,337
CYANOPHYTA	
Aphanocapsa delicatissima	153,734
Chroococcus limneticus	21,389
Merismopedia tenuissima	32,084
EUGLENOPHYTA	
Euglena sp.	3,342
Trachelomonas spp.	10,026
CRYPTOPHYTA	
Cryptomonas erosa	8,021
Cryptomonas ovata	2,674

07342500 SOUTH SULPHUR RIVER NEAR COOPER, TX

LOCATION.--Lat 33°21'23", long 95°35'41", Delta County, Hydrologic Unit 11140301, on levee on left bank 110 ft downstream from bridge on State Highways 19 and 154, 1.0 mi downstream from Big Creek, 1.0 mi upstream from Brushy Creek, 4.5 mi downstream from Doctors Creek, and 5.6 mi southeast of Cooper.

DRAINAGE AREA.--527 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1942 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 371.91 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 15, 1985, at site 360 ft to right and 90 ft upstream at same datum. Oct. 1, 1970, at datum 3.00 ft higher. May 9, 1942, to Nov. 8, 1949, nonrecording gage, and Nov. 9, 1949, to May 13, 1955, water-stage recorder at site 1,060 ft to right of present gage. Gage-height telemeter at station.

REMARKS.--No estimated daily discharge. Records good. Construction of Cooper Dam, 13.4 miles upstream from station, was begun during the 1988 water year. Deliberate impoundment began Sept. 28, 1991.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--49 years (water years 1943-91), 416 ft³/s (10.72 in/yr), 301,400 acre-ft/yr.

EXTREMES FOR PERIOR PRIOR TO REGULATION (WATER YEARS, 1943-1991),--Maximum discharge 47,200 ft³/s May 13, 1982 (gage height, 27.21 ft, from floodmark in gage well); no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	161	885	235	1380	1740	3240	.01	14	330	173	.76
2	.00	13	827	108	615	1740	3220	.01	15	1240	52	.50
3	.00	2.1	267	42	409	1940	3150	.01	9.8	1460	238	2.6
4	.00	.35	43	28	18	3050	3120	.01	6.8	1230	1180	8.0
5	.01	.11	12	21	19	441	3060	.01	4.1	53	1960	8.0
6	.01	.05	4.2	17	13	524	3060	.00	9.5	403	3120	7.7
7	.00	8.4	1.6	15	11	2870	2500	.00	10	1420	3790	7.6
8	.35	.33	1.0	14	10	3580	1010	.00	612	1440	3880	7.6
9	.09	.10	1080	13	8.8	4240	676	.00	376	1440	3860	6.5
10	.05	.05	263	12	8.3	545	97	.00	479	1330	3590	3.4
11	.06	.04	122	10	7.9	485	86	2.8	1700	1140	1960	2.8
12	.06	.03	452	10	701	2890	84	534	1570	1130	1710	5.3
13	.05	.02	129	12	953	3650	84	85	1500	1070	1630	5.2
14	.04	.02	26	26	1060	3710	113	20	1480	809	1550	5.1
15	.03	.02	7.3	16	1030	3660	186	7.5	1470	811	1430	5.2
16	.03	.02	2.6	14	669	3620	155	5.7	1460	811	1430	5.3
17	.04	342	1.1	12	21	3640	81	1.8	1450	1460	1420	5.2
18	.02	113	.54	598	14	3280	78	73	1160	744	1210	5.1
19	.03	458	.63	1830	10	388	80	398	463	86	795	5.3
20	.03	285	365	1830	7.4	1490	81	118	451	109	668	5.2
21	.03	39	1170	1530	5.9	3200	78	33	452	704	367	6.3
22	.03	5.8	520	1510	33	3610	48	12	453	1130	241	5.7
23	.02	.95	555	1850	1320	3630	.28	79	386	1120	240	5.1
24	.02	.24	110	1760	988	3610	.07	256	254	911	240	4.7
25	.02	.05	46	947	978	3630	.04	84	253	453	241	3.8
26	.07	.02	29	555	205	3570	.02	58	255	371	192	3.7
27	1.5	.01	24	413	398	3520	.01	13	254	218	111	3.8
28	224	.01	34	942	1230	3470	.01	13	260	992	65	3.9
29	1950	.83	27	1830	1740	3430	.02	112	400	635	3.3	3.9
30	319	303	20	2000	---	3330	.02	23	157	164	1.5	4.1
31	248	---	16	2320	---	3310	---	12	---	809	.98	---
TOTAL	2743.59	1733.55	7040.97	20520	13863.3	85793	24287.47	1940.85	17364.2	26023	37348.78	147.36
MEAN	88.5	57.8	227	662	478	2768	810	62.6	579	839	1205	4.91
MAX	1950	458	1170	2320	1740	4240	3240	534	1700	1460	3880	8.0
MIN	.00	.01	.54	10	5.9	388	.01	.00	4.1	53	.98	.50
AC-FT	5440	3440	13970	40700	27500	170200	48170	3850	34440	51620	74080	292
CFSM	.17	.11	.43	1.26	.91	5.25	1.54	.12	1.10	1.59	2.29	.01
IN.	.19	.12	.50	1.45	.98	6.06	1.71	.14	1.23	1.84	2.64	.01

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR	
ANNUAL TOTAL	126516.22		238806.07	
ANNUAL MEAN	347		652	
HIGHEST DAILY MEAN	3090	Apr 14	4240	Mar 9
LOWEST DAILY MEAN	.00	Sep 23	.00	Oct 1
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 23	.00	Oct 1
INSTANTANEOUS PEAK FLOW			5500	Mar 9
INSTANTANEOUS PEAK STAGE			19.12	Mar 9
INSTANTANEOUS LOW FLOW			.00	*
ANNUAL RUNOFF (AC-FT)	250900		473700	
ANNUAL RUNOFF (CFSM)	.66		1.24	
ANNUAL RUNOFF (INCHES)	8.93		16.86	
10 PERCENT EXCEEDS	1170		1970	
50 PERCENT EXCEEDS	40		85	
90 PERCENT EXCEEDS	.02		.03	

* No flow at times in October and May.

07342500 SOUTH SULPHUR RIVER NEAR COOPER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1966, October 1967 to current year. Chemical and biochemical analyses: December 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1958 to September 1966, October 1967 to September 1989.
WATER TEMPERATURE: October 1958 to September 1966, October 1967 to September 1989.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,710 microsiemens Aug. 14, 1973; minimum daily, 82 microsiemens July 2, 1976, July 12, 1988.
WATER TEMPERATURE: Maximum daily, 36.0°C Aug. 6, 1960, Aug. 10, 1962; minimum daily, 0.0°C on many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS TOTAL (MG/L AS CACO3)
NOV 20...	1931	140	210	6.9	18.0	130	80	10.2	107	1.7	76
JAN 07...	1752	15	342	7.6	13.0	70	37	9.0	86	0.8	100
APR 21...	1820	78	196	7.7	16.0	80	33	9.6	98	0.7	74
JUN 02...	1720	15	444	7.9	21.0	40	31	8.2	94	1.3	130
JUL 21...	1838	980	198	7.6	29.0	30	26	8.1	106	1.4	76
SEP 16...	1340	15	217	7.4	25.5	27	17	--	--	3.3	82

DATE	HARDNESS NONCARB DISSOLVED FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
NOV 20...	0	27	2.0	15	0.8	3.5	77	18	9.3	0.30	9.2
JAN 07...	15	36	3.0	33	1	4.0	88	33	44	0.20	7.9
APR 21...	1	25	2.7	11	0.6	3.6	73	14	8.6	0.10	3.0
JUN 02...	1	48	3.4	38	1	2.5	130	34	41	0.20	8.5
JUL 21...	0	26	2.5	9.7	0.5	3.3	79	11	6.4	0.20	2.9
SEP 16...	0	28	2.9	9.8	0.5	3.7	93	7.2	6.0	0.20	5.3

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L)	RESIDUE VOLATILE, SUSPENDED (MG/L)	RESIDUE FIXED NON FILTERABLE (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)
NOV 20...	130	190	60	130	0.230	0.050	0.280	0.130	0.47	0.60	0.140
JAN 07...	214	50	22	28	0.160	0.040	0.200	0.040	0.46	0.50	0.150
APR 21...	112	55	26	29	0.090	0.040	0.130	0.070	0.43	0.50	0.170
JUN 02...	255	79	8	71	0.170	0.060	0.230	0.070	0.53	0.60	0.050
JUL 21...	110	150	16	134	--	0.040	<0.050	0.130	0.57	0.70	0.180
SEP 16...	120	14	13	1	0.110	0.020	0.130	0.770	0.53	1.3	0.410

DATE	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV 20...	0.120	11	--	--	--	--	--	--	--	--	--
JAN 07...	0.120	9.6	2	47	<0.5	<1.0	<5	<3	<10	58	<10
APR 21...	0.180	9.3	--	--	--	--	--	--	--	--	--
JUN 02...	0.080	9.0	--	--	--	--	--	--	--	--	--
JUL 21...	0.130	7.7	4	34	0.5	<1.0	<5	<3	<10	69	<10
SEP 16...	0.260	8.3	9	28	<0.5	<1.0	<5	<3	<10	29	<10

07342500 SOUTH SULPHUR RIVER NEAR COOPER, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV										
20...	--	--	--	--	--	--	--	--	--	--
JAN										
07...	6	28	<0.1	<10	<10	<1	<1.0	350	<6	9
APR										
21...	--	--	--	--	--	--	--	--	--	--
JUN										
02...	--	--	--	--	--	--	--	--	--	--
JUL										
21...	<4	40	<0.1	<10	<10	<1	<1.0	220	<6	6
SEP										
16...	<4	890	<0.1	<10	<10	<1	<1.0	220	<6	9

07343000 NORTH SULPHUR RIVER NEAR COOPER, TX

LOCATION.--Lat 33°28'29", long 95°35'15", Lamar County, Hydrologic Unit 11140301, on left bank at downstream side of highway embankment near left end of downstream bridge on State Highways 19 and 24, 2.3 mi upstream from Auds Creek, 5.5 mi upstream from Hickory Creek, 8.7 mi northeast of Cooper, and 15.6 mi upstream from mouth.

DRAINAGE AREA.--276 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1949 to current year.
Water-quality records.--Chemical analyses: July 1950 to September 1958, January 1967 to September 1988.

GAGE.--Water-stage recorder. Datum of gage is 372.42 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Nov. 8, 1949, nonrecording gage, Nov. 8, 1949, to May 21, 1960, water-stage recorder at site 50 ft upstream at datum 9.00 ft higher, and from May 22, 1960, to Sept. 30, 1970, at datum 5.00 ft higher.

REMARKS.--Records fair, including those of estimated daily discharges. In 1928-29, the channel was rectified for a distance of 28 mi upstream and 18 mi downstream from this station. The crest-stage gage was found damaged and was removed on Mar. 26, 1992. Gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 2, 1944, reached a stage of 35.6 ft, present datum, and flood in 1932 reached about same stage, from information by U.S. Army Corps of Engineers and local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20,000 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 29	0010	58,800	a/32.50	Dec. 20	2100	24,300	21.13
Dec. 9	0330	24,000	20.97	June 8	0815	39,900	27.97

a/ From Highwater mark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1190	3470	935	92	65	32	20	302	210	154	.73
2	.00	180	e3650	494	80	57	29	18	256	104	58	1.1
3	.00	85	700	198	70	58	26	17	373	66	868	8.6
4	.13	62	195	127	64	3790	e27	16	98	203	71	7.7
5	.26	53	102	102	59	1850	e427	14	61	67	47	7.0
6	.32	47	76	90	52	326	e150	13	292	45	350	5.0
7	.87	43	66	83	48	137	69	12	152	36	73	4.5
8	.29	40	310	87	44	93	45	11	13000	29	23	2.5
9	.02	37	e9460	79	41	5280	36	11	1220	18	14	1.9
10	.00	e36	922	63	40	654	32	8.0	492	11	9.9	2.9
11	.00	e33	1290	56	40	169	28	460	3700	9.1	7.4	5.8
12	.00	e27	4070	65	541	107	26	e4700	592	7.1	6.8	4.5
13	.00	e24	1030	170	219	82	40	e506	198	5.0	9.1	3.2
14	.00	e22	e248	429	97	68	34	e192	117	4.2	5.4	2.4
15	.00	e18	e154	134	73	61	28	e110	81	247	6.2	2.3
16	.00	e17	e124	77	56	54	24	e74	62	89	5.4	2.2
17	.00	e1770	110	68	50	137	21	e66	51	3160	4.2	2.1
18	.32	541	94	5060	43	e5650	20	e2190	39	531	3.5	1.6
19	1.3	1770	244	2140	37	e1750	21	1700	32	262	3.7	1.3
20	1.1	568	6570	915	34	e1670	141	1850	29	70	3.4	1.3
21	.68	148	6150	466	33	e355	51	514	74	71	3.2	8.9
22	.32	84	4590	3060	150	e191	35	284	43	33	2.8	44
23	.09	59	1830	481	2030	e134	27	1930	48	21	2.7	18
24	.07	46	427	172	300	e106	22	1560	38	15	2.0	9.4
25	.17	41	209	111	2460	117	19	579	672	11	1.7	6.5
26	22	40	158	88	793	105	17	522	437	8.5	1.4	4.7
27	967	38	235	1710	201	61	16	152	98	9.1	.98	3.7
28	10900	37	381	998	109	50	15	189	1180	71	.78	2.7
29	13300	36	222	352	80	48	21	640	2940	196	.73	1.8
30	1360	40	146	179	---	42	23	189	1080	57	.69	1.8
31	3420	---	108	122	---	35	---	100	---	1220	.63	---
TOTAL	29974.94	7132	47341	19111	7936	23302	1502	18647.0	27757	6886.0	1740.61	170.13
MEAN	967	238	1527	616	274	752	50.1	602	925	222	56.1	5.67
MAX	13300	1770	9460	5060	2460	5650	427	4700	13000	3160	868	44
MIN	.00	17	66	56	33	35	15	8.0	29	4.2	.63	.73
AC-FT	59460	14150	93900	37910	15740	46220	2980	36990	55060	13660	3450	337
CFSM	3.50	.86	5.53	2.23	.99	2.72	.18	2.18	3.35	.80	.20	.02
IN.	4.04	.96	6.38	2.58	1.07	3.14	.20	2.51	3.74	.93	.23	.02

e Estimated

07343000 NORTH SULPHUR RIVER NEAR COOPER, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1992, BY WATER YEAR (WY)

MEAN	228	229	258	204	350	326	406	477	332	101	19.5	124
MAX	1784	1406	1527	1172	1483	1223	3017	2461	1792	872	160	584
(WY)	1972	1958	1992	1950	1950	1968	1966	1982	1989	1976	1971	1973
MIN	.000	.000	.000	.16	.81	4.43	2.97	2.43	.28	.000	.000	.000
(WY)	1953	1956	1956	1964	1976	1954	1972	1972	1988	1954	1952	1952

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1950 - 1992	
ANNUAL TOTAL	153923.77		191499.68			
ANNUAL MEAN	422		523		254	
HIGHEST ANNUAL MEAN					541	1957
LOWEST ANNUAL MEAN					49.4	1978
HIGHEST DAILY MEAN	13300	Oct 29	13300	Oct 29	40900	Oct 19 1971
LOWEST DAILY MEAN	.00	Sep 28	.00	Oct 1	.00	Oct 1 1949
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 10	.00	Oct 10	.00	Aug 2 1951
INSTANTANEOUS PEAK FLOW			58800	Oct 29	90600	Oct 19 1971
INSTANTANEOUS PEAK STAGE			32.50	Oct 29	36.16	Oct 19 1971
INSTANTANEOUS LOW FLOW					.00	*
ANNUAL RUNOFF (AC-FT)	305300		379800		183800	
ANNUAL RUNOFF (CFSM)	1.53		1.90		.92	
ANNUAL RUNOFF (INCHES)	20.75		25.81		12.49	
10 PERCENT EXCEEDS	766		1310		273	
50 PERCENT EXCEEDS	40		61		10	
90 PERCENT EXCEEDS	.20		1.7		.00	

* No flow at times most years.

07343000 NORTH SULPHUR RIVER NEAR COOPER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: July 1950 to September 1958, January 1967 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1968 to September 1990.
WATER TEMPERATURES: October 1968 to September 1990.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,000 microsiemens July 2, 3, 1988; minimum daily, 191 microsiemens Oct. 12, Dec. 10, 1971.
WATER TEMPERATURES: Maximum daily, 39.0°C June 1, 1977; minimum daily, 0.0°C on many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV 19...	1812	3790	235	7.9	16.0	9.6	99	1.4	96	7	35	2.0
JAN 07...	1215	66	697	8.0	14.0	12.0	119	0.3	280	76	100	7.4
APR 21...	1145	50	620	8.1	15.0	7.2	72	1.0	220	48	76	7.1
MAY 19...	1150	1660	306	7.9	22.0	8.2	94	1.7	130	--	45	3.3
JUN 02...	1210	226	526	8.2	22.0	8.4	98	0.9	210	36	73	5.7
JUL 21...	1257	84	458	8.4	30.0	10.2	137	2.7	170	38	60	4.9

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV 19...	12	0.5	2.5	89	22	6.0	0.30	8.9	142	0.320	0.060	0.380
JAN 07...	47	1	2.4	210	120	25	0.30	8.1	435	0.610	0.020	0.630
APR 21...	44	1	2.9	170	120	31	0.40	6.2	390	0.400	0.040	0.440
MAY 19...	15	0.6	2.9	e110	37	6.6	0.20	8.8	--	2.40	0.100	2.50
JUN 02...	33	1	2.4	170	79	19	0.30	7.8	324	0.770	0.020	0.790
JUL 21...	31	1	3.1	130	74	20	0.40	9.1	282	0.130	0.040	0.170

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
NOV 19...	0.050	0.55	0.60	0.280	0.130	--	--	--	--	--	--	--
JAN 07...	0.050	0.15	0.20	0.070	0.030	<1	51	<0.5	<1.0	<5	<3	<10
APR 21...	0.030	0.27	0.30	0.020	0.040	--	--	--	--	--	--	--
MAY 19...	0.080	0.42	0.50	0.110	0.120	2	27	<0.5	<1.0	<5	<3	<10
JUN 02...	0.020	0.38	0.40	0.040	0.020	1	46	<0.5	<1.0	<5	<3	<10
JUL 21...	0.040	0.46	0.50	0.100	0.070	--	--	--	--	--	--	--

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 19...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 07...	3	<10	17	7	<0.1	<10	10	1	<1.0	1200	<6	4
APR 21...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 19...	70	<10	8	6	--	<10	<10	<1	<1.0	540	<6	6
JUN 02...	13	<10	8	2	<0.1	<10	<10	<1	<1.0	1000	<6	4
JUL 21...	--	--	--	--	--	--	--	--	--	--	--	--

e Estimated

07343200 SULPHUR RIVER NEAR TALCO, TX

LOCATION.--Lat 33°23'10", long 95°07'56", Franklin County, Hydrologic Unit 11140302, at downstream side of highway embankment near right end of bridge on U.S. Highway 271, 2.2 mi northwest of Talco, 3.2 mi downstream from Mustang Creek, and 162 mi upstream from mouth.

DRAINAGE AREA.--1,365 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR TX-76-1(P).

GAGE.--Water-stage recorder. Datum of gage is 290.82 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. The River Crest Stream Electric Generating Plant diverts water (amount unknown) upstream from station. Deliberate impoundment of water in Cooper Lake (station 07342500) began on Sept. 28, 1991. Flow may be slightly affected at times by discharge from the flood-detention pools of 14 floodwater-retarding structures with a combined detention capacity of 8,210 acre-ft. These structures control runoff from 23.4 mi² in the Auds and Depot Creek drainage basin. Gage-height telemeter at station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--35 years (water years 1956-1991) prior to regulation by Cooper Lake, 1,408 ft³/s (14.01 in/yr), 1,020,000 acre-ft/yr.

EXTREMES FOR PERIOR PRIOR TO REGULATION (WATER YEARS, 1956-91).--Maximum discharge, 77,000 ft³/s Dec. 11, 1971 (gage height, 29.40 ft, from floodmark); no flow at times in 1957, 1964-65, 1970, and 1979-80.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in 1908 and 1914 each reached a stage of 27.5 ft, and flood in 1945 reached a stage of 26.5 ft, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	10700	4730	269	2190	1680	2610	126	248	2380	10600	49
2	14	6910	11200	1850	1640	1710	2580	122	455	1140	4600	89
3	13	2380	13400	1660	912	1700	2560	121	474	2020	2270	259
4	10	1000	7280	870	638	2870	2550	117	410	6830	1920	256
5	8.9	512	2590	491	297	9770	2510	105	201	5110	1720	140
6	9.5	241	1030	308	168	5200	2570	98	111	2170	2070	106
7	9.9	131	528	221	142	1690	2590	97	413	1040	2740	85
8	10	82	315	723	123	2240	2370	94	1400	1440	3020	76
9	10	69	6530	578	110	7200	1330	89	12500	1600	3050	74
10	10	63	23500	306	99	14900	872	80	5920	1590	3060	68
11	10	58	11000	186	93	7880	420	84	2690	1530	2990	63
12	9.7	54	8260	187	1090	2640	248	3830	5260	1300	2430	56
13	9.4	46	9280	264	5270	2690	222	7500	2550	1230	2050	51
14	9.4	39	3940	565	3480	3160	218	1750	1770	1190	2010	48
15	9.7	36	1630	715	2010	3040	223	534	1660	1040	1800	47
16	10	35	836	476	1410	2920	258	231	1660	1360	1640	45
17	10	1310	466	346	1020	2900	273	140	1630	2770	1580	42
18	10	7880	291	774	430	8260	257	767	1610	10700	1570	43
19	10	4120	215	7240	203	13200	230	8800	1470	7670	1440	44
20	10	10900	892	7050	149	4700	222	4850	806	3280	986	45
21	9.7	6620	12200	4330	122	2170	456	1830	556	1770	809	45
22	9.7	2150	15700	4640	128	2680	521	711	532	1500	550	750
23	9.7	883	13300	7410	3410	2940	352	360	522	1620	351	1840
24	9.6	437	8620	3980	9740	2900	237	1820	485	1540	281	1070
25	9.6	193	3070	2360	4760	2950	186	1910	377	1280	270	477
26	10	124	1310	1410	7540	2960	154	926	667	766	265	184
27	34	93	731	1100	3430	2870	132	749	749	570	249	76
28	816	78	543	2570	1310	2750	117	357	510	2010	204	39
29	13900	71	576	2390	1350	2720	117	363	2090	9340	142	40
30	31200	517	478	2250	---	2670	120	784	4230	11500	75	45
31	13400	---	338	2070	---	2630	---	487	---	8810	43	---
TOTAL	59515.8	57732	164779	59589	53264	130590	27505	39832	53956	98096	56785	6252
MEAN	1920	1924	5315	1922	1837	4213	917	1285	1799	3164	1832	208
MAX	31200	10900	23500	7410	9740	14900	2610	8800	12500	11500	10600	1840
MIN	8.9	35	215	186	93	1680	117	80	111	570	43	39
AC-FT	118000	114500	326800	118200	105600	259000	54560	79010	107000	194600	112600	12400
CFSM	1.41	1.41	3.89	1.41	1.35	3.09	.67	.94	1.32	2.32	1.34	.15
IN.	1.62	1.57	4.49	1.62	1.45	3.56	.75	1.09	1.47	2.67	1.55	.17

07343200 SULPHUR RIVER NEAR TALCO, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1992, BY WATER YEAR (WY)

MEAN	932	1534	1839	1115	1864	2082	2135	2812	1685	597	131	488
MAX	7022	7238	11040	4028	8634	7253	10390	12330	7060	3845	1832	3172
(WY)	1982	1975	1972	1979	1969	1973	1957	1982	1981	1976	1992	1973
MIN	.000	.63	1.29	.45	3.76	35.4	11.3	21.1	2.78	.18	.039	.035
(WY)	1957	1964	1964	1964	1976	1966	1971	1988	1988	1978	1978	1985

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1957 - 1992	
ANNUAL TOTAL	594496.36		807895.8			
ANNUAL MEAN	1629		2207		1431	
HIGHEST ANNUAL MEAN					2717	1969
LOWEST ANNUAL MEAN					318	1978
HIGHEST DAILY MEAN	31200	Oct 30	31200	Oct 30	64000	Dec 11 1971
LOWEST DAILY MEAN	.57	Aug 12	8.9	Oct 5	.00	Oct 1 1956
ANNUAL SEVEN-DAY MINIMUM	1.2	Aug 7	9.7	Oct 9	.00	Oct 1 1956
INSTANTANEOUS PEAK FLOW			35800	Oct 30	77000	Dec 11 1971
INSTANTANEOUS PEAK STAGE			25.53	Oct 30	29.40	Dec 11 1971
INSTANTANEOUS LOW FLOW					.00	*
ANNUAL RUNOFF (AC-FT)	1179000		1602000		1037000	
ANNUAL RUNOFF (CFSM)	1.19		1.62		1.05	
ANNUAL RUNOFF (INCHES)	16.20		22.02		14.24	
10 PERCENT EXCEEDS	5120		7090		3900	
50 PERCENT EXCEEDS	310		812		72	
90 PERCENT EXCEEDS	9.5		45		1.8	

* No flow at times in 1957, 1964-65, 1970, and 1979-80.

07343200 SULPHUR RIVER NEAR TALCO, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: January 1965 to current year. Chemical and biochemical analyses: January 1968 to current year. Pesticide analyses: January 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1966 to September 1991.
WATER TEMPERATURE: October 1966 to September 1991.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,800 microsiemens Feb. 17, 1976; minimum daily, 65 microsiemens Jan. 15, 1989.
WATER TEMPERATURE (1966-89): Maximum daily, 39.0°C Aug. 13, 1987; minimum daily, 0.0°C on many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
NOV												
27...	1241	92	375	7.7	10.5	--	--	9.5	85	1.1	150	22
JAN												
14...	1420	584	386	7.7	8.0	65	78	9.8	83	1.7	150	41
APR												
23...	1315	348	467	7.8	20.5	--	--	8.0	90	2.5	150	36
MAY												
20...	0940	4570	292	7.6	22.0	--	--	7.6	87	1.9	120	26
JUN												
03...	1650	450	431	8.1	22.0	50	77	7.4	86	1.1	160	29
JUL												
22...	1505	1480	234	7.6	28.0	--	--	7.6	98	1.5	89	3

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)
NOV												
27...	55	3.8	21	0.7	4.3	130	48	14	0.20	9.3	234	--
JAN												
14...	53	3.9	22	0.8	3.6	110	54	17	0.20	6.2	225	172
APR												
23...	53	5.2	32	1	3.9	120	77	26	0.20	5.3	273	--
MAY												
20...	42	2.9	15	0.6	2.7	91	38	8.0	0.30	7.4	171	--
JUN												
03...	58	4.5	28	1	3.0	130	60	20	0.30	7.6	263	165
JUL												
22...	32	2.3	10	0.5	3.9	86	18	6.8	0.20	8.6	133	--

DATE	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)
NOV												
27...	--	--	0.190	0.030	0.220	0.040	0.56	0.60	0.190	0.110	--	--
JAN												
14...	12	160	0.130	0.050	0.180	0.040	0.76	0.80	0.100	0.060	2	56
APR												
23...	--	--	0.180	0.050	0.230	0.090	0.51	0.60	0.070	0.090	--	--
MAY												
20...	--	--	2.20	0.100	2.30	0.060	0.34	0.40	0.100	0.070	--	--
JUN												
03...	25	140	0.780	0.030	0.810	0.030	0.47	0.50	0.060	0.030	2	61
JUL												
22...	--	--	0.110	0.050	0.160	0.080	0.62	0.70	0.200	0.180	--	--

DATE	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)
NOV												
27...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
14...	<0.5	<1.0	<5	<3	<10	41	<10	7	54	<0.1	<10	<10
APR												
23...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
20...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
03...	<0.5	<1.0	<5	<3	<10	37	<10	7	11	<0.1	<10	<10
JUL												
22...	--	--	--	--	--	--	--	--	--	--	--	--

07343200 SULPHUR RIVER NEAR TALCO, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
NOV 27...	--	--	--	--	--	--	--	--	--	--	--
JAN 14...	<1	<1.0	520	<6	15	--	--	--	--	--	--
APR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 20...	--	--	--	--	--	--	--	--	--	--	--
JUN 03...	<1	2.0	660	<6	9	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	<1	<1.0	<0.1	<1.0	1.3	7.4

DATE	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDO-SULFAN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PER-THANE IN BOT-TOM MA-TERIAL (UG/KG)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
NOV 27...	--	--	--	--	--	--	--	--	--	--	--
JAN 14...	--	--	--	--	--	--	--	--	--	--	--
APR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 20...	--	--	--	--	--	--	--	--	--	--	--
JUN 03...	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	1.5	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10

07343500 WHITE OAK CREEK NEAR TALCO, TX

LOCATION.--Lat 33°19'20", long 95°05'33", Titus County, Hydrologic Unit 11140300, near center of main channel at downstream side of bridge on U.S. Highway 271, 0.8 mi downstream from Lewis Creek, 2.4 mi upstream from Ripley Creek, 2.7 mi south of Talco, and 38.4 mi upstream from mouth.

DRAINAGE AREA.--494 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1949 to current year.

REVISED RECORDS.--WSP 1711: Elevation of historical maximum.

GAGE.--Water-stage recorder. Datum of gage is 286.45 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair including those for estimated daily discharges. There are several small diversions upstream from station for municipal supply. The cities of Sulphur Springs and Mount Vernon discharged sewage effluent into tributaries above this station. Gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1870, 22.9 ft Mar. 31, 1945, from floodmarks and from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 23	1130	9,470	17.93	July 18	2230	19,100	18.78
Mar. 10	2130	15,400	18.49	July 30	1200	14,700	18.44
June 30	2200	11,100	18.12				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	5580	883	360	1380	1280	103	48	95	10200	7660	16
2	9.5	4420	1830	320	823	594	87	46	139	8600	5150	16
3	7.5	3350	2600	420	411	317	76	43	200	5930	3400	47
4	6.1	2160	2990	492	282	485	70	40	150	5500	2630	43
5	5.4	1330	2840	e462	236	1110	64	35	116	5520	2540	70
6	4.9	497	2320	e345	211	1590	65	31	87	3500	2280	88
7	4.4	185	1870	e248	194	1560	76	27	74	1570	1600	56
8	4.5	119	1270	e388	178	1400	121	22	64	394	688	33
9	4.6	89	994	e891	157	4070	160	19	63	142	259	21
10	4.3	71	1660	1190	137	13300	121	17	123	105	173	14
11	4.0	60	2670	1010	122	11400	86	17	368	87	142	12
12	3.4	53	3980	678	618	5900	70	568	548	73	121	11
13	3.0	48	3860	415	2000	3730	61	668	575	62	106	9.9
14	3.1	44	3550	476	2970	2310	53	795	571	55	196	9.1
15	3.1	42	2980	576	2810	1170	56	899	680	56	206	9.2
16	2.8	42	2360	525	2080	444	95	1170	441	51	119	9.2
17	2.6	131	1940	353	1120	283	174	1250	143	652	84	8.2
18	2.7	593	1220	451	424	904	108	554	82	8010	66	7.3
19	2.8	1040	486	1100	244	1190	70	700	65	15500	56	7.1
20	3.0	3220	334	1520	181	1320	559	1030	56	8820	50	7.4
21	3.2	5520	1640	1530	146	946	918	685	49	5120	44	10
22	3.2	4270	4510	1720	129	483	1280	333	43	3060	40	16
23	3.1	3440	8780	1770	542	239	1160	260	48	1720	39	23
24	2.9	2470	6950	1560	1130	170	691	218	52	546	37	31
25	3.0	1730	4980	1260	1690	207	219	191	42	174	32	22
26	3.8	853	3700	1040	2440	453	107	168	38	114	28	19
27	5.4	333	2540	670	3150	473	76	187	41	93	24	13
28	8.5	212	1710	770	2440	423	60	201	72	670	21	9.1
29	1180	172	914	1150	1890	263	54	162	2460	5120	19	7.3
30	3760	156	561	1340	---	160	51	130	7900	13500	18	6.2
31	5500	---	457	1500	---	123	---	105	---	11100	16	---
TOTAL	10568.8	42230	79379	26530	30135	58297	6891	10619	15385	116044	27844	651.0
MEAN	341	1408	2561	856	1039	1881	230	343	513	3743	898	21.7
MAX	5500	5580	8780	1770	3150	13300	1280	1250	7900	15500	7660	88
MIN	2.6	42	334	248	122	123	51	17	38	51	16	6.2
AC-FT	20960	83760	157400	52620	59770	115600	13670	21060	30520	230200	55230	1290
CFSM	.69	2.85	5.18	1.73	2.10	3.81	.46	.69	1.04	7.58	1.82	.04
IN.	.80	3.18	5.98	2.00	2.27	4.39	.52	.80	1.16	8.74	2.10	.05

e Estimated

07343500 WHITE OAK CREEK NEAR TALCO, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1992, BY WATER YEAR (WY)

MEAN	200	520	704	478	763	711	859	866	384	241	53.9	114
MAX	1744	2984	3986	3222	3593	3491	3784	3166	2620	3743	898	1064
(WY)	1982	1975	1972	1980	1950	1990	1957	1990	1981	1992	1992	1950
MIN	.000	.34	1.12	1.82	7.58	11.8	4.97	7.35	.83	.35	.000	.000
(WY)	1979	1976	1966	1964	1976	1956	1956	1988	1988	1956	1978	1969

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1950 - 1992	
ANNUAL TOTAL	284863.3		424573.8			
ANNUAL MEAN	780		1160		482	
HIGHEST ANNUAL MEAN					1160	1992
LOWEST ANNUAL MEAN					68.6	1956
HIGHEST DAILY MEAN	8780	Dec 23	15500	Jul 19	38000	Dec 11 1971
LOWEST DAILY MEAN	2.6	Oct 17	2.6	Oct 17	.00	Aug 8 1954
ANNUAL SEVEN-DAY MINIMUM	2.9	Oct 13	2.9	Oct 13	.00	Aug 8 1954
INSTANTANEOUS PEAK FLOW			19100	Jul 18	48000	Dec 11 1971
INSTANTANEOUS PEAK STAGE			18.78	Jul 18	21.20	Dec 11 1971
INSTANTANEOUS LOW FLOW			2.5	Oct 17	.00	*
ANNUAL RUNOFF (AC-FT)	565000		842100		349100	
ANNUAL RUNOFF (CFSM)	1.58		2.35		.98	
ANNUAL RUNOFF (INCHES)	21.45		31.97		13.25	
10 PERCENT EXCEEDS	2580		3410		1260	
50 PERCENT EXCEEDS	147		218		35	
90 PERCENT EXCEEDS	5.6		9.4		.94	

* No flow at times in 1954, 1956, 1964-65, 1969-73, 1976, 1978-79, and 1988.

07343500 WHITE OAK CREEK NEAR TALCO, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1967 to June 1989. Chemical and biochemical analyses: November 1982 to September 1985, and October 1991 to September 1992.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to September 1989.
WATER TEMPERATURES: October 1967 to September 1989.

INSTRUMENTATION.--From October 1967 to September 1989 specific conductance and water temperature were recorded continuously at this station.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,220 micromhos June 15, 1972; minimum daily 33 micromhos May 16, 1969.
WATER TEMPERATURE: Maximum daily, 37.0°C July 18, Aug. 3, 15, 1975, and Aug. 7, 1986; minimum daily, 0.0°C on several days during January 1968, 1970, 1978, and 1984.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
JAN 10...	1215	1210	155	7.3	10.0	130	47	9.1	80	1.8	41
FEB 27...	1745	3030	105	7.8	15.0	200	33	10.0	99	2.6	31
APR 24...	1210	780	157	6.8	21.0	50	45	6.6	75	1.9	44
MAY 20...	1153	1060	123	6.7	23.0	130	51	6.8	79	2.4	33
JUN 05...	1240	114	242	7.0	23.0	120	69	7.2	85	1.0	64
JUL 24...	1340	439	131	6.4	27.5	--	--	5.1	65	1.4	38

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
JAN 10...	19	10	3.8	12	0.8	5.5	22	25	15	0.20	7.0
FEB 27...	6	7.7	2.9	7.6	0.6	4.2	25	13	8.3	<0.10	5.7
APR 24...	14	11	3.9	11	0.7	5.4	30	22	13	0.10	6.4
MAY 20...	6	8.5	2.9	8.9	0.7	5.2	27	18	10	0.10	5.8
JUN 05...	21	15	6.3	22	1	6.4	43	41	26	0.20	9.0
JUL 24...	8	9.6	3.4	9.6	0.7	4.9	30	18	13	<0.10	7.3

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
JAN 10...	92	72	19	53	0.340	0.050	0.390	0.080	1.0	1.1	0.290
FEB 27...	64	2	<1	--	0.250	0.040	0.290	0.060	0.84	0.90	0.240
APR 24...	92	73	29	44	0.340	0.050	0.390	0.110	0.99	1.1	0.280
MAY 20...	76	97	15	82	0.250	0.040	0.290	0.090	0.81	0.90	0.200
JUN 05...	153	98	15	83	0.950	0.050	1.00	0.040	1.1	1.1	0.300
JUL 24...	84	--	--	--	0.190	0.050	0.240	0.110	0.99	1.1	0.260

07343500 WHITE OAK CREEK NEAR TALCO, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
JAN 10...	0.200	14	1	37	<0.5	<1.0	<5	<3	<10	140	<10
FEB 27...	0.180	16	--	--	--	--	--	--	--	--	--
APR 24...	0.220	16	<1	46	<0.5	<1.0	<5	<3	<10	510	<10
MAY 20...	0.180	1.4	<1	32	<0.5	<1.0	<5	<3	<10	340	<10
JUN 05...	0.110	13	1	50	<0.5	2.0	<5	<3	<10	560	<10
JUL 24...	0.210	--	--	--	--	--	--	--	--	--	--

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
JAN 10...	<4	26	<0.1	<10	<10	<1	<1.0	85	<6	9
FEB 27...	--	--	--	--	--	--	--	--	--	--
APR 24...	4	67	<0.1	<10	<10	<1	<1.0	87	<6	18
MAY 20...	<4	24	--	<10	<10	<1	<1.0	75	<6	7
JUN 05...	<4	95	<0.1	<10	<10	<1	2.0	130	<6	13
JUL 24...	--	--	--	--	--	--	--	--	--	--

07343850 WHITE OAK CREEK NEAR OMAHA, TX

LOCATION.--Lat 33°16'30", long 94°44'30", Morris County, Hydrologic Unit 11140303, at bridge, on U.S Highway 259, 6.2 mi north of Omaha, and 10.5 mi upstream from mouth.

DRAINAGE AREA.--772 mi².

PERIOD OF RECORD.--Occasional discharge measurements: February 1965 to August 1967.
Water-quality records.--Chemical sand biochemical analyses: October 1968 to September 1977, and October 1991 to September 1992.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
JAN											
21...	1440	992	187	6.8	5.0	100	27	11.6	91	1.5	46
MAR											
17...	1525	1800	85	6.6	17.0	100	39	7.6	79	0.7	26
MAY											
11...	1515	31	425	7.2	21.0	90	22	6.3	71	1.3	100
JUN											
16...	1750	690	145	6.6	26.0	150	55	5.0	62	1.6	36
AUG											
21...	1115	1000	265	7.2	25.0	110	47	7.0	85	2.9	63
27...	1530	50	316	7.4	26.5	38	43	5.5	69	0.9	80

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
JAN											
21...	26	11	4.6	16	1	4.0	20	36	24	0.20	7.2
MAR											
17...	5	6.6	2.4	6.0	0.5	4.0	21	9.6	5.9	0.10	4.7
MAY											
11...	47	23	11	41	2	5.8	56	69	45	0.10	12
JUN											
16...	12	8.6	3.5	11	0.8	5.3	24	16	12	0.10	27
AUG											
21...	23	15	6.2	23	1	7.3	40	41	28	0.20	11
27...	32	19	7.9	28	1	6.5	48	52	33	0.20	12

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
JAN											
21...	115	19	<1	--	0.200	0.020	0.220	0.060	0.64	0.70	0.110
MAR											
17...	52	23	10	13	0.120	0.030	0.150	0.050	0.75	0.80	0.200
MAY											
11...	241	105	4	101	0.490	0.040	0.530	0.070	0.73	0.80	0.180
JUN											
16...	98	78	18	60	0.360	0.040	0.400	0.070	0.83	0.90	0.220
AUG											
21...	157	101	5	96	0.710	0.010	0.720	0.100	1.0	1.1	0.190
27...	188	87	18	69	0.500	0.010	0.510	0.030	0.57	0.60	0.160

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
JAN											
21...	0.090	--	--	--	--	--	--	--	--	--	--
MAR											
17...	0.140	13	--	--	--	--	--	--	--	--	--
MAY											
11...	0.140	11	<1	87	<0.5	<1.0	<5	<3	<10	200	<10
JUN											
16...	0.170	14	--	--	--	--	--	--	--	--	--
AUG											
21...	0.040	9.0	1	69	<0.5	2.0	<5	<3	<10	390	<10
27...	0.030	11	<1	80	<0.5	<1.0	<5	<3	<10	460	<10

07343850 WHITE OAK CREEK NEAR OMAHA, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
JAN										
21...	--	--	--	--	--	--	--	--	--	--
MAR										
17...	--	--	--	--	--	--	--	--	--	--
MAY										
11...	6	320	<0.1	<10	<10	<1	<1.0	240	<6	7
JUN										
16...	--	--	--	--	--	--	--	--	--	--
AUG										
21...	<4	230	<0.1	<10	<10	<1	2.0	140	<6	25
27...	5	240	<0.1	<10	<10	<1	<1.0	180	<6	30

07344200 WRIGHT PATMAN LAKE NEAR TEXARKANA, TX

LOCATION.--Lat 33°18'16", long 94°09'38", Bowie-Cass County line, Hydrologic Unit 11140302, in intake structure of Wright Patman Dam on the Sulphur River, 0.5 mi upstream from U.S. Highway 59, 10 mi southwest of Texarkana, and 44.5 mi upstream from mouth.

DRAINAGE AREA.--3,443 mi².

PERIOD OF RECORD.--July 1953 to current year. Published as Texarkana Reservoir prior to October 1970 and as Lake Texarkana from October 1970 to September 1972.
Water-quality records.--Chemical and biochemical analyses: March 1967 to September 1984.

REVISED RECORDS.--WSP 1561: 1957(M). WSP 1711: 1959(M).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). July 19 to Dec. 31, 1953, nonrecording gage at site about 125 ft upstream at datum 200 ft higher.

REMARKS.--The lake is formed by a rolled earthfill dam 18,500 ft long, including a 200-foot uncontrolled spillway and a 1-mile long dike. Temporary impoundment of water began July 2, 1953, and deliberate impoundment began June 27, 1956. The dam was completed in December 1957. The flood-control outlet works consist of two 20.0-foot-diameter conduits controlled by four 10.0- by 20.0-foot electrically driven broome-type gates. Flow is affected at times by discharge from the flood-detention pools of 25 floodwater-retarding structures with a combined detention capacity of 13,450 acre-ft. These structures control runoff from 40.0 mi² in the Sulphur River and Langford Creek drainage basins. Outflow discharging over the spillway passes into an outlet channel and then to the Sulphur River. The lake was built for flood control and for conservation. An unknown amount of water is diverted for industrial and municipal uses. The capacity table is based on a 1948 survey. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	286.0	-
Crest of spillway	259.5	2,654,300
Top of conservation pool	220.0	145,300
Lowest gated outlet (invert)	200.0	2,600

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,912,100 acre-ft May 9, 1966 (elevation, 252.64 ft); minimum since first appreciable storage and after deliberate impoundment began, 137,500 acre-ft Sept. 5, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 636,400 acre-ft Dec. 30 (elevation, 234.60 ft); minimum daily, 209,800 acre-ft Feb. 24 (elevation, 222.84 ft).

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

222.0	189,300	228.0	364,100	232.0	518,400
224.0	240,200	230.0	437,200	234.0	607,900
226.0	298,500			235.0	655,900

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	262400	265000	254400	627800	304100	213300	394600	293000	364400	418600	373500	295400
2	260900	276700	252100	618300	296600	219700	382400	293000	360600	408500	382000	293900
3	259500	290800	246000	605100	287200	223100	370400	293000	357900	400400	409600	303800
4	258600	319300	238600	591600	278800	233700	356500	292300	355500	391300	443800	304400
5	255200	354800	240700	578300	271400	239600	341600	288700	353800	384500	472400	304400
6	253500	378500	248500	563000	260900	242400	331000	289900	354500	378800	492000	304400
7	251800	388100	262100	550500	258100	240700	316700	289900	353100	377400	502800	304100
8	250700	395300	286300	537000	251000	237500	312900	289300	351400	373200	506200	303200
9	249600	392100	318000	519300	241000	264700	306000	289000	352700	369700	504500	301900
10	248700	387000	347700	502000	231000	286300	303800	288400	356200	374600	499900	300700
11	247900	377400	374600	489100	220300	315500	300700	287200	355100	376000	489900	300700
12	246200	365100	404800	476000	226800	341600	296300	290200	351700	376000	479700	298800
13	245400	349000	433000	464800	235900	382000	293900	290500	350400	373900	471200	297300
14	244600	331300	467200	447000	242700	424600	290500	292000	349700	370700	458800	295700
15	242900	312900	504100	432200	247400	456000	285700	297300	350400	363400	447700	294200
16	241300	294200	529600	418200	250100	476400	283300	302800	351400	353800	435300	293000
17	239400	284500	540000	402600	253000	484200	280900	308200	355100	348300	421200	291700
18	237200	272800	546600	390300	245100	488300	278500	314800	361700	340600	407800	289900
19	233200	271100	550500	380200	241600	483800	277000	323500	367600	333600	391700	289600
20	231000	265200	554100	369300	238600	479300	278500	328400	377800	333000	377800	288700
21	228900	261800	552800	357900	233700	472000	276700	332600	382400	332300	367900	292000
22	226300	259200	551000	348300	229700	466400	277300	337900	387000	335000	356800	293300
23	224200	254400	547500	338900	221800	461600	280300	344600	388800	345600	344600	292700
24	221600	249000	542600	329700	209800	460400	282100	349700	388100	362400	332600	294200
25	219700	248200	546100	321900	213300	461600	283900	355100	386300	380200	319600	296300
26	217900	253500	569700	316400	212300	455600	283900	364400	385600	384900	313200	298800
27	220300	257800	599500	315800	211100	447000	285100	369300	382400	393200	306900	300000
28	220300	259800	622100	316700	210600	438000	285700	376700	381300	392400	302800	300000
29	229400	258600	632600	316400	210300	432600	291700	378800	411500	387700	299700	296000
30	235300	257800	636400	314500	---	419700	292000	374600	420100	384200	297000	290800
31	255800	---	633100	310400	---	407800	---	368300	---	377800	295400	---
MAX	262400	395300	636400	627800	304100	488300	394600	378800	420100	418600	506200	304400
MIN	217900	248200	238600	310400	209800	213300	276700	287200	349700	332300	295400	288700
(†)	224.56	224.63	234.53	226.38	222.86	229.22	225.79	228.12	229.55	228.39	225.90	225.75
(ϕ)	-8000	+2000	+375300	-322700	-100100	+197500	-115800	+76300	+51800	-42300	-82400	-4600

CAL YR 1991 MAX 636400 MIN 171300 (ϕ) +373900
WTR YR 1992 MAX 636400 MIN 209800 (ϕ) +27000

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

07344200 WRIGHT PATMAN LAKE NEAR TEXARKANA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and Biochemical analyses: March 1967 to September 1984 and February to August 1992.

331838094095901 - WRIGHT PATMAN LAKE AC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	RESER-VOIR STORAGE (AC-FT)	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
FEB												
20...	0917	239000	1.00	133	6.8	13.5	0.24	8.4	81	K19	K20	46
20...	0920	--	10.0	134	6.7	13.5	--	8.4	81	--	--	--
20...	0925	--	20.0	133	6.7	13.5	--	8.5	82	--	--	--
20...	0930	--	27.0	132	6.6	13.5	--	8.4	81	--	--	43
JUN												
10...	0941	356000	1.00	205	9.2	26.0	0.90	9.2	116	K1	K1	77
10...	0947	--	10.0	205	8.9	25.0	--	8.0	99	--	--	--
10...	0954	--	20.0	242	7.4	24.0	--	2.5	30	--	--	--
10...	1000	--	28.0	244	7.1	23.5	--	1.5	18	--	--	91
AUG												
20...	1131	378000	1.00	146	7.6	27.0	1.00	5.3	67	K1	K1	52
20...	1137	--	10.0	146	7.5	26.5	--	4.6	58	--	--	--
20...	1143	--	20.0	146	7.3	26.5	--	4.4	55	--	--	--
20...	1149	--	30.0	146	7.2	26.5	--	4.1	52	--	--	49

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
FEB											
20...	14	15	2.1	8.4	0.5	2.5	32	26	11	<0.10	5.4
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	9	14	2.0	8.1	0.5	2.4	34	23	10	<0.10	5.3
JUN											
10...	7	26	2.9	13	0.6	--	70	17	10	0.20	2.1
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	9	31	3.3	14	0.6	3.4	82	23	15	0.20	3.6
AUG											
20...	3	18	1.8	5.2	0.3	3.1	49	7.3	4.9	0.10	7.7
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	0	17	1.7	5.3	0.3	3.2	54	7.5	5.1	0.10	7.9

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB											
20...	90	0.140	0.030	0.170	0.050	0.45	0.50	0.090	0.060	87	5
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	85	0.120	0.030	0.150	0.060	0.44	0.50	0.090	0.060	120	9
JUN											
10...	--	--	<0.010	<0.050	0.020	1.6	1.6	0.080	0.020	8	3
10...	--	--	<0.010	<0.050	0.030	1.2	1.2	0.030	<0.010	<10	<10
10...	--	--	0.010	<0.050	0.120	0.58	0.70	0.060	0.010	<10	60
10...	143	0.045	0.010	0.055	0.160	0.44	0.60	0.030	0.020	15	82
AUG											
20...	78	--	<0.010	<0.050	0.070	0.73	0.80	0.160	0.090	52	2
20...	--	--	<0.010	<0.050	0.020	0.58	0.60	0.120	0.070	80	<10
20...	--	--	<0.010	<0.050	0.020	0.58	0.60	0.120	0.070	100	30
20...	80	--	<0.010	<0.050	0.020	0.58	0.60	0.100	0.060	120	12

07344200 WRIGHT PATMAN LAKE NEAR TEXARKANA, TX--Continued

332142094115001 - WRIGHT PATMAN LAKE BC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
20...	1022	1.00	119	7.0	13.0	8.2	78
20...	1025	12.0	120	7.0	13.0	8.0	76
JUN							
10...	1030	1.00	175	9.2	28.0	9.4	123
10...	1033	5.00	179	9.2	27.0	8.7	112
10...	1036	12.0	193	7.2	24.0	0	0
AUG							
20...	1223	1.00	170	7.8	27.5	4.7	60
20...	1227	5.00	175	7.2	26.5	2.4	30
20...	1231	10.0	169	7.2	26.5	2.7	34
20...	1235	13.0	169	7.2	26.5	3.0	38

331935094112901 - WRIGHT PATMAN LAKE CC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
20...	1047	1.00	132	7.0	13.5	8.7	84
20...	1050	10.0	136	6.9	13.5	8.4	81
20...	1053	18.0	137	6.9	13.5	8.1	78
JUN							
10...	1104	1.00	175	9.4	26.5	10.2	130
10...	1107	5.00	175	8.7	25.5	6.6	83
10...	1110	10.0	188	7.2	24.0	2.4	29
10...	1113	15.0	193	7.1	23.5	0.3	4
10...	1116	22.0	203	7.3	23.5	0	0
AUG							
20...	1304	1.00	173	8.8	28.5	7.7	100
20...	1308	5.00	172	7.6	27.5	4.6	59
20...	1312	10.0	168	7.2	27.0	2.9	37
20...	1317	15.0	150	7.0	27.0	1.7	22
20...	1322	22.0	154	7.0	27.0	0	0

331706094130501 - WRIGHT PATMAN LAKE DC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
20...	1126	1.00	178	7.2	14.0	9.1	89
20...	1129	10.0	179	7.2	13.5	8.9	86
20...	1131	20.0	177	7.1	13.5	8.7	84
20...	1134	28.0	179	7.0	13.5	8.5	82
JUN							
10...	1143	1.00	215	9.4	27.5	11.5	149
10...	1145	5.00	217	9.3	26.5	10.2	130
10...	1148	10.0	221	8.8	25.5	6.6	83
10...	1150	15.0	248	7.3	24.0	0.9	11
10...	1154	20.0	257	7.3	23.0	0	0
10...	1158	30.0	272	7.3	22.5	0	0
AUG							
20...	1352	1.00	151	8.2	28.5	6.3	82
20...	1356	5.00	146	7.4	27.0	4.4	56
20...	1359	10.0	145	7.3	27.0	4.0	51
20...	1404	15.0	145	7.3	27.0	3.9	49
20...	1408	20.0	145	7.3	27.0	3.8	48
20...	1412	30.0	146	7.2	27.0	3.6	46

07344200 WRIGHT PATMAN LAKE NEAR TEXARKANA, TX--Continued

331519094141101 - WRIGHT PATMAN LAKE EC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
FEB											
20...	1319	1.00	143	7.2	15.0	0.20	8.7	87	K29	K29	52
20...	1323	10.0	158	7.2	14.0	--	8.2	80	--	--	--
20...	1327	20.0	150	7.3	14.0	--	8.5	83	--	--	54
JUN											
10...	1309	1.00	250	8.9	28.0	0.70	9.1	119	K1	K2	96
10...	1313	5.00	251	8.9	27.0	--	8.7	112	--	--	--
10...	1318	10.0	255	8.3	26.5	--	5.4	69	--	--	--
10...	1325	15.0	258	7.9	26.0	--	3.9	49	--	--	--
10...	1329	19.0	270	7.1	25.0	--	0	0	--	--	99
AUG											
20...	1457	1.00	181	8.0	29.5	0.90	6.7	89	K1	K2	65
20...	1501	5.00	170	7.3	27.0	--	4.2	53	--	--	--
20...	1505	10.0	171	7.3	27.0	--	3.8	48	--	--	--
20...	1509	15.0	180	7.3	27.0	--	4.0	51	--	--	--
20...	1513	21.0	179	7.3	27.0	--	3.8	48	--	--	65

DATE	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
FEB											
20...	13	17	2.2	8.6	0.5	2.4	39	25	9.5	<0.10	5.4
20...	--	--	--	--	--	--	--	--	--	--	--
20...	13	18	2.2	8.9	0.5	2.6	41	27	10	<0.10	5.5
JUN											
10...	11	33	3.3	15	0.7	3.5	85	25	11	0.20	5.3
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	5	34	3.4	15	0.7	4.3	94	26	11	0.20	6.1
AUG											
20...	1	22	2.4	7.3	0.4	3.7	64	9.0	6.3	0.10	7.2
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	1	22	2.4	6.9	0.4	3.6	64	9.1	6.2	0.10	7.5

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB											
20...	94	0.130	0.030	0.160	0.030	0.47	0.50	0.100	0.060	56	8
20...	--	--	--	--	--	--	--	--	--	--	--
20...	99	0.120	0.030	0.150	0.040	0.46	0.50	0.100	0.060	66	11
JUN											
10...	147	0.063	0.020	0.083	0.020	0.78	0.80	0.060	0.010	22	26
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	0.069	0.020	0.089	0.090	0.81	0.90	0.020	0.020	--	--
10...	--	--	--	--	--	--	--	--	--	50	230
10...	158	--	<0.010	<0.050	0.380	0.62	1.0	0.070	0.010	440	1100
AUG											
20...	96	--	<0.010	<0.050	<0.010	--	0.50	0.120	0.070	20	11
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	96	--	0.020	<0.050	0.030	0.47	0.50	0.120	0.110	61	170

07344200 WRIGHT PATMAN LAKE NEAR TEXARKANA, TX--Continued

331533094210901 - WRIGHT PATMAN LAKE GC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
FEB											
20...	1544	1.00	179	7.0	14.0	0.21	7.8	76	150	200	68
20...	1550	10.0	177	7.0	14.0	--	7.8	76	--	--	--
20...	1555	17.0	177	7.0	14.0	--	8.1	79	--	--	68
JUN											
10...	1700	1.00	272	7.9	30.0	0.60	7.8	106	K17	30	100
10...	1703	5.00	295	7.3	25.5	--	4.2	53	--	--	--
10...	1707	10.0	296	7.2	25.0	--	3.6	45	--	--	--
10...	1711	15.0	298	7.2	25.0	--	3.4	42	--	--	--
10...	1715	19.0	298	7.3	25.5	--	3.3	41	--	--	110
AUG											
20...	1826	1.00	206	7.2	26.0	0.70	4.2	52	46	K3	79
20...	1832	5.00	213	7.2	25.0	--	3.5	43	--	--	--
20...	1838	10.0	214	7.2	25.0	--	3.1	38	--	--	--
20...	1842	15.0	214	7.2	25.0	--	3.0	36	--	--	--
20...	1848	20.0	214	7.2	25.0	--	3.0	36	--	--	79

DATE	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
FEB											
20...	14	23	2.6	10	0.5	2.7	54	23	8.4	<0.10	5.5
20...	--	--	--	--	--	--	--	--	--	--	--
20...	14	23	2.5	10	0.5	2.8	54	23	8.1	<0.10	5.5
JUN											
10...	15	34	3.8	17	0.7	3.4	86	29	18	0.20	6.9
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	23	38	4.3	19	0.8	3.7	90	32	20	0.20	7.5
AUG											
20...	0	27	2.7	8.4	0.4	3.6	79	10	7.3	0.10	6.0
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	0	27	2.8	9.1	0.4	3.8	82	11	7.7	0.10	5.1

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB											
20...	108	0.090	0.030	0.120	0.040	0.56	0.60	0.110	0.080	51	12
20...	--	--	--	--	--	--	--	--	--	--	--
20...	107	0.070	0.040	0.110	0.040	0.46	0.50	0.100	0.080	46	12
JUN											
10...	164	0.110	0.010	0.120	0.020	0.78	0.80	0.050	0.020	120	21
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	179	0.350	0.010	0.360	0.060	0.44	0.50	0.090	0.040	210	75
AUG											
20...	112	--	0.020	<0.050	0.020	0.48	0.50	0.100	0.080	16	14
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	116	0.059	0.020	0.079	0.040	0.66	0.70	0.110	0.080	22	20

Wright Patman Lake Site AC (331838094095901)

Phytoplankton Analyses October 1991 - September 1992

Date	2-20-92
Time	0918
TOTAL CELLS/mL	5,100,322
NUMBER OF SPECIES	11
DEPTH COLLECTED (ft.)	0.4

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Aulacaseira italica var. *tenuissima*	8,046
Melosira varians	83,143
Stephanodiscus astraea var. *minutula*	2,682
CHLOROPHYTA (Green-Algae)	
Ankistrodesmus falcatus	31,290
Chlorella ellipsoidea	125,161
Selenastrum minutum	93,871
CHRYSOPHYTA (Golden-Brown Algae)	
Unknown flagellate	312,903
CYANOPHYTA (Blue-Green Algae)	
Aphanocapsa delicatissima	4,161,613
Chroococcus sp.	156,452
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	93,871
Cryptomonas erosa	31,290

Wright Patman Lake Site GC (331533094210901)

Phytoplankton Analyses October 1991 - September 1992

Date	2-20-92
Time	1546
TOTAL CELLS/mL	8,667,417
NUMBER OF SPECIES	18
DEPTH COLLECTED (ft.)	0.4

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	15,645
Melosira varians	10,430
Stephanodiscus astraea var. *minutula*	5,215
Order Pennales	
Gomphonema parvulum	6,258
Navicula cryptocephala	6,258
Nitzschia acicularis	6,258
Nitzschia palea	6,258
Synedra delicatissima	6,258
CHLOROPHYTA (Green Algae)	
Chlamydomonas sp.	31,290
Chlorella ellipsoidea	31,290
Chlorococcum humicola	62,581
Selenastrum minutum	187,742
CHRYSOPHYTA (Golden-Brown Algae)	
Unknown flagellate	563,226
CYANOPHYTA (Blue-Green Algae)	
Aphanocapsa delicatissima	6,539,677
Aphanothece nidulans	438,064
Chroococcus sp.	594,516
CRYPTOPHYTA (Cryptomonads)	
Chroomonas sp.	31,290
Rhodomonas minuta	125,161

Wright Patman Lake AC (331838094095901)

PhytoplanktonAnalyses October 1991 to September 1992

Date	6-10-92
Time	940
TOTAL CELLS/mL	1,171,722
NUMBER OF SPECIES	16
DEPTH COLLECTED (ft.)	1.4

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	15,373
CHLOROPHYTA	
Chlamydomonas sp.	4,679
Cosmarium sp.	668
Gloeocystis gigas	668
Pediastrum duplex	2,005
Scenedesmus quadricauda	2,674
CYANOPHYTA	
Anabaena affinis	183,813
Anabaena spiroides	711,857
Aphanocapsa delicatissima	140,366
Aphanizomenon flos-aquae	43,447
Chroococcus limneticus	20,052
Chroococcus minimus	1,337
CHRYSOPHYTA	
Mallomonas sp.	668
EUGLENOPHYTA	
Euglena sp.	12,031
Trachelomonas sp.	12,700
CRYPTOPHYTA	
Cryptomonas erosa	19,384

Wright Patman Lake GC (331533094210901)

Phytoplankton Analyses October 1991 to September 1992

Date	6-10-92
Time	1659
TOTAL CELLS/mL	289,420
NUMBER OF SPECIES	16
DEPTH COLLECTED (ft.)	0.6

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	4,679
Order Pennales	
Fragilaria crotenensis	8,021
CHLOROPHYTA	
Ankistrodesmus falcatus	2,674
Chlamydomonas sp.	3,342
Cosmarium sp.	668
Scenedesmus bijuga	668
Scenedesmus quadricauda	668
Staurastrum sp.	668
CYANOPHYTA	
Aphanocapsa delicatissima	140,366
Aphanizomenon flos-aquae	10,026
Chroococcus limneticus	5,347
Chroococcus minimus	2,674
Merismopedia tenuissima	102,935
EUGLENOPHYTA	
Trachelomonas sp.	2,005
CRYPTOPHYTA	
Cryptomonas erosa	2,674
Cryptomonas ovata	2,005

Wright Patman Lake AC (331838094095901)

Phytoplankton Analyses October 1991 to September 1992

Date	8-20-92
Time	1130
TOTAL CELLS/mL	452,513
NUMBER OF SPECIES	20
DEPTH COLLECTED (ft.)	1.7

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	438
Melosira varians	4910
Order Pennales	
Fragilaria vaucherie	8,021
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	8,689
Ankistrodesmus spiralis	1,337
Chlamydomonas sp.	6,016
Scenedesmus bijuga	1,337
Scenedesmus quadricauda	2,674
CHRYSOPHYTA (Golden-brown algae)	
Mallamonas sp.	668
CYANOPHYTA (Blue-green algae)	
Anabaena spiroides	3,342
Aphanocapsa delicatissima	86,893
Aphanizomenon flos-aquae	143,708
Chroococcus limneticus	18715
Merismopedia chondroidea	16042
Merismopedia tenuissima	85,556
Oscillatoria subrevis	43,447
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	4,010
Trachelomonas spp.	5,347
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas erosa	4,010
Cryptomonas ovata	7,353

Wright Patman Lake GC (331533094210901)

Phytoplankton Analyses October 1991 to September 1992

Date	8-20-92
Time	1825
TOTAL CELLS/mL	161,754
NUMBER OF SPECIES	15
DEPTH COLLECTED (ft.)	1.1

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Pennales	
Fragilaria crotenensis	1,432
Fragilaria vaucherie	7,162
Gyrosigma sp.	1,432
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	3,342
Ankistrodesmus spiralis	1,337
Chlamydomonas sp.	2,005
Cosmarium sp.	668
CYANOPHYTA (Blue-green algae)	
Anabaena spiroides	12,031
Aphanocapsa delicatissima	73,525
Chroococcus limneticus	2,674
Merismopedia tenuissima	5,347
Oscillatoria subrevis	40,105
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	1,337
Trachelomonas spp.	5,347
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas erosa	4,010

07344210 SULPHUR RIVER NEAR TEXARKANA, TX

LOCATION.--Lat 33°18'20", long 94°09'03", Bowie County, Hydrologic Unit 11140302, on downstream side of highway embankment near left end of downstream (northbound) bridge on U.S. Highway 59, 0.4 mi downstream from Texarkana Dam, 1.4 mi upstream from Elliott Creek, 11.7 mi southwest of Texarkana, and at mile 44.1.

DRAINAGE AREA.--3,443 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year (midnight elevations). August 1937 to July 1953 and October 1953 to September 1979 (daily gage heights); January to December 1933, January 1937 to December 1942, and January 1945 to September 1979 (discharge measurements); January to December 1939 and January 1945 to September 1979 (daily discharges) published by U.S. Army Corps of Engineers; October 1979 to September 1985 (daily discharges).
Water-quality records.--Chemical and biochemical analyses: January 1983 to September 1985.

GAGE.--Water-stage recorder. Datum of gage is 180.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Elevation records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft³/s June 16 to July 5, 1981; maximum gage height, 32.57 ft June 15, 1981; no flow June 25, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 94,000 ft³/s Apr. 4, 1945; maximum stage, 47.23 ft Apr. 14, 1945; no flow on various occasions.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 212.06 ft at 1600 hours Mar. 15; minimum, 188.41 ft June 23.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193.59	198.96	211.77	211.80	211.53	209.54	211.51	192.65	206.19	209.04	211.60	194.10
2	193.48	198.34	211.76	211.80	211.51	209.53	211.47	192.56	206.39	211.08	211.62	193.72
3	193.40	199.10	211.59	211.72	211.60	210.92	211.45	192.50	204.82	211.45	211.71	194.04
4	193.61	200.64	211.62	211.77	211.58	211.29	211.43	192.48	202.38	211.64	211.82	193.87
5	193.44	204.54	210.40	211.77	211.46	211.35	211.41	192.43	200.81	211.64	211.89	193.74
6	193.43	208.64	209.03	211.71	211.52	211.31	211.50	190.85	198.33	211.64	211.80	193.66
7	191.67	210.98	207.59	211.70	210.34	211.30	211.44	189.61	197.25	211.63	211.80	193.63
8	191.36	211.43	205.69	211.65	209.95	211.26	210.29	189.48	196.91	211.62	211.81	193.58
9	190.92	211.74	203.80	211.72	209.90	211.61	210.09	189.34	199.39	211.60	211.83	193.55
10	190.95	211.77	201.72	211.77	209.77	211.56	208.86	189.32	201.68	210.55	211.81	193.60
11	190.94	211.79	199.62	211.76	209.68	211.57	208.28	189.37	205.22	210.29	211.81	193.77
12	190.94	211.66	200.18	211.74	210.00	211.64	207.98	189.28	206.18	210.20	211.81	193.79
13	190.94	211.70	203.54	211.66	210.06	211.76	207.75	189.26	206.42	210.17	211.78	193.59
14	190.90	211.68	204.90	211.62	209.90	211.82	206.34	189.43	206.44	210.17	211.77	193.51
15	192.69	211.61	206.91	211.52	209.82	212.02	204.16	189.44	206.48	210.14	211.75	193.49
16	192.93	211.56	209.70	211.51	209.79	211.76	201.00	189.43	206.45	210.12	211.71	193.45
17	192.92	211.60	211.53	211.61	209.75	211.77	199.13	189.43	205.06	210.17	211.69	193.43
18	195.21	211.58	211.72	211.65	211.15	211.76	197.98	189.42	202.30	210.14	211.68	193.41
19	195.67	211.68	211.79	211.61	211.27	211.68	197.53	189.42	198.92	210.08	211.64	193.41
20	195.73	211.59	211.85	211.50	211.27	211.67	197.40	191.25	195.17	208.63	211.59	193.43
21	195.73	211.51	211.86	211.75	211.29	211.69	197.32	193.36	192.42	207.98	210.64	193.48
22	195.76	211.47	211.89	211.74	211.28	211.56	195.20	193.65	189.12	207.53	210.39	193.98
23	195.73	211.40	211.82	211.68	211.21	211.64	192.98	193.71	191.08	207.27	210.29	195.87
24	195.73	211.36	211.79	211.66	211.18	211.67	192.49	193.76	193.35	209.26	210.21	196.47
25	195.70	211.35	211.80	211.59	210.28	211.67	192.34	193.75	196.16	209.79	210.14	196.47
26	195.71	211.37	211.85	211.60	209.84	211.67	192.27	196.33	196.60	211.28	208.64	198.78
27	195.93	211.68	211.91	211.58	209.68	211.64	192.27	196.77	196.68	211.47	207.00	199.35
28	195.92	211.75	211.91	211.57	209.61	211.64	192.27	198.48	196.72	211.54	204.04	199.45
29	198.20	211.79	211.91	211.58	209.53	211.63	192.48	201.74	201.45	211.62	200.99	199.44
30	198.67	211.78	211.84	211.58	---	211.56	192.61	205.04	205.74	211.59	198.53	200.99
31	198.84	---	211.83	211.48	---	211.56	---	205.87	---	211.60	195.23	---
MAX	198.84	211.79	211.91	211.80	211.60	212.02	211.51	205.87	206.48	211.64	211.89	200.99
MIN	190.90	198.34	199.62	211.48	209.53	209.53	192.27	189.26	189.12	207.27	195.23	193.41

CAL YR 1991 MAX 212.09 MIN 189.77
WTR YR 1992 MAX 212.02 MIN 189.12

07344210 SULPHUR RIVER NEAR TEXARKANA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January 1983 to September 1985, and October 1991 to September 30, 1992.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
FEB 20...	1430	9900	140	6.9	14.5	100	34	10.4	102	--	46
JUN 10...	1540	2150	206	9.0	27.0	25	2.5	9.3	117	2.9	79
AUG 20...	1720	10000	131	8.2	28.5	55	4.3	8.8	114	2.0	48

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
FEB 20...	11	15	2.1	8.6	0.6	2.3	35	18	10	<0.10	4.8
JUN 10...	10	27	2.8	12	0.6	3.1	69	23	12	0.20	2.8
AUG 20...	0	16	1.9	6.2	0.4	4.7	51	8.0	6.8	0.10	7.7

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
FEB 20...	82	30	2	28	0.130	0.030	0.160	0.070	0.53	0.60	0.100
JUN 10...	125	16	13	3	--	<0.010	<0.050	0.050	1.4	1.4	0.060
AUG 20...	82	16	<1	--	--	<0.010	<0.050	0.050	0.55	0.60	0.120

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
FEB 20...	0.050	10	<1	29	<0.5	<1.0	<5	<3	<10	54	<10
JUN 10...	0.010	9.2	2	23	<0.5	<1.0	<5	<3	<10	8	<10
AUG 20...	0.070	10	2	33	<0.5	1.0	<5	<3	<10	230	<10

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
FEB 20...	4	6	<0.1	<10	<10	<1	<1.0	120	<6	<3
JUN 10...	<4	13	<0.1	<10	<10	<1	<1.0	220	<6	10
AUG 20...	<4	20	<0.1	<10	<10	<1	2.0	140	<6	14

07344482 BIG CYPRESS CREEK NEAR WINNSBORO, TX
(Flood-hydrograph Partial-record Station)

LOCATION.--Lat 33°01'24", long 95°16'12", Franklin County, Hydrologic Unit 11140305, on left bank at downstream side of bridge on State Highway 37, 0.3 mi downstream from Glade Branch, 1.8 mi upstream from Little Cypress Creek, 4.7 mi north of Winnsboro, and 146.5 mi upstream from mouth.

DRAINAGE AREA.--27.2 mi^2.

PERIOD OF RECORD.--March 1974 to September 1991 (continuous-record station); October 1991 to September 1992, (flood-hydrograph partial-record station).

REVISED RECORDS.--WRD TX-89-1: 1985-88.

GAGE.--Water-stage recorder. Datum of gage is 375.83 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow slightly affected by Lake Franklin located 1.4 mi upstream on Glade Branch. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years (water years (1975-91), 23.4 ft^3/s (11.68 in/yr), 16,950 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,290 ft^3/s Nov. 26, 1988 (gage height, 12.91 ft); no flow at times in water years 1974, 1978-80, 1982, and 1984-88.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	2315	1,370	10.90	Apr. 12	1115	1,850	11.22
Dec. 18	0915	1,370	10.90	Apr. 13	2315	1,520	11.00
Dec. 27	0515	1,290	10.84	May 3	1345	1,550	11.02
Jan. 10	1030	1,590	11.05	May 5	0615	1,300	10.85
Feb. 22	1500	1,740	11.15				

07344486 BRUSHY CREEK AT SCROGGINS, TX

LOCATION.--Lat 32°58'32", long 95°11'03", Franklin County, Hydrologic Unit 11140305, at downstream side of highway embankment near left end of bridge on Farm Road 115, 0.1 mi north of Scroggins, 0.3 mi downstream from Briary Creek, 2.5 mi upstream from South Brushy Creek, and 9.5 mi upstream from mouth.

DRAINAGE AREA.--23.4 mi^2.

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

REVISED RECORDS.--WDR TX-89-1 1983-88 (M).

GAGE.--Water-stage recorder. Datum of gage is 343.90 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair, except those below 5.0 ft^3/s and those for estimated daily discharges, which are poor. Several observations of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 29	2000	4,200	13.94	Mar. 9	1730	1,200	13.04
Nov. 1	0230	1,060	12.95	June 29	1645	1,380	13.14
Dec. 22	1000	1,070	12.96				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	442	e26	e17	18	17	7.5	7.9	43	31	14	7.5
2	5.9	29	e361	e16	16	18	8.5	7.2	44	16	135	11
3	6.3	13	e53	e29	15	21	8.8	5.5	14	13	137	24
4	6.7	11	e27	e38	17	52	9.0	6.3	9.2	12	14	13
5	6.9	9.6	e18	e19	26	109	7.7	5.7	5.9	9.2	15	6.8
6	7.1	8.5	e15	e18	25	37	6.8	4.1	9.3	7.9	21	5.0
7	7.8	7.9	e14	e17	18	23	7.7	3.5	8.9	7.3	9.2	4.4
8	7.7	7.7	e12	e17	16	18	5.7	3.7	5.2	7.4	6.5	3.7
9	8.7	7.6	e12	e17	15	359	4.7	3.8	4.4	7.1	6.1	3.1
10	7.9	7.7	e341	e48	16	212	5.6	3.6	3.5	6.7	6.4	3.7
11	8.3	7.8	e192	e26	17	41	5.2	4.5	139	6.2	6.4	6.0
12	8.3	7.9	e44	e15	60	26	5.8	27	35	5.9	11	4.0
13	8.1	8.2	e30	e16	72	20	7.1	9.3	9.7	5.6	20	2.6
14	7.9	10	e24	e17	28	17	6.7	5.4	6.1	5.4	8.2	2.6
15	7.8	9.2	e21	17	22	14	9.3	4.5	4.0	8.5	5.7	3.6
16	7.7	8.2	e20	15	18	13	7.7	3.5	4.9	11	4.7	3.9
17	8.9	15	e20	16	17	13	7.2	3.2	5.2	192	4.6	3.3
18	8.9	18	e19	41	16	59	8.1	7.1	6.8	218	4.7	3.3
19	8.9	18	e19	32	16	25	8.2	20	8.7	48	6.1	4.1
20	8.5	35	e18	e19	15	15	23	6.0	9.7	15	6.4	8.5
21	8.8	14	e35	e19	16	11	9.3	3.2	11	18	6.7	29
22	9.0	9.9	e680	e55	24	11	5.9	2.7	8.3	11	7.5	16
23	9.2	8.2	e150	e39	98	10	4.8	4.5	10	9.1	7.5	5.8
24	9.4	6.7	e45	e21	30	10	5.6	5.0	9.8	8.4	8.5	4.1
25	9.5	7.5	e32	e18	34	56	7.2	7.9	6.8	8.1	18	3.7
26	11	9.5	e25	e19	30	23	8.3	8.8	11	9.6	8.0	3.6
27	90	e10	e22	e19	21	13	7.4	6.2	20	11	7.3	3.4
28	36	e8.6	e22	e20	19	11	8.2	9.9	14	23	8.2	3.2
29	1640	e9.0	e20	e21	17	11	11	10	705	18	9.0	3.2
30	421	e8.2	e18	e36	---	10	9.4	7.9	241	13	8.6	3.3
31	98	---	e17	21	---	7.9	---	4.6	---	21	7.9	---
TOTAL	2495.2	772.9	2352	738	7[illegible]	1282.9	237.4	212.5	1413.4	783.4	539.2	199.4
MEAN	80.5	25.8	75.9	23.8	25.9	41.4	7.91	6.85	47.1	25.3	17.4	6.65
MAX	1640	442	680	55	98	359	23	27	705	218	137	29
MIN	5.0	6.7	12	15	15	7.9	4.7	2.7	3.5	5.4	4.6	2.6
AC-FT	4950	1530	4670	1460	1490	2540	471	421	2800	1550	1070	396
CFSM	3.44	1.10	3.24	1.02	1.11	1.77	.34	.29	2.01	1.08	.74	.28
IN.	3.97	1.23	3.74	1.17	1.20	2.04	.38	.34	2.25	1.25	.86	.32

e Estimated

07344486 BRUSHY CREEK AT SCROGGINS, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1992, BY WATER YEAR (WY)

MEAN	12.6	12.4	30.2	16.9	25.9	27.4	18.8	28.0	17.2	7.56	2.93	4.24
MAX	80.5	25.8	103	44.9	47.5	66.1	54.9	68.2	70.0	32.2	17.4	41.7
(WY)	1992	1992	1983	1991	1991	1990	1990	1991	1981	1981	1992	1979
MIN	.68	2.51	2.99	6.33	10.0	8.15	3.64	1.64	.26	.007	.003	.14
(WY)	1979	1990	1979	1981	1978	1986	1978	1988	1984	1978	1985	1984

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1978 - 1992	
ANNUAL TOTAL	12589.88		11778.3			
ANNUAL MEAN	34.5		32.2		17.6	
HIGHEST ANNUAL MEAN					32.2	1992
LOWEST ANNUAL MEAN					5.53	1984
HIGHEST DAILY MEAN	1640	Oct 29	1640	Oct 29	1640	Oct 29 1991
LOWEST DAILY MEAN	.71	Jul 11	2.6	Sep 13	.00	Jun 28 1978
ANNUAL SEVEN-DAY MINIMUM	1.0	Jul 10	3.3	Sep 12	.00	Jun 28 1978
INSTANTANEOUS PEAK FLOW			4200	Oct 29	7520	Dec 2 1982
INSTANTANEOUS PEAK STAGE			13.94	Oct 29	14.39	Dec 2 1982
INSTANTANEOUS LOW FLOW			.02	May 16	.00	*
ANNUAL RUNOFF (AC-FT)	24970		23360		12760	
ANNUAL RUNOFF (CFSM)	1.47		1.38		.75	
ANNUAL RUNOFF (INCHES)	20.01		18.72		10.22	
10 PERCENT EXCEEDS	46		40		27	
50 PERCENT EXCEEDS	11		10		6.7	
90 PERCENT EXCEEDS	1.8		4.7		.33	

* No flow at times in 1978, 1980, 1984-88.

07344489 LAKE BOB SANDLIN NEAR MOUNT PLEASANT, TX

LOCATION.--Lat 33°04'48", long 95°00'07", Titus County, Hydrologic Unit 11140305, in control room in left abutment of service spillway at left end of Fort Sherman Dam on Big Cypress Creek, 1.7 mi upstream from Tankersley Creek, 3.5 mi upstream from bridge on U.S. Highway 271, 5.7 mi southwest of the county courthouse in Mount Pleasant, and 129.2 mi upstream from mouth.

DRAINAGE AREA.--239 mi².

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

GAGE.--Water-stage recorder and data collection platform (DCP) with shaft encoder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Apr. 12, 1978, a nonrecording gage was located at same site and datum.

REMARKS.--The lake is formed by a rolled earthfill dam 10,800 ft long, including spillways. Deliberate impoundment began Aug. 8, 1977, and dam was completed by April 1978. The spillway is an excavated channel cut through natural ground. The spillway is 4,500 ft wide, located to the left of the left end of the dam. The service spillway is 289.5 ft wide with 160 ft of net flow width controlled by four 40- by 22.5-foot tainter gates. The dam was built, and is owned, maintained, and operated by the Titus County Fresh Water Supply District No. 1 to provide water for municipal use. Flow from 75.0 mi² above this station is controlled by Lake Cypress Springs on Big Cypress Creek and 36.0 mi² is controlled by Montecello Reservoir on Blundell Creek, a tributary to Big Cypress Creek. There is a stage telemeter (DCP) at station. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-ft)
Top of dam	349.0	-
Crest of uncontrolled spillway	341.3	251,000
Crest of gated spillway	316.5	64,790
Lowest gated outlet (invert)	294.5	3,300

COOPERATION.-Area and capacity tables were compiled by Forest and Cotton, Inc., Consulting Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 222,800 acre-ft Mar. 17, 1987 (elevation, 338.49 ft); minimum, 516 acre-ft Aug. 8-17, 1977 (elevation, 290.00 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 221,600 acre-ft June 29 at 1500 hours (elevation, 338.36 ft); minimum, 196,800 acre-ft Oct. 25, 26 (elevation, 335.71 ft).

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

335.0	190,400	338.0	218,100
336.0	199,400	339.0	227,800
337.0	208,600		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202000	211400	214400	213500	214100	213500	212900	213300	213800	215000	214200	211600
2	202000	211800	213700	213800	213900	213600	213000	213300	213700	215100	214800	211400
3	201900	212000	213400	213300	213800	213700	213100	213300	213500	214800	214400	212100
4	201800	212200	213300	213300	213800	214300	213200	213300	213500	214600	214200	212100
5	201300	212300	213200	213300	213800	213300	213300	213200	213600	214800	214200	212000
6	201200	212600	213200	213200	213700	213100	213400	213000	213800	214700	214000	211900
7	201000	212800	213300	213100	213500	213200	213600	212700	213800	214500	213900	211700
8	200700	212900	213800	213300	213300	213200	213700	212500	213800	214600	213800	211700
9	200400	212900	214000	213200	213200	212600	213800	212100	214500	214500	213800	211600
10	200200	212900	214000	213000	213200	213300	213900	212000	214400	214500	213900	211300
11	200000	213100	214200	213100	213300	213500	214100	212900	214600	214500	213800	211300
12	199900	213100	213900	213200	214100	213700	213900	212900	214600	214400	214800	211200
13	199600	213000	214000	213400	213500	214200	213900	212900	214500	214400	214200	211000
14	199300	212900	213900	213100	213300	214100	213700	213100	214400	214300	213800	210900
15	199000	212900	213800	213100	213300	213600	213800	213600	214200	214600	213600	210600
16	198700	212800	213600	212900	213400	213700	213600	213600	213900	214600	213500	210400
17	198400	213300	213300	213000	213300	214200	213400	213700	213600	215800	213300	210200
18	198200	213100	213300	213600	213300	213700	213400	214200	213500	214800	213300	209900
19	198000	213700	213300	213500	213200	214100	213900	214000	213000	215200	213200	211400
20	197700	212900	214600	213300	213200	214100	213600	214000	213100	215200	213100	211400
21	197500	212800	213700	213900	213300	214000	213300	214000	212700	215100	212900	212800
22	197300	212900	213800	214100	214500	213800	213200	213800	212500	215000	212800	213100
23	197100	212600	213200	213900	214100	213700	213200	213600	212100	214800	212700	212900
24	196900	212300	213300	213800	214200	213700	213300	213500	211900	214900	212500	212800
25	196800	212300	213600	213500	213900	213500	213300	213500	211600	215100	212500	212700
26	197200	212300	213100	213400	213500	213400	213200	213500	211900	215200	212500	212700
27	199500	212500	212900	214300	213400	213300	213100	213400	211800	215500	212300	212500
28	199900	212700	213200	214100	213400	213300	212900	213700	212900	214800	212100	212300
29	205000	212900	213300	213900	213400	213300	213300	213600	218200	215200	211900	212000
30	208600	214400	213300	214200	---	213100	213300	213600	215200	214800	211700	211700
31	210900	---	213100	214200	---	213000	---	213600	---	214300	211600	---
MAX	210900	214400	214600	214300	214500	214300	214100	214200	218200	215800	214800	213100
MIN	196800	211400	212900	212900	213200	212600	212900	212000	211600	214300	211600	209900
(↑)	337.24	337.61	337.47	337.59	337.51	337.46	337.50	337.53	337.69	337.60	337.32	337.33
(Φ)	+8900	+3500	-1300	+1100	-800	-400	+300	+300	+1600	-900	-2700	+100

CAL YR 1991 MAX 215100 MIN 196800 (Φ) +2600
WTR YR 1992 MAX 218200 MIN 196800 (Φ) +9700

(↑) Elevation, in feet, at end of month.
(Φ) Change in contents, in acre-feet.

07344500 BIG CYPRESS CREEK NEAR PITTSBURG, TX
(Flood-hydrograph Partial-record Station)

LOCATION.--Lat 33°01'15", long 94°52'55", Camp-Titus County line, Hydrologic Unit 11140305, near center of stream at downstream side of bridge on State Highway 11, 0.5 mi upstream from Louisiana & Arkansas Railway Co. bridge, 1.4 mi upstream from Williamson Creek, 5.2 mi east of Pittsburg, 19.2 mi downstream from Lake Bob Sandlin, and 110.0 mi upstream from mouth.

DRAINAGE AREA.--366 mi².

PERIOD OF RECORD.--March 1943 to January 1963 (published as Cypress Creek near Pittsburg), October 1967 to September 1989. October 1989 to current year, (peaks above base discharge and annual maximum). Gage-height records collected at this site from September 1963 to December 1967, are published in reports by the U.S. Army Corps of Engineers.
Water-quality records.--Chemical analyses: March 1965 to August 1989. Chemical and biochemical analyses: January 1983 to September 1985.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder and data collection platform (DCP). Datum of gage is 247.49 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 12, 1954, water-stage recorder at site 1,900 ft downstream at present datum.

REMARKS.--Records fair, except those estimated which are poor. Flow partly regulated by Lake Cypress Springs (station 07344484) since July 1970, and by Monticello Reservoir (on Blundell Creek) since August 1972. Flow largely regulated by Lake Bob Sandlin (station 07344489) since August 1977. Sewage effluent was returned to a tributary above this station by the city of Mount Pleasant, and sewage effluent was returned to a tributary below this station by the city of Pittsburg. Gage-height telemeter (DCP) at station.

AVERAGE DISCHARGE.--24 years (water years 1944-62, 1968-72), prior to combined regulation by Lake Cypress Springs and Monticello Reservoir, 327 ft³/s (12.13 in/yr), 236,900 acre-ft/yr; 17 years (water years 1973-89) regulated, 255 ft³/s (184,700 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,500 ft³/s Mar. 30, 1945 (gage height, 28.3 ft, from floodmark, and adjusted to present site on basis of record for flood of Apr. 27, 1958), from rating curve extended above 20,000 ft³/s; no flow Aug. 20 to Oct 3, 1954, July 19 to Nov. 4, 1956.
Maximum stage since at least 1895, that of Mar. 30, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1938 reached a stage of about 25 ft, present site, adjusted as explained above, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 390 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 30	2100	1,740	12.88	Feb. 26	2400	1,490	12.63
Nov. 21	1300	1,330	12.44	Mar. 10	0600	13,100	18.62
Dec. 2	2300	2,350	13.30	Mar. 19	2000	1,270	12.37
Dec. 10	2300	1,690	12.84	Mar. 26	2100	916	11.81
Dec. 22	0800	5,200	15.00	May 20	2400	464	10.38
Jan. 4	1300	916	11.81	June 13	0100	477	10.44
Jan. 14	2200	425	10.19	June 30	0300	22,200	21.55
Jan. 24	0400	1,140	12.18	July 18	1700	4,090	14.38
Jan. 30	0100	892	11.76	July 30	0600	6,290	15.63
Feb. 13	1500	5,230	15.02				

07345600 BIG CYPRESS CREEK NEAR LONE STAR, TX

LOCATION.--Lat 32°54'11" long 94°43'16", Camp-Morris Counties, Hydrologic Unit 1140305, at upstream side of bridge at center of bridge span, 1.1 mi southwest of State Highways 259 and 729 intersection.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--Chemical and biochemical analyses: July 1991 To September 1992 (discontinued).

REMARKS.--Discharge not measured for all samples.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 16...	1600	--	303	301	8.6	7.6	21.0	760	11.4	128	2.6	30
NOV 21...	1125	--	114	133	6.3	6.6	13.5	765	6.9	66	1.3	1200
DEC 19...	1505	--	175	182	6.1	7.2	10.5	770	8.4	74	0.2	90
JAN 22...	1145	751	169	177	6.5	7.1	7.0	755	11.7	97	1.3	K790
FEB 13...	1230	735	149	158	6.7	6.8	13.0	760	9.0	86	1.0	2500
MAR 18...	1020	487	159	174	6.7	7.5	17.0	750	6.5	68	0.6	K310
APR 24...	1025	178	176	180	6.7	7.0	19.5	760	5.7	62	0.8	390
MAY 13...	1410	187	198	206	6.6	7.1	23.0	760	5.3	62	1.4	3000
JUN 18...	1140	--	163	170	6.4	6.7	27.0	760	3.9	49	1.9	85

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
OCT 16...	K4	83	38	45	170	3	179	25	4.9	24	36	1
NOV 21...	K6000	32	16	16	69	120	89	8.2	2.8	8.3	31	0.6
DEC 19...	140	48	23	25	100	2	105	12	4.3	14	36	0.9
JAN 22...	380	45	26	19	94	8	104	11	4.2	14	38	0.9
FEB 13...	2900	40	23	17	83	9	108	10	3.6	11	35	0.8
MAR 18...	150	45	20	25	92	8	110	11	4.3	13	36	0.8
APR 24...	460	41	20	21	93	11	105	9.3	4.2	16	43	1
MAY 13...	2400	40	16	24	107	11	142	10	3.7	21	50	1
JUN 18...	190	40	14	26	87	18	126	9.6	3.8	14	41	1

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CYANIDE TOTAL (MG/L AS CN)	CARBON, ORGANIC TOTAL (MG/L AS C)	ACRO-LEIN TOTAL (UG/L)
OCT 16...	7.2	59	23	0.010	0.290	0.010	0.70	0.040	<0.010	<0.010	7.4	<20
NOV 21...	5.8	24	10	<0.010	0.150	0.050	0.50	0.130	0.070	<0.010	12	--
DEC 19...	4.4	33	17	<0.010	0.220	0.030	0.50	0.070	0.020	<0.010	7.5	--
JAN 22...	3.7	31	18	0.010	0.430	0.020	0.40	0.070	0.020	<0.010	7.9	--
FEB 13...	3.2	30	14	<0.010	0.260	0.040	0.60	0.100	0.020	<0.010	9.5	--
MAR 18...	4.2	29	15	<0.010	0.150	0.010	0.40	0.050	<0.010	<0.010	7.1	<20
APR 24...	4.2	27	19	0.030	0.760	0.110	0.60	0.160	0.050	<0.010	8.7	--
MAY 13...	5.0	31	21	0.030	1.90	0.080	0.60	0.130	0.070	<0.010	8.1	<20
JUN 18...	4.0	23	16	0.010	0.460	0.080	0.70	0.170	0.060	<0.010	9.6	--

07345600 BIG CYPRESS CREEK NEAR LONE STAR, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	ACRYLO-NITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L)
OCT 16...	<20	<3.0	<0.2	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
APR 24...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMO CHLORO-PROPANE WATER WHOLE TOT.REC (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)
OCT 16...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<5.0	<5.0	<3.0	<3.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<5.0	<5.0	<3.0	<3.0
APR 24...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<5.0	<5.0	<3.0	<3.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)
OCT 16...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0
APR 24...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--	--

07345600 BIG CYPRESS CREEK NEAR LONE STAR, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NAPHTHALENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRACHLORO-WAT UNF REC (UG/L)	ETHANE, 1,1,2,2 TETRACHLORO-WAT UNF REC (UG/L)	TETRACHLOROETHYLENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE 1,2,4-TRICHLORO-WAT UNF REC (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	123-TRICHLOROPROPANE WATER WHOLE TOTAL (UG/L)
OCT 16...	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0
APR 24...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	VINYL CHLORIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ACENAPHTHYLENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZIDINE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)
OCT 16...	<1.0	<3.0	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<1.0	<3.0	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
APR 24...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<1.0	<3.0	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	1,2,5,6-DIBENZANTHRACENE TOTAL (UG/L)	3,3'-DICHLOROBENZIDINE TOTAL (UG/L)
OCT 16...	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0
APR 24...	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--

07345600 BIG CYPRESS CREEK NEAR LONE STAR, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)
OCT 16...	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0
APR 24...	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--

DATE	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)
OCT 16...	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0
APR 24...	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--

DATE	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)
OCT 16...	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.05	<0.03	<0.09	<0.030
NOV 21...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030
APR 24...	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030
JUN 18...	--	--	--	--	--	--	--	--	--	--	--

07345600 BIG CYPRESS CREEK NEAR LONE STAR, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CHLORDANE CIS WATER WHOLE TOTAL (UG/L)	CHLORDANE TRANS WATER WHOLE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN-I WATER WHOLE REC (UG/L)	ENDOSULFAN BETA TOTAL (UG/L)	ENDOSULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)
OCT 16...	<0.10	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060
NOV 21...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<0.10	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060
APR 24...	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<0.10	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060
JUN 18...	--	--	--	--	--	--	--	--	--	--	--

DATE	ENDRIN ALDEHYDE TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)
OCT 16...	<0.20	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1
NOV 21...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<0.20	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1
APR 24...	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<0.20	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1
JUN 18...	--	--	--	--	--	--	--	--	--	--	--

07345700 LAKE O' THE PINES AT HIGHWAY 155 BRIDGE NEAR ORE CITY, TX

LOCATION.--Lat 32°51'00", long 94°42'03", Marion County, Hydrologic Unit 1140305, at downstream side of bridge, 2.25 mi west-southwest of Rock Island, and 3.6 mi north-northeast of Ore City.

DRAINAGE AREA.--850 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1968 to September 1981, July 1991 to September 1992 (discontinued).

REMARKS.--The sampling site for this station is the same location as 32510009442031 Lake O' the Pines Site FC from inventories of October 1977 to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SPECIFIC CONDUCTANCE LAB (US/CM)	SPECIFIC CONDUCTANCE FIELD (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	PH WATER WHOLE LAB (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT												
18...	1015	102	111	6.6	6.6	20.5	765	7.8	86	2.0	--	590
NOV												
21...	1445	157	177	6.5	7.3	15.0	765	8.4	83	0.1	K19	200
DEC												
18...	1455	152	159	6.0	7.0	11.0	770	8.6	77	0.2	K39	K5
JAN												
22...	0840	181	191	6.5	7.6	6.0	755	12.8	104	1.2	K18	K4
FEB												
13...	0915	173	180	7.2	7.1	12.0	760	10.6	99	0.8	K5	55
MAR												
18...	1425	126	136	6.7	7.4	17.5	750	8.4	89	0.9	K17	270
APR												
22...	1520	179	187	8.3	7.3	23.0	760	9.7	113	2.1	71	140
MAY												
13...	0920	150	160	6.9	6.9	24.0	760	8.3	99	1.7	K15	48
JUN												
18...	0925	131	141	6.4	6.6	29.5	760	5.7	75	1.1	<2	>20

DATE	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)
OCT												
18...	16	8	8.0	60	<1	71	1.5	3.0	13	57	1	4.4
NOV												
21...	44	22	22	91	18	108	12	3.4	13	36	0.9	5.2
DEC												
18...	39	21	18	85	4	113	9.6	3.7	11	35	0.8	4.7
JAN												
22...	48	26	22	100	4	107	12	4.4	15	38	0.9	3.8
FEB												
13...	41	22	19	94	11	106	10	3.9	13	38	0.9	3.6
MAR												
18...	35	16	19	68	<1	92	8.4	3.4	9.2	34	0.7	3.5
APR												
22...	43	22	21	100	43	129	10	4.3	17	43	1	4.3
MAY												
13...	30	16	14	86	<1	108	5.6	3.9	16	50	1	4.2
JUN												
18...	28	15	13	70	14	95	5.1	3.6	13	47	1	3.8

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CYANIDE TOTAL (MG/L AS CN)	CARBON, ORGANIC TOTAL (MG/L AS C)	ACROLEIN TOTAL (UG/L)	ACRYLONITRILE TOTAL (UG/L)
OCT												
18...	20	14	<0.010	<0.050	<0.010	0.40	0.040	0.020	--	7.8	<20	<20
NOV												
21...	30	14	0.010	0.500	0.070	0.50	0.050	0.030	<0.010	7.1	--	--
DEC												
18...	27	15	<0.010	0.097	0.020	0.60	0.070	0.060	<0.010	9.4	--	--
JAN												
22...	33	18	<0.010	0.360	0.010	0.40	0.050	0.040	<0.010	6.4	--	--
FEB												
13...	33	18	<0.010	0.310	0.020	0.50	0.060	0.010	<0.010	6.8	--	--
MAR												
18...	22	10	<0.010	<0.050	0.020	0.40	0.060	<0.010	<0.010	9.0	<20	<20
APR												
22...	33	19	<0.010	0.300	0.020	0.70	0.060	0.010	<0.010	7.8	--	--
MAY												
13...	30	18	<0.010	<0.050	0.020	0.40	0.010	<0.010	<0.010	7.9	<20	<20
JUN												
18...	23	14	<0.010	<0.050	0.050	0.60	0.050	0.030	<0.010	8.5	--	--

07345700 LAKE O' THE PINES AT HIGHWAY 155 BRIDGE NEAR ORE CITY, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	BENZENE TOTAL (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)
OCT 18...	<3.0	<0.2	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
APR 22...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	DIBROMO CHLORO-PROPANE WATER WHOLE TOT.REC (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)
OCT 18...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
APR 22...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)
OCT 18...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<5.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<5.0
APR 22...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<5.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--	--

07345700 LAKE O' THE PINES AT HIGHWAY 155 BRIDGE NEAR ORE CITY, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)
OCT 18...	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0
APR 22...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	XYLENE WATER UNFLTRD REC (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)
OCT 18...	<3.0	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<3.0	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
APR 22...	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<3.0	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--

DATE	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6 -DIBENZ -ANTHRA -CENE TOTAL (UG/L)	3,3'-DI-CHLORO-BENZI-DINE TOTAL (UG/L)
OCT 18...	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0
APR 22...	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--

07345700 LAKE O' THE PINES AT HIGHWAY 155 BRIDGE NEAR ORE CITY, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)
OCT 18...	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0
APR 22...	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--

DATE	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)
OCT 18...	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0
NOV 21...	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0
APR 22...	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0
JUN 18...	--	--	--	--	--	--	--	--	--	--	--

DATE	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)
OCT 18...	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030
NOV 21...	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030
APR 22...	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030
JUN 18...	--	--	--	--	--	--	--	--	--	--	--

07345700 LAKE O' THE PINES AT HIGHWAY 155 BRIDGE NEAR ORE CITY, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L)	CHLOR-DANE TRANS WATER WHOLE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN-I WATER WHOLE REC (UG/L)	ENDO-SULFAN BETA TOTAL (UG/L)	ENDO-SULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)
OCT											
18...	<0.10	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060
NOV											
21...	--	--	--	--	--	--	--	--	--	--	--
DEC											
18...	--	--	--	--	--	--	--	--	--	--	--
JAN											
22...	--	--	--	--	--	--	--	--	--	--	--
FEB											
13...	--	--	--	--	--	--	--	--	--	--	--
MAR											
18...	<0.10	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060
APR											
22...	--	--	--	--	--	--	--	--	--	--	--
MAY											
13...	<0.10	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060
JUN											
18...	--	--	--	--	--	--	--	--	--	--	--

DATE	ENDRIN ALDE-HYDE TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)
OCT											
18...	<0.20	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1
NOV											
21...	--	--	--	--	--	--	--	--	--	--	--
DEC											
18...	--	--	--	--	--	--	--	--	--	--	--
JAN											
22...	--	--	--	--	--	--	--	--	--	--	--
FEB											
13...	--	--	--	--	--	--	--	--	--	--	--
MAR											
18...	<0.20	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1
APR											
22...	--	--	--	--	--	--	--	--	--	--	--
MAY											
13...	<0.20	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1
JUN											
18...	--	--	--	--	--	--	--	--	--	--	--

07345890 LAKE O' THE PINES ABOVE DAM NEAR JEFFERSON, TX

LOCATION.--lat 32°45'18", long 94°30'01", Marion County, Hydrologic Unit 1140305, on left bank, 1,320 ft north of Ferrell's Bridge Dam gate structure, and 9.2 mi west of Jefferson.

DRAINAGE AREA.--850 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: July 1991 to September 1992 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT												
17...	1700	86	96	6.5	6.9	23.0	765	7.7	89	1.7	--	K23
NOV												
22...	1215	78	95	6.2	7.6	14.5	760	9.2	90	0.3	K8	36
DEC												
19...	1315	84	93	6.1	6.7	12.0	770	8.1	74	0.1	<1	K22
JAN												
22...	1535	100	109	6.2	7.1	9.0	755	13.1	114	1.0	K1	<2
FEB												
13...	1705	107	115	6.6	6.9	11.0	760	10.6	96	0.5	K5	K220
MAR												
18...	1730	113	128	6.9	7.5	16.5	750	9.7	101	0.6	<1	K13
APR												
23...	1745	118	124	7.5	8.3	22.5	765	9.1	105	1.1	K8	K14
MAY												
12...	1825	120	124	6.9	7.1	24.5	760	8.4	101	1.1	K5	K38
JUN												
17...	1615	113	122	7.8	7.2	30.0	760	7.6	101	0.5	K3	52

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
OCT												
17...	20	7	13	48	<1	67	3.2	2.8	8.2	43	0.8	3.4
NOV												
22...	17	5	12	48	1	56	2.7	2.6	8.7	47	0.9	3.2
DEC												
19...	17	9	8.0	48	4	78	2.6	2.5	8.2	46	0.9	3.1
JAN												
22...	22	14	8.0	57	1	61	4.4	2.7	9.3	43	0.9	3.6
FEB												
13...	23	15	8.0	61	10	96	5.1	2.6	8.7	40	0.8	3.5
MAR												
18...	29	18	11	66	<1	82	6.6	3.1	9.8	39	0.8	3.6
APR												
23...	30	17	13	65	<1	78	7.0	3.1	8.8	36	0.7	3.4
MAY												
12...	29	17	12	68	<1	91	6.3	3.2	10	39	0.8	3.6
JUN												
17...	27	13	14	63	<1	78	5.7	3.2	10	41	0.8	3.3

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CYANIDE TOTAL (MG/L AS CN)	CARBON, ORGANIC TOTAL (MG/L AS C)	ACRO-LEIN TOTAL (UG/L)	ACRYLO-NITRILE TOTAL (UG/L)
OCT												
17...	13	10	0.030	0.067	0.050	0.50	0.020	<0.010	<0.010	6.7	<20	<20
NOV												
22...	14	9.7	<0.010	0.110	0.060	0.30	<0.010	<0.010	<0.010	5.7	--	--
DEC												
19...	16	10	<0.010	0.094	0.070	0.40	0.020	<0.010	<0.010	5.6	--	--
JAN												
22...	21	11	<0.010	0.170	0.040	0.40	0.030	<0.010	<0.010	5.7	--	--
FEB												
13...	23	12	<0.010	0.190	0.030	0.40	0.020	0.020	<0.010	6.0	--	--
MAR												
18...	23	12	<0.010	0.110	0.010	0.40	0.020	<0.010	<0.010	6.2	<20	<20
APR												
23...	22	12	<0.010	<0.050	<0.010	0.40	0.010	0.010	<0.010	7.1	--	--
MAY												
12...	24	12	<0.010	<0.050	0.030	0.20	<0.010	<0.010	<0.010	6.4	<20	<20
JUN												
17...	20	12	<0.010	<0.050	0.020	0.40	0.020	<0.010	<0.010	6.4	--	--

07345890 LAKE O' THE PINES ABOVE DAM NEAR JEFFERSON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	BENZENE TOTAL (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)
OCT 17...	<3.0	<0.2	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
NOV 22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
APR 23...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	DIBROMO CHLORO-PROPANE WATER WHOLE TOT.REC (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)
OCT 17...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
NOV 22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
APR 23...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)
OCT 17...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<5.0
NOV 22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<5.0
APR 23...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<5.0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	--

07345890 LAKE O' THE PINES ABOVE DAM NEAR JEFFERSON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)
OCT												
17...	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0
NOV												
22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
19...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
18...	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0
APR												
23...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
12...	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0
JUN												
17...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	XYLENE WATER UNFLTRD REC (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)
OCT											
17...	<3.0	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
NOV											
22...	--	--	--	--	--	--	--	--	--	--	--
DEC											
19...	--	--	--	--	--	--	--	--	--	--	--
JAN											
22...	--	--	--	--	--	--	--	--	--	--	--
FEB											
13...	--	--	--	--	--	--	--	--	--	--	--
MAR											
18...	<3.0	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
APR											
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
12...	<3.0	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUN											
17...	--	--	--	--	--	--	--	--	--	--	--

DATE	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6 -DIBENZ -ANTHRA -CENE TOTAL (UG/L)	3,3'-DI-CHLORO-BENZI-DINE TOTAL (UG/L)
OCT											
17...	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0
NOV											
22...	--	--	--	--	--	--	--	--	--	--	--
DEC											
19...	--	--	--	--	--	--	--	--	--	--	--
JAN											
22...	--	--	--	--	--	--	--	--	--	--	--
FEB											
13...	--	--	--	--	--	--	--	--	--	--	--
MAR											
18...	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0
APR											
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
12...	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0
JUN											
17...	--	--	--	--	--	--	--	--	--	--	--

07345890 LAKE O' THE PINES ABOVE DAM NEAR JEFFERSON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)
OCT 17...	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0
NOV 22...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0
APR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--

DATE	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)
OCT 17...	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0
NOV 22...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0
APR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--

DATE	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)
OCT 17...	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.05	<0.03	<0.09	<0.050
NOV 22...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030
APR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030
JUN 17...	--	--	--	--	--	--	--	--	--	--	--

07345890 LAKE O' THE PINES ABOVE DAM NEAR JEFFERSON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CHLORDANE CIS WATER WHOLE TOTAL (UG/L)	CHLORDANE TRANS WATER WHOLE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN-I WATER WHOLE REC (UG/L)	ENDOSULFAN BETA TOTAL (UG/L)	ENDOSULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)
OCT 17...	<0.10	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060
NOV 22...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<0.10	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060
APR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<0.10	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060
JUN 17...	--	--	--	--	--	--	--	--	--	--	--

DATE	ENDRIN ALDEHYDE TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)
OCT 17...	<0.20	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1
NOV 22...	--	--	--	--	-	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	<0.20	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1
APR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<0.20	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1
JUN 17...	--	--	--	--	--	--	--	--	--	--	--

07345900 LAKE O' THE PINES NEAR JEFFERSON, TX

LOCATION.--Lat 32°45'04", long 94°29'59", Marion County, Hydrologic Unit 11140305, on left bank 1,500 ft upstream from left end of Ferrell's Bridge Dam on Big Cypress Creek, on Farm Road 726, 9.0 mi west of Jefferson, and 80.1 mi upstream from mouth.

DRAINAGE AREA.--850 mi².

PERIOD OF RECORD.--August 1957 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1969 to September 1984.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Nov. 12, 1957, non-recording gage at same site and datum.

REMARKS.--The lake is formed by a rolled earthfill dam 10,600 ft long, including a 200-foot-wide concrete spillway. Impoundment of water began Aug. 21, 1957, and the dam was completed June 25, 1958. Official operation began Dec. 11, 1959. The flood-control outlet works consist of two 10.0-foot-diameter conduits that are controlled by two 8.0- by 12.5-foot electrically driven broome-type gates. The low-flow outlet works consist of a controlled 14-inch pipe. Flow over the spillway is discharged into a 2,000-foot-long rectified channel and then into Cypress Creek. The capacity table is based on a survey made in 1950. The lake was built for conservation, flood control, and water supply. During the current year, an unknown amount of water was diverted from the lake for municipal and industrial uses. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	277.0	-
Crest of spillway	249.5	842,100
Top of conservation pool	228.5	254,900
Crest of intake to wet well (14 in)	202.5	5,760
Lowest gated outlet (invert)	200.0	2,860

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 694,360 acre-ft May 5, 1966 (elevation, 245.41 ft); minimum since December 1959, 210,100 acre-ft Oct. 6, 1984 (elevation, 225.98 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 389,300 acre-ft July 4 (elevation, 234.86 ft); minimum daily, 250,000 acre-ft Oct. 22, 25 (elevation, 228.24 ft).

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

228.0	245,600	231.0	303,800	234.0	369,100
229.0	264,300	232.0	324,800	235.0	392,700
230.0	283,700	233.0	346,500		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	265000	261100	264700	271400	262000	264100	272700	255800	282900	371700	296100	284900
2	263900	260900	265000	267900	262000	262900	268500	255600	286500	378900	303000	285900
3	262800	261200	265600	263100	262000	262400	265000	255400	288100	388100	304700	287900
4	261600	261400	265600	259400	262600	264300	262000	255200	290300	389300	301800	286900
5	260500	261800	267500	258200	263100	266400	259000	255200	291300	386700	298700	286500
6	259000	262000	269200	257800	262400	268100	257500	255200	290700	383100	295100	286300
7	257500	262400	269400	257500	261600	269100	256200	255000	290000	378000	292100	286100
8	256000	262000	269400	258600	260900	270000	255400	254800	289600	373500	290000	285900
9	254800	261200	270400	258800	259500	276000	255200	254500	289400	368200	288500	285700
10	254100	260100	267700	258600	258800	280100	255200	257300	290700	361300	287300	285300
11	253500	259000	265400	259700	258200	308800	255800	255600	291300	353700	286100	285100
12	253000	257800	266600	259700	260300	318800	256500	256000	290700	348300	285900	284700
13	252600	256300	266600	264300	261800	321400	256700	255800	287700	343000	285700	284300
14	252200	255000	266400	263500	268700	322900	256900	256300	288700	337100	285100	284100
15	252100	254300	266400	265000	279500	323100	257100	257700	288500	330800	284500	283700
16	251700	253700	266400	264300	284300	321400	257500	258200	287900	324100	284300	283300
17	251300	257100	266200	265000	286700	318800	257800	258800	287300	317800	283900	283100
18	251100	257100	265800	266600	286100	317100	257800	260100	287100	313200	283700	282900
19	250800	262600	265600	266800	282900	314600	259700	266000	285900	309800	283500	284300
20	250600	265000	266400	267100	279000	311300	261100	268100	285100	309200	282900	283500
21	250400	267500	267300	268700	275100	307800	260700	269200	284900	308600	282700	289000
22	250000	271800	267300	268900	273900	305700	260100	271200	284900	306100	282500	288300
23	250600	274900	271000	270000	270400	302800	259700	273300	285100	302000	281900	287700
24	250200	274500	278000	266000	267100	299500	259200	273700	285100	298500	281300	286700
25	250000	273300	282100	265000	268100	296100	258600	275100	284900	296500	281300	284900
26	250200	271900	284300	265000	265200	293100	257800	276000	284900	294500	281100	282300
27	250900	267100	285100	265800	264700	290000	256700	276600	284300	293500	281100	279700
28	250900	264100	282900	264700	264300	286700	255600	278400	292900	292100	280500	276400
29	258200	261400	279300	264100	264300	283900	256700	279300	311300	290900	279900	271800
30	258600	264800	276400	262900	---	280500	256200	279700	338600	289600	279500	268500
31	260900	---	274300	262000	---	276400	---	280100	---	290700	279000	---
MAX	265000	274900	285100	271400	286700	323100	272700	280100	338600	389300	304700	289000
MIN	250000	253700	264700	257500	258200	262400	255200	254500	282900	289600	279000	268500
(↑)	228.82	229.03	229.52	228.88	229.00	229.63	228.57	229.82	232.64	230.35	229.76	229.22
(Φ)	-5100	+3900	+9500	-12300	+2300	+12100	-20200	+23900	+58500	-47900	-11700	-10500

CAL YR 1991 MAX 384300 MIN 250000 (Φ) -19200
WTR YR 1992 MAX 389300 MIN 250000 (Φ) -2500

(↑) Elevation, in feet, at end of month.
(Φ) Change in contents, in acre-feet.

07346000 BIG CYPRESS CREEK NEAR JEFFERSON, TX

LOCATION.--Lat 32°44'58", long 94°29'55", Marion County, Hydrologic Unit 11140306, on left bank 950 ft downstream from Ferrell's Bridge Dam, 7.6 mi upstream from French Creek, and 8.5 mi west of Jefferson.

DRAINAGE AREA.--850 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1924 to September 1959 (published as Cypress Creek), October 1979 to current year. Records of stage and discharge for the period October 1959 to September 1979 published by the U.S. Army Corps of Engineers, New Orleans District.

GAGE.--Water-stage recorder. Datum of gage is 180.00 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers benchmark). Prior to Nov. 2, 1933, staff gage, and Nov. 2, 1933, to Dec. 8, 1955, water-stage recorder, at site about 950 ft upstream at datum 3.70 ft higher. After Dec. 9, 1955, at site about 550 ft downstream or at present site at datum 180.00 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow completely regulated by Lake O' the Pines (station 07345900), 950 ft upstream, since August 1957. Gage-height telemeter at station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--33 years (water years 1925-57), prior to completion of Ferrells Bridge Dam, 660 ft³/s (478,200 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION, (WATER YEARS, 1925-57).--Maximum discharge, 57,100 ft³/s Apr. 1, 1945 (gage height, 28.78. ft, site and datum then in use), from rating curve extended above 29000 ft³/s; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	554	e351	680	e3210	1110	1550	2560	42	53	883	1150	52
2	553	e447	589	e3210	1050	1550	2270	41	65	1360	1360	52
3	550	e645	739	e2390	1030	1560	1700	41	121	1820	1980	59
4	550	e669	976	e1450	1030	1600	1480	35	216	1900	2550	54
5	549	e666	1010	e1050	1040	1630	1370	26	308	2240	2600	53
6	544	e672	1280	e1040	1040	1600	991	27	400	2690	2610	52
7	545	e709	1540	e863	1030	1580	626	28	403	2720	2150	54
8	449	e916	1570	e613	1020	1580	301	28	399	2760	1490	55
9	171	e939	1900	e614	1020	1590	94	28	399	2790	1030	55
10	13	e940	2450	e480	1020	1620	39	28	398	2790	683	54
11	3.0	e940	2040	e273	1020	1720	37	30	483	2780	329	55
12	2.9	e942	1480	e272	1040	1990	37	34	652	2770	133	55
13	2.7	e593	1280	e271	1080	1770	37	31	658	2770	65	55
14	2.8	e84	1530	e270	1060	1540	36	30	658	2760	64	53
15	2.8	e20	1550	e364	1050	1750	35	32	660	2780	63	53
16	2.8	3.4	1550	640	1050	2300	35	33	593	2820	61	53
17	2.8	2.3	1540	660	1310	2640	35	31	278	2810	60	53
18	2.8	2.2	1540	676	2080	2670	35	31	142	2800	61	53
19	2.6	20	1540	684	2610	2660	35	38	139	2780	60	54
20	2.7	106	1550	675	2640	2640	203	34	150	2760	60	54
21	2.7	281	1600	815	2640	2640	469	32	152	2760	60	64
22	2.7	714	1600	1250	2640	2630	641	31	101	2760	60	218
23	2.7	1210	1580	1550	2650	2620	650	31	54	2760	60	493
24	2.6	2050	1570	1590	2620	2610	650	32	48	2470	59	741
25	2.6	2570	1570	1600	2640	2640	644	32	40	1530	58	1290
26	2.6	2620	e2050	1590	2210	2630	640	31	40	1160	56	1610
27	2.6	2310	e3180	1610	1630	2610	534	31	40	927	51	1670
28	2.5	1600	e3210	1620	1570	2600	202	33	39	717	50	1670
29	4.2	1320	e3220	1600	1560	2600	46	40	202	775	52	1670
30	3.0	900	e3210	1600	---	2580	43	33	546	1080	54	1660
31	165	---	e3210	1420	---	2570	---	31	---	1130	54	---
TOTAL	4699.1	25241.9	54334	35950	45490	66270	16475	1005	8437	67852	19173	12164
MEAN	152	841	1753	1160	1569	2138	549	32.4	281	2189	618	405
MAX	554	2620	3220	3210	2650	2670	2560	42	660	2820	2610	1670
MIN	2.5	2.2	589	270	1020	1540	35	26	39	717	50	52
AC-FT	9320	50070	107800	71310	90230	131400	32680	1990	16730	134600	38030	24130

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1992#, BY WATER YEAR (WY)

MEAN	167	218	584	715	1202	1218	1072	757	895	289	98.1	95.4
MAX	647	841	1753	2083	2432	2645	2669	1835	2750	2189	618	405
(WY)	1980	1992	1992	1991	1991	1988	1990	1991	1989	1992	1992	1992
MIN	3.35	4.82	4.13	4.16	127	290	137	32.4	32.5	19.9	16.2	8.70
(WY)	1981	1989	1982	1981	1981	1981	1981	1992	1987	1980	1982	1980

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1959 - 1992#	
ANNUAL TOTAL	417476.0		357091.0			
ANNUAL MEAN	1144		976		607	
HIGHEST ANNUAL MEAN					1062	1991
LOWEST ANNUAL MEAN					108	1984
HIGHEST DAILY MEAN	3220	Dec 29	3220	Dec 29	3220	Dec 29 1991
LOWEST DAILY MEAN	2.2	Nov 18	2.2	Nov 18	.00	Jul 26 1987
ANNUAL SEVEN-DAY MINIMUM	2.6	Oct 22	2.6	Oct 22	1.4	Oct 18 1979
INSTANTANEOUS PEAK FLOW			3220	Dec 29	3220	Dec 29 1991
INSTANTANEOUS PEAK STAGE			19.97	Dec 29	19.97	Dec 29 1991
INSTANTANEOUS LOW FLOW			.05	Nov 16	.00	at times
ANNUAL RUNOFF (AC-FT)	828100		708300		439700	
10 PERCENT EXCEEDS	2710		2630		2010	
50 PERCENT EXCEEDS	709		663		160	
90 PERCENT EXCEEDS	26		31		19	

Period of regulated streamflow.

07346000 BIG CYPRESS CREEK NEAR JEFFERSON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January 1983 to September 1985, July 1991 to September 1992 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	SPECIFIC CONDUCTANCE LAB (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	PH WATER WHOLE LAB (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
OCT 17...	1420	1.1	91	100	6.2	6.9	22.0	765	5.2	59	1.3	--
NOV 22...	1015	710	79	102	6.5	6.5	14.5	760	10.9	107	0.2	40
DEC 19...	1140	1740	84	93	6.0	6.8	12.5	770	11.1	103	0	K2
JAN 22...	1445	1710	105	109	6.3	6.8	11.0	755	11.4	104	1.0	K8
FEB 13...	1805	1300	107	116	6.8	6.9	11.0	760	12.6	115	0.6	<1
MAR 19...	1705	3030	115	128	6.8	7.1	16.0	760	11.0	112	0.5	<2
APR 23...	1540	701	118	124	6.8	7.9	20.0	765	9.4	103	1.6	47
MAY 12...	1545	64	120	127	6.5	7.3	22.0	760	6.9	79	0.7	K32
JUN 17...	1350	266	118	123	6.4	6.7	26.0	760	7.3	90	1.6	K12

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO
OCT 17...	250	20	6	14	48	<1	67	3.5	2.8	8.3	42	0.8
NOV 22...	160	20	8	12	49	5	65	3.7	2.6	8.9	45	0.9
DEC 19...	K35	17	9	8.4	48	1	66	2.7	2.5	8.4	46	0.9
JAN 22...	K10	23	14	8.3	58	4	62	4.6	2.7	9.5	43	0.9
FEB 13...	K38	24	15	9.0	62	8	80	5.2	2.7	9.0	41	0.8
MAR 19...	K10	29	18	11	65	<1	91	6.6	3.1	9.7	39	0.8
APR 23...	250	30	17	13	65	<1	80	6.8	3.1	9.3	37	0.7
MAY 12...	200	30	14	16	65	1	75	6.7	3.2	10	39	0.8
JUN 17...	>100	28	14	14	64	<1	82	6.0	3.2	10	40	0.8

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CYANIDE TOTAL (MG/L AS CN)	CARBON, ORGANIC TOTAL (MG/L AS C)	ACROLEIN TOTAL (UG/L)
OCT 17...	3.4	12	9.4	0.030	0.190	0.180	0.60	0.050	0.020	<0.010	6.0	<20
NOV 22...	3.2	14	9.8	<0.010	0.099	0.040	0.40	0.010	0.010	<0.010	5.7	--
DEC 19...	3.3	16	9.7	<0.010	0.095	0.080	0.50	0.030	<0.010	<0.010	5.7	--
JAN 22...	3.7	21	11	<0.010	0.170	0.050	0.40	0.030	0.030	<0.010	5.6	--
FEB 13...	3.5	23	12	<0.010	0.190	0.020	0.50	0.040	0.010	<0.010	6.2	--
MAR 19...	2.6	23	12	<0.010	0.110	0.010	0.40	0.020	<0.010	<0.010	6.4	<20
APR 23...	3.3	22	12	<0.010	<0.050	0.020	0.50	0.020	--	--	7.6	--
MAY 12...	3.3	22	11	<0.010	<0.050	0.160	0.50	<0.010	<0.010	<0.010	7.0	<20
JUN 17...	3.3	21	12	<0.010	0.060	0.050	0.40	0.030	0.010	<0.010	6.4	--

07346000 BIG CYPRESS CREEK NEAR JEFFERSON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	ACRYLO-NITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L)
OCT 17...	<20	<3.0	<0.2	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
NOV 22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
APR 23...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMO CHLORO-PROPANE WATER WHOLE TOT.REC (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)
OCT 17...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
NOV 22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<5.0	<5.0	<3.0	<3.0
APR 23...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<5.0	<5.0	<3.0	<3.0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)
OCT 17...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
NOV 22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0
APR 23...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	--

07346000 BIG CYPRESS CREEK NEAR JEFFERSON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NAPHTHALENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRACHLORO-WAT UNF REC (UG/L)	ETHANE, 1,1,2,2 TETRACHLORO-WAT UNF REC (UG/L)	TETRACHLOROETHYLENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE 1,2,4-TRICHLORO-WAT UNF REC (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	123-TRICHLOROPROPANE WATER WHOLE TOTAL (UG/L)
OCT 17...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
NOV 22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0
APR 23...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	VINYL CHLORIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ACENAPHTHYLENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZIDINE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)
OCT 17...	<1.0	<3.0	--	--	--	--	--	--	--	--	--	--
NOV 22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<1.0	<3.0	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
APR 23...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<1.0	<3.0	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	PARACHLORO-META CRESOL TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	1,2,5,6-DIBENZ-ANTHRACENE TOTAL (UG/L)	3,3'-DICHLOROBENZIDINE TOTAL (UG/L)
OCT 17...	--	--	--	--	--	--	--	--	--	--	--
NOV 22...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0
APR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--

07346000 BIG CYPRESS CREEK NEAR JEFFERSON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)
OCT 17...	--	--	--	--	--	--	--	--	--	--	--
NOV 22...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0
APR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--

DATE	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)
OCT 17...	--	--	--	--	--	--	--	--	--	--	--
NOV 22...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0
APR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--

DATE	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)
OCT 17...	--	--	--	--	--	--	--	<0.05	<0.03	<0.09	<0.050
NOV 22...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030
APR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030
JUN 17...	--	--	--	--	--	--	--	--	--	--	--

07346000 BIG CYPRESS CREEK NEAR JEFFERSON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CHLORDANE CIS WATER WHOLE TOTAL (UG/L)	CHLORDANE TRANS WATER WHOLE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN-I WATER WHOLE REC (UG/L)	ENDOSULFAN BETA TOTAL (UG/L)	ENDOSULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)
OCT 17...	<0.10	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060
NOV 22...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<0.10	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060
APR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<0.10	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060
JUN 17...	--	--	--	--	--	--	--	--	--	--	--

DATE	ENDRIN ALDEHYDE TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)
OCT 17...	<0.20	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1
NOV 22...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<0.20	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1
APR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<0.20	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1
JUN 17...	--	--	--	--	--	--	--	--	--	--	--

07346045 BLACK CYPRESS BAYOU AT JEFFERSON, TX

LOCATION.--Lat 32°46'40", long 94°21'26", Marion County, Hydrologic Unit 11140306 near center of channel at downstream side of bridge on U.S. Highway 59, 1.1 mi north of Jefferson, 2.0 mi upstream from Texas and Pacific Railway Co. bridge, and 5.2 mi upstream from mouth.

DRAINAGE AREA.--365 mi².

PERIOD OF RECORD.--September 1968 to current year. May 1938 to September 1955 (daily gage heights) and November 1956 to August 1968 (daily gage heights and discharge measurements) published by U.S. Army Corps of Engineers as "Black Cypress Creek at Jefferson". September 1964 to August 1968 operated as low-flow partial-record station only.
Water-quality records.--Chemical analyses: October 1967 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 171.47 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records good except those below 25 ft³/s and those for estimated daily discharges, which are fair. No known regulation or diversion in vicinity of the gage. Gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1938, 22.42 ft Apr. 29, 1958, from records by U.S. Army Corps of Engineers.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)

No peaks greater than base discharge during year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	274	784	586	532	e946	452	177	312	882	149	15
2	43	360	781	539	524	774	408	162	378	2850	174	18
3	41	501	832	511	508	690	370	163	419	3260	250	87
4	38	726	1090	491	482	692	338	174	450	2370	419	133
5	33	953	1400	477	512	784	314	184	464	1610	594	110
6	28	940	e1460	470	527	893	297	176	461	1120	613	127
7	24	809	1270	462	489	1500	290	153	466	798	519	176
8	22	675	1030	452	473	1960	284	130	474	565	395	189
9	20	526	896	431	486	1860	276	111	405	374	282	187
10	19	388	775	399	490	1570	282	97	346	246	195	181
11	19	286	676	385	477	1270	288	87	564	178	148	146
12	18	217	618	e406	510	2160	287	119	417	139	123	102
13	18	185	659	e414	842	3370	275	168	360	110	107	72
14	17	171	713	407	764	2490	256	178	337	92	92	56
15	17	160	812	403	1410	1630	238	252	339	79	80	48
16	17	151	1010	420	e2440	1180	224	333	364	68	73	42
17	18	158	1150	438	e2450	925	210	354	413	63	68	38
18	18	205	1180	485	e2080	823	195	324	425	61	60	35
19	17	259	1030	523	e1620	697	184	283	358	72	52	33
20	17	484	857	506	e1250	608	184	298	260	100	46	53
21	16	602	904	493	e1030	550	179	333	186	146	40	118
22	16	829	905	552	e882	526	173	381	147	225	36	169
23	16	1610	1000	593	e800	503	195	448	122	291	32	189
24	16	e1940	1250	611	e1150	482	244	484	104	371	28	222
25	17	1700	1470	622	e3230	539	309	457	90	449	26	331
26	17	1290	e1620	607	e3480	598	367	413	120	428	24	461
27	18	e966	e1490	609	e3000	562	365	339	133	313	22	500
28	24	744	e1190	616	e1980	551	292	275	120	194	21	471
29	52	602	e933	591	e1310	566	222	264	315	143	19	417
30	140	553	751	563	---	534	199	284	501	131	18	320
31	193	---	655	543	---	491	---	275	---	138	17	---
TOTAL	1018	19264	31191	15605	35728	32724	8197	7876	9850	17866	4722	5046
MEAN	32.8	642	1006	503	1232	1056	273	254	328	576	152	168
MAX	193	1940	1620	622	3480	3370	452	484	564	3260	613	500
MIN	16	151	618	385	473	482	173	87	90	61	17	15
AC-FT	2020	38210	61870	30950	70870	64910	16260	15620	19540	35440	9370	10010
CFSM	.09	1.76	2.76	1.38	3.38	2.89	.75	.70	.90	1.58	.42	.46
IN.	.10	1.96	3.18	1.59	3.64	3.34	.84	.80	1.00	1.82	.48	.51

e Estimated

07346045 BLACK CYPRESS BAYOU AT JEFFERSON, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1992, BY WATER YEAR (WY)

MEAN	59.9	246	525	478	641	721	617	486	297	88.0	48.3	56.3
MAX	415	1344	2157	1508	1612	1606	2006	1934	1321	576	623	581
(WY)	1974	1975	1988	1991	1975	1990	1973	1991	1974	1992	1979	1974
MIN	.009	13.6	62.1	99.0	156	159	109	50.8	4.68	.97	.060	.000
(WY)	1979	1984	1990	1971	1981	1986	1971	1984	1984	1978	1969	1969

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1969 - 1992	
ANNUAL TOTAL	256969		189087			
ANNUAL MEAN	704		517		354	
HIGHEST ANNUAL MEAN					647	1991
LOWEST ANNUAL MEAN					78.3	1971
HIGHEST DAILY MEAN	6130	May 6	3480	Feb 26	10700	Dec 28 1987
LOWEST DAILY MEAN	12	Jul 24	15	Sep 1	.00	Aug 10 1969
ANNUAL SEVEN-DAY MINIMUM	16	Oct 19	16	Oct 19	.00	Aug 10 1969
INSTANTANEOUS PEAK FLOW			3540	Mar 13	11600	Dec 28 1987
INSTANTANEOUS PEAK STAGE			15.85	Mar 13	19.34	Dec 28 1987
INSTANTANEOUS LOW FLOW			15	Sep 1	.00	*
ANNUAL RUNOFF (AC-FT)	509700		375100		256300	
ANNUAL RUNOFF (CFSM)	1.93		1.42		.97	
ANNUAL RUNOFF (INCHES)	26.19		19.27		13.17	
10 PERCENT EXCEEDS	1630		1180		865	
50 PERCENT EXCEEDS	483		368		163	
90 PERCENT EXCEEDS	25		34		1.3	

* No flow at times most years.

07346050 LITTLE CYPRESS CREEK NEAR ORE CITY, TX

LOCATION.--Lat 32°40'21", long 94°45'03", Upshur County, Hydrologic Unit 11140307, on right bank at downstream side of bridge on U.S. Highway 259, 4 mi downstream from Clear Creek, 9 mi south of Ore City, and 12 mi north of Longview.

DRAINAGE AREA.--383 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 232.67 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No known diversions above station. During the year, the city of Gilmer discharged a small amount of sewage effluent into a tributary above this station. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1902 occurred in March 1945; maximum stage since 1945, that of Apr. 24, 1966. The flood in April 1958 reached a stage of 19.4 ft, or 1.3 ft lower than the flood of March 1945 at a point 6 mi upstream, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 13	1000	2,640	11.36	June 30	0230	3,480	11.96

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	198	397	462	799	1150	427	104	202	2210	e88	e120
2	17	198	570	413	752	936	347	103	291	2080	e135	e170
3	16	158	627	387	653	755	281	102	341	2070	e181	e200
4	16	143	551	339	546	632	240	97	416	1640	e212	e200
5	15	138	482	300	517	926	212	87	623	1230	e159	e190
6	15	130	480	284	522	1830	205	77	759	892	e70	e140
7	13	116	508	273	466	1580	211	71	672	639	e41	e80
8	12	88	522	259	424	1470	202	64	483	369	e32	e60
9	9.5	67	554	241	424	1300	194	60	245	139	e29	e40
10	9.1	56	556	221	422	1260	186	55	125	e69	e27	e20
11	7.7	50	451	204	422	1360	177	52	117	e42	e27	e19
12	7.1	46	344	235	409	1290	166	77	120	e29	e53	e18
13	6.3	43	475	282	364	2480	153	117	113	e26	e133	e17
14	5.5	40	587	274	535	1860	144	122	131	e35	e123	e16
15	5.0	38	551	271	1010	1340	135	143	120	e86	e74	e40
16	3.8	37	528	288	991	1020	126	158	89	e142	e51	e105
17	3.0	42	547	303	1000	797	120	164	72	e170	e40	e100
18	4.4	121	521	354	1010	681	120	141	61	e186	e32	e90
19	5.5	221	434	419	851	612	122	126	54	e203	e27	e115
20	6.1	582	365	405	712	499	140	129	48	e218	e23	e150
21	6.8	692	733	379	585	441	147	149	43	e197	e19	e160
22	7.0	506	1210	462	456	471	149	151	39	e106	e17	e170
23	7.5	358	1360	547	363	485	191	184	35	e64	e15	e160
24	8.5	324	1620	518	526	439	235	218	34	e48	e13	e120
25	8.4	364	1880	473	728	449	256	157	34	e38	e12	e80
26	9.1	428	1740	481	827	475	211	111	39	e42	e11	e60
27	11	449	1420	577	1420	431	139	103	44	e54	e10	e40
28	14	384	1150	741	1500	432	107	118	48	e50	11	e30
29	29	243	915	745	1310	509	99	148	1900	e47	e74	e26
30	80	177	744	662	---	549	104	179	2990	e47	e180	e20
31	153	---	595	723	---	501	---	196	---	e53	e200	---
TOTAL	529.3	6437	23417	12522	20544	28960	5546	3763	10288	13221	2119	2756
MEAN	17.1	215	755	404	708	934	185	121	343	426	68.4	91.9
MAX	153	692	1880	745	1500	2480	427	218	2990	2210	212	200
MIN	3.0	37	344	204	363	431	99	52	34	26	10	16
AC-FT	1050	12770	46450	24840	40750	57440	11000	7460	20410	26220	4200	5470
CFSM	.04	.56	1.97	1.05	1.85	2.44	.48	.32	.90	1.11	.18	.24
IN.	.05	.63	2.27	1.22	2.00	2.81	.54	.37	1.00	1.28	.21	.27

e Estimated

07346050 LITTLE CYPRESS CREEK NEAR ORE CITY, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1992, BY WATER YEAR (WY)

MEAN	37.9	171	338	323	463	566	586	480	211	60.0	24.7	62.3
MAX	407	1508	1965	1275	1321	1478	3007	1834	905	426	392	614
(WY)	1974	1975	1988	1991	1975	1987	1966	1968	1974	1992	1979	1974
MIN	.000	1.10	3.70	25.6	55.8	40.9	54.3	23.9	2.09	.005	.000	.000
(WY)	1964	1966	1990	1964	1964	1966	1971	1984	1971	1984	1984	1963

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1963 - 1992	
ANNUAL TOTAL	178614.1		130102.3			
ANNUAL MEAN	489		355		280	
HIGHEST ANNUAL MEAN					599	1975
LOWEST ANNUAL MEAN					35.7	1964
HIGHEST DAILY MEAN	4370	May 6	2990	Jun 30	21000	Apr 24 1966
LOWEST DAILY MEAN	1.2	Jul 22	3.0	Oct 17	.00	Aug 16 1963
ANNUAL SEVEN-DAY MINIMUM	2.1	Jul 17	4.8	Oct 14	.00	Aug 16 1963
INSTANTANEOUS PEAK FLOW			3480	Jun 30	23500	Apr 24 1966
INSTANTANEOUS PEAK STAGE			11.96	Jun 30	20.20	Apr 24 1966
INSTANTANEOUS LOW FLOW					.00	at times
ANNUAL RUNOFF (AC-FT)	354300		258100		203200	
ANNUAL RUNOFF (CFSM)	1.28		.93		.73	
ANNUAL RUNOFF (INCHES)	17.35		12.64		9.95	
10 PERCENT EXCEEDS	1370		899		743	
50 PERCENT EXCEEDS	230		178		68	
90 PERCENT EXCEEDS	7.6		18		.12	

07346070 LITTLE CYPRESS CREEK NEAR JEFFERSON, TX

LOCATION (REVISED).--Lat 32°42'46", long 94°20'45", Marion County, Hydrologic Unit 11140307, at downstream side of upstream bridge on U.S. Highway 59, 0.3 mi downstream from Texas and Pacific Railway Co. bridge, 3.3 mi downstream from Grays Creek, 3.5 mi south of Jefferson, and 6.8 mi upstream from mouth.

DRAINAGE AREA.--675 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1946 to current year.

GAGE.--Water-stage recorder and datum collection platform (DCP). Datum of gage is 174.60 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 19, 1947, nonrecording gage at upstream side of bridge at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. There is no known diversions above station, but some sewage effluent is discharged into tributaries that enter Little Cypress Creek above this station. Gage-height telemeter (DCP) at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1944 reached a stage of 21.1 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	245	716	2010	1750	2420	769	283	368	534	85	20
2	35	263	823	1670	1520	2390	738	244	636	710	83	29
3	29	281	906	1370	1330	2310	739	220	646	1580	84	175
4	25	286	911	1150	1200	2370	736	203	570	2510	82	205
5	19	283	911	992	1420	2840	708	189	486	2520	81	124
6	15	271	906	877	1890	2900	654	176	449	2330	117	168
7	13	251	900	785	1720	2830	589	162	448	2180	155	195
8	11	228	870	726	1450	2770	528	147	476	1950	173	206
9	10	212	882	667	1270	2800	475	131	525	1570	168	193
10	8.8	204	910	607	1120	2980	441	118	634	1220	138	146
11	7.2	e187	889	558	997	2950	419	108	760	939	97	95
12	6.0	e161	909	628	1040	2760	398	120	687	699	76	65
13	9.5	e142	1040	723	1850	2560	381	136	497	347	60	49
14	9.1	124	1160	728	2210	2400	360	157	302	139	49	41
15	4.2	113	1080	700	2340	2350	334	181	234	92	42	38
16	3.2	107	982	664	2400	2710	305	207	204	73	54	37
17	3.7	122	909	632	2270	2790	281	214	193	68	108	35
18	4.7	207	855	680	2050	2690	263	211	185	82	133	33
19	5.6	257	819	817	1820	2580	247	240	160	94	117	33
20	6.4	571	836	825	1660	2220	283	278	131	114	84	43
21	6.9	610	1210	829	1520	1750	295	274	110	153	59	106
22	7.3	619	1870	949	1410	1400	290	258	94	172	45	102
23	9.0	671	2520	1050	1550	1160	282	226	82	182	37	90
24	10	720	2780	1030	1690	988	274	223	73	197	33	118
25	11	741	2610	980	2000	1010	260	226	67	210	31	149
26	12	729	2470	951	2580	1080	261	253	67	190	28	168
27	13	696	2350	1070	2610	1020	281	285	73	136	26	171
28	13	627	2340	1600	2560	970	302	313	79	106	24	160
29	31	555	2460	1780	2460	930	331	343	228	92	23	122
30	153	549	2490	1850	---	880	332	316	445	87	22	83
31	171	---	2360	1930	---	823	---	290	---	97	20	---
TOTAL	703.6	11032	43674	31828	51687	64631	12556	6732	9909	21373	2334	3199
MEAN	22.7	368	1409	1027	1782	2085	419	217	330	689	75.3	107
MAX	171	741	2780	2010	2610	2980	769	343	760	2520	173	206
MIN	3.2	107	716	558	997	823	247	108	67	68	20	20
AC-FT	1400	21880	86630	63130	102500	128200	24900	13350	19650	42390	4630	6350
CFSM	.03	.54	2.09	1.52	2.64	3.09	.62	.32	.49	1.02	.11	.16
IN.	.04	.61	2.41	1.75	2.85	3.56	.69	.37	.55	1.18	.13	.18

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1992, BY WATER YEAR (WY)

MEAN	99.6	298	616	701	906	978	1043	1044	411	124	48.6	104
MAX	927	2709	3391	2664	2853	2367	4584	4212	2354	689	667	941
(WY)	1950	1958	1961	1991	1950	1969	1966	1958	1957	1992	1979	1979
MIN	.000	.017	.53	8.33	91.5	100	117	61.6	4.67	.24	.000	.000
(WY)	1953	1957	1957	1957	1964	1966	1972	1971	1971	1964	1956	1952

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1947 - 1992	
ANNUAL TOTAL	381576.6		259658.6			
ANNUAL MEAN	1045		709		529	
HIGHEST ANNUAL MEAN					1260	1958
LOWEST ANNUAL MEAN					67.3	1964
HIGHEST DAILY MEAN	7570	May 4	2980	Mar 10	32700	Apr 26 1966
LOWEST DAILY MEAN	3.2	Oct 16	3.2	Oct 16	.00	Sep 20 1948
ANNUAL SEVEN-DAY MINIMUM	5.0	Oct 15	5.0	Oct 15	.00	Sep 20 1948
INSTANTANEOUS PEAK FLOW			3070	Mar 10	35500	Apr 26 1966
INSTANTANEOUS PEAK STAGE			11.79	Mar 10	22.28	Apr 26 1966
INSTANTANEOUS LOW FLOW			.08	Oct 16	.00	at times
ANNUAL RUNOFF (AC-FT)	756900		515000		383200	
ANNUAL RUNOFF (CFSM)	1.55		1.05		.78	
ANNUAL RUNOFF (INCHES)	21.03		14.31		10.65	
10 PERCENT EXCEEDS	2630		2320		1350	
50 PERCENT EXCEEDS	619		298		172	
90 PERCENT EXCEEDS	29		32		1.1	

07346070 LITTLE CYPRESS CREEK NEAR JEFFERSON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: June 1964 to current year. Pesticide analyses: January 1968 to June 1981.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to September 1990.
WATER TEMPERATURE: October 1967 to September 1990.

INSTRUMENTATION.--From June 1981 to September 1990, specific conductance and water temperature were recorded continuously at this station.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,350 microsiemens Nov. 9, 1969; minimum, 20 microsiemens Mar. 29, 30, 1989.
WATER TEMPERATURE (1967-87, 1989-90): Maximum, 32.5°C on several days during July and August 1987; minimum, 0.0°C on several days during winter months of 1983, 1985.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV												
15...	1130	114	161	6.8	12.0	7.8	73	<0.1	27	18	6.4	2.7
JAN												
18...	1230	655	128	6.6	6.0	--	--	0.9	25	15	5.7	2.5
MAR												
19...	0850	2510	78	6.3	17.5	6.6	69	0.6	20	9	4.6	2.0
MAY												
11...	1825	83	135	6.4	20.0	6.4	71	0.5	25	11	5.7	2.7
AUG												
20...	1350	83	119	7.0	23.5	6.9	81	2.8	21	0	4.9	2.0
27...	0915	38	117	7.1	25.0	4.6	56	0.4	24	1	5.6	2.4

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV												
15...	15	1	4.5	9.0	25	24	0.10	18	101	0.080	0.030	0.110
JAN												
18...	13	1	2.6	9.8	22	24	0.20	18	94	0.120	0.010	0.130
MAR												
19...	6.8	0.7	2.6	11	9.9	9.1	<0.10	10	52	--	0.010	<0.050
MAY												
11...	15	1	2.7	14	14	24	0.20	22	95	0.350	0.030	0.380
AUG												
20...	12	1	5.1	21	12	14	<0.10	14	78	0.270	0.020	0.290
27...	11	1	4.6	23	9.7	15	<0.10	15	77	--	<0.010	0.300

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
NOV												
15...	0.020	0.28	0.30	0.060	0.040	--	--	--	--	--	--	--
JAN												
18...	0.030	0.47	0.50	0.070	0.040	<1	51	<0.5	<1.0	<5	<3	<10
MAR												
19...	0.030	0.57	0.60	0.080	0.040	--	--	--	--	--	--	--
MAY												
11...	0.050	0.35	0.40	0.130	0.120	--	--	--	--	--	--	--
AUG												
20...	0.100	1.2	1.3	0.260	0.200	1	42	<0.5	3.0	<5	6	<10
27...	0.050	0.35	0.40	0.140	0.030	--	--	--	--	--	--	--

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV												
15...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
18...	350	<10	11	71	<0.1	<10	<10	<1	<1.0	91	<6	9
MAR												
19...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
11...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
20...	970	<10	9	150	<0.1	<10	<10	<1	<1.0	76	<6	60
27...	--	--	--	--	--	--	--	--	--	--	--	--

07346085 BIG CYPRESS CREEK NEAR KARNACK, TX

LOCATION.--Lat 32°41'48", long 94°11'15", Harrison-Marion Counties, Hydrologic Unit 11140306, at downstream side of State Highway 43 bridge, at approximate center of bridge span, 1.25 mi north-northwest of State Highways 43 and 143 intersection, and 2.25 mi north-northwest of Karnack, Tx.

DRAINAGE AREA.-- Not determined.

PERIOD OF RECORD.--October 1979 to September 1985, elevations only.
Water-quality records.-- Chemical and biochemical analyses: July 1991 to September 1992 (discontinued).

REMARKS.-- Discharge not determined for all samples.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT											
17...	0945	--	85	6.5	19.5	2.8	7.7	84	1.6	K28	K240
NOV											
20...	1045	--	92	6.2	15.0	14	5.6	55	0.7	850	3200
DEC											
19...	0905	--	79	5.8	10.5	6.1	8.4	74	0.1	60	52
JAN											
22...	1700	E3350	88	6.0	7.0	7.3	11.9	99	1.1	120	120
FEB											
14...	1150	5290	76	6.4	12.5	17	8.7	82	0.9	K300	K3600
MAR											
19...	1330	7030	85	6.3	16.5	9.4	7.3	75	0.5	K240	380
APR											
23...	1235	1050	102	6.4	22.5	9.6	5.2	60	1.0	79	130
MAY											
12...	1210	609	96	6.7	21.5	8.5	7.4	84	0.9	42	K20
JUN											
17...	1020	1360	96	6.2	27.0	8.2	4.9	62	1.7	43	130

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
OCT											
17...	20	6	3.4	2.7	8.4	0.8	3.2	14	11	10	69
NOV											
20...	20	9	4.6	2.1	9.0	0.9	3.5	11	14	13	71
DEC											
19...	17	8	3.4	2.1	7.9	0.8	2.9	9.4	13	11	73
JAN											
22...	20	11	4.2	2.2	8.7	0.9	2.5	8.2	14	12	51
FEB											
14...	17	8	3.8	1.8	6.9	0.7	2.3	9.1	12	10	57
MAR											
19...	22	11	5.0	2.2	7.2	0.7	3.0	11	14	9.2	81
APR											
23...	25	10	5.7	2.5	8.9	0.8	2.2	15	11	14	78
MAY											
12...	21	6	4.7	2.2	9.6	0.9	2.3	15	10	14	77
JUN											
17...	24	10	5.3	2.5	8.5	0.8	2.6	14	13	11	83

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
OCT											
17...	47	<1	--	<0.010	<0.050	0.010	0.29	0.30	0.020	<0.010	<0.010
NOV											
20...	53	11	--	<0.010	<0.050	0.010	0.29	0.30	0.050	0.030	0.030
DEC											
19...	46	8	--	<0.010	<0.050	0.030	0.37	0.40	0.040	0.020	<0.010
JAN											
22...	49	<1	--	<0.010	0.120	0.020	0.28	0.30	0.040	0.020	0.020
FEB											
14...	43	16	0.079	0.010	0.089	0.030	0.47	0.50	0.050	0.030	0.020
MAR											
19...	48	<1	--	<0.010	<0.050	0.020	0.48	0.50	0.060	<0.010	0.020
APR											
23...	55	1	0.240	0.020	0.260	0.090	0.31	0.40	0.060	--	0.050
MAY											
12...	53	8	--	<0.010	0.110	0.020	0.28	0.30	0.040	0.020	0.030
JUN											
17...	52	6	--	<0.010	0.120	0.060	0.44	0.50	0.060	0.030	0.030

07346085 BIG CYPRESS CREEK NEAR KARNACK, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)
OCT											
17...	6.4	<0.010	<1	37	<10	<1	<10	51	<100	<1	<0.1
NOV											
20...	9.9	<0.010	<1	48	<1.0	<1	1	440	<1	84	<0.1
DEC											
19...	8.2	<0.010	<1	43	<1.0	<1	1	420	1	34	<0.1
JAN											
22...	6.2	<0.010	<1	47	<1.0	<1	<1	450	<1	55	0.2
FEB											
14...	8.9	<0.010	<1	<100	<1.0	<1	1	490	<1	60	<0.1
MAR											
19...	9.6	<0.010	<1	52	<1.0	2	1	630	<1	50	0.3
APR											
23...	8.0	--	1	60	<1.0	<1	2	1000	<1	300	<0.1
MAY											
12...	7.7	<0.010	<1	50	<1.0	<1	1	1100	<1	17	<0.1
JUN											
17...	8.3	<0.010	<1	57	<1.0	<1	<1	720	<1	180	<0.1

DATE	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)
OCT											
17...	<1	8	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
NOV											
20...	2	16	--	--	--	--	--	--	--	--	--
DEC											
19...	2	13	--	--	--	--	--	--	--	--	--
JAN											
22...	1	10	--	--	--	--	--	--	--	--	--
FEB											
14...	1	<10	--	--	--	--	--	--	--	--	--
MAR											
19...	2	11	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
APR											
23...	3	7	--	--	--	--	--	--	--	--	--
MAY											
12...	2	6	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
JUN											
17...	1	13	--	--	--	--	--	--	--	--	--

DATE	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)
OCT											
17...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
NOV											
20...	--	--	--	--	--	--	--	--	--	--	--
DEC											
19...	--	--	--	--	--	--	--	--	--	--	--
JAN											
22...	--	--	--	--	--	--	--	--	--	--	--
FEB											
14...	--	--	--	--	--	--	--	--	--	--	--
MAR											
19...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
APR											
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
12...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
JUN											
17...	--	--	--	--	--	--	--	--	--	--	--

07346085 BIG CYPRESS CREEK NEAR KARNACK, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	VINYL CHLORIDE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	ETHANE, 1,1,2,2 TETRACHLORO-WAT UNF REC (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	1,2-DICHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	BENZENE 1,3-DICHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DICHLORO-WATER UNFLTRD REC (UG/L)
OCT 17...	<1.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<5.0	<5.0
NOV 20...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 14...	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<1.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<5.0	<5.0
APR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<1.0	<3.0	<3.0	<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<5.0	<5.0
JUN 17...	--	--	--	--	--	--	--	--	--	--	--

DATE	1,2-TRANSDICHLOROETHENE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ALDRIN, TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)
OCT 17...	<3.0	<3.0	<3.0	<0.040	<0.1	<0.020	<0.060	<0.030	<0.80	<0.050	<2
NOV 20...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
FEB 14...	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<3.0	<3.0	<3.0	<0.040	<0.1	<0.020	<0.060	<0.030	<0.80	<0.030	<2
APR 23...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	<3.0	<3.0	<3.0	<0.040	<0.1	<0.020	<0.060	<0.030	<0.80	<0.030	<2
JUN 17...	--	--	--	--	--	--	--	--	--	--	--

SABINE RIVER MAIN STEM

08017200 COWLEECH FORK SABINE RIVER AT GREENVILLE, TX

LOCATION.--Lat 33°07'58", long 96°04'36", Hunt County, Hydrologic Unit 12010001, on left bank 103 ft downstream from centerline of downstream bridge on Interstate Highway 30 (U.S. Highway 67), 0.3 mi downstream from Horse Creek, 0.9 mi downstream from Louisiana and Arkansas Railroad Co. bridge, 1.8 mi east of Greenville, and at mile 558.3.

DRAINAGE AREA.--77.7 mi².

PERIOD OF RECORD.--February 1959 to current year. Prior to October 1963, published as Sabine River at Greenville.

REVISED RECORDS.--WSP 1732: Drainage area. WSP 2122: 1960, 1963-65.

GAGE.--Water-stage recorder. Datum of gage is 485.07 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. The city of Greenville diverted water from city lakes upstream from gage and from Lake Tawakoni for municipal use. Sewage effluent is returned to a tributary downstream from gage. Extreme low flow is largely sustained by return water from water treatment plant upstream. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1895, 22 ft in May 1935, from information by local resident and city engineer of Greenville. Flood of July 3, 1913, reached a stage of 20 ft, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 29	0530	5,120	16.72	Mar. 9	2045	3,270	16.17
Dec. 9	1715	5,440	16.81	May 18	1430	3,420	16.22
Dec. 21	0930	4,520	16.54	June 29	0845	4,680	16.59

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	1190	400	115	22	14	1.6	.57	55	40	60	.09
2	.08	52	970	147	16	12	1.4	.53	26	13	3.1	.02
3	.07	16	435	41	14	10	1.2	.53	8.9	5.6	35	1.8
4	.03	7.6	66	17	12	543	1.2	.51	5.3	2.8	1.9	.35
5	.01	4.7	28	10	11	445	1.1	.51	3.2	1.3	.36	.19
6	.00	2.5	14	7.7	9.7	102	5.2	.66	5.7	.78	.19	.10
7	.00	1.4	8.3	6.9	8.9	34	6.7	.91	21	.63	.22	.05
8	.00	1.1	5.6	6.6	8.3	20	4.3	.90	447	.53	.31	.02
9	.00	.77	3100	5.6	7.7	1680	2.1	.95	18	.50	.34	.01
10	.00	.48	997	3.9	7.2	710	1.5	.95	3.7	.54	.32	.01
11	.00	.32	226	2.6	7.1	69	1.2	1.1	459	.53	.20	.09
12	.00	.25	1300	2.5	133	35	191	2130	37	.48	.24	.16
13	.00	.23	190	6.1	53	23	116	400	7.2	.46	1.4	.08
14	.00	.23	77	40	19	16	7.6	14	3.1	.38	.62	.05
15	.00	.19	33	19	15	12	2.8	55	1.5	1.9	.39	.03
16	.00	27	16	6.8	12	e9.5	1.4	12	1.0	.60	.32	.01
17	.02	1330	8.3	3.5	9.3	e13	1.0	959	.76	.41	.22	.00
18	.02	170	4.3	379	6.7	e560	.69	3090	.60	1.7	.20	.00
19	.01	147	65	458	5.2	101	2.0	776	.48	1.8	.23	.00
20	.00	67	1190	59	4.4	32	13	346	2.7	.63	.19	.00
21	.00	23	3680	24	4.0	19	5.7	59	.88	.59	.16	.38
22	.00	12	1020	332	28	13	1.7	16	.50	.54	.13	.23
23	.00	7.3	1190	106	525	9.7	.78	8.8	.43	.39	.07	.10
24	.00	4.2	122	34	80	8.1	.36	350	.41	.34	.03	.03
25	.00	2.5	44	16	1170	9.7	.21	67	31	.33	.01	.02
26	7.9	1.8	30	19	548	7.3	.11	133	68	.31	.00	.01
27	89	1.2	85	1070	69	6.4	.07	15	32	.24	.00	.00
28	857	.91	89	636	33	5.0	.36	6.4	303	57	.00	.00
29	4070	4.7	39	147	20	3.9	.87	16	3010	48	.00	.00
30	1040	37	19	62	---	3.0	.62	8.3	382	6.1	.00	.00
31	710	---	10	35	---	2.4	---	4.2	---	727	.02	---
TOTAL	6774.22	3113.38	15461.5	3818.2	2858.5	4528.0	373.77	8473.82	4935.36	915.41	106.17	3.83
MEAN	219	104	499	123	98.6	146	12.5	273	165	29.5	3.42	.13
MAX	4070	1330	3680	1070	1170	1680	191	3090	3010	727	60	1.8
MIN	.00	.19	4.3	2.5	4.0	2.4	.07	.51	.41	.24	.00	.00
AC-FT	13440	6180	30670	7570	5670	8980	741	16810	9790	1820	211	7.6
CFSM	2.81	1.34	6.42	1.59	1.27	1.88	.16	3.52	2.12	.38	.04	.00
IN.	3.24	1.49	7.40	1.83	1.37	2.17	.18	4.06	2.36	.44	.05	.00

e Estimated

SABINE RIVER MAIN STEM--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1992, BY WATER YEAR (WY)

MEAN	51.7	44.2	91.9	57.4	78.8	96.7	91.3	141	67.1	22.5	6.67	33.4
MAX	354	206	573	193	273	390	431	540	353	264	95.2	258
(WY)	1972	1975	1972	1969	1970	1984	1966	1982	1981	1989	1977	1974
MIN	.003	.17	.11	.24	.67	.57	.85	.33	.032	.023	.000	.012
(WY)	1979	1980	1990	1986	1981	1986	1971	1988	1988	1991	1985	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1960 - 1992	
ANNUAL TOTAL	43443.62		51362.16			
ANNUAL MEAN	119		140		65.2	
HIGHEST ANNUAL MEAN					140	1992
LOWEST ANNUAL MEAN					15.9	1971
HIGHEST DAILY MEAN	4070	Oct 29	4070	Oct 29	9730	May 13 1982
LOWEST DAILY MEAN	.00	Jul 2	.00	Oct 6	.00	Aug 4 1964
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 2	.00	Oct 6	.00	Aug 4 1972
INSTANTANEOUS PEAK FLOW			5440	Dec 9	15300	May 13 1982
INSTANTANEOUS PEAK STAGE			16.81	Dec 9	18.47	May 13 1982
INSTANTANEOUS LOW FLOW					.00	*
ANNUAL RUNOFF (AC-FT)	86170		101900		47200	
ANNUAL RUNOFF (CFSM)	1.53		1.81		.84	
ANNUAL RUNOFF (INCHES)	20.80		24.59		11.39	
10 PERCENT EXCEEDS	144		387		55	
50 PERCENT EXCEEDS	1.2		4.8		1.4	
90 PERCENT EXCEEDS	.00		.01		.05	

* No flow at times in 1964, 1969-70, 1972-73, and 1977-91.

08017300 SOUTH FORK SABINE RIVER NEAR QUINLAN, TX

LOCATION.--Lat 32°53'52", long 96°15'11", Hunt County, Hydrologic Unit 12010001, on right bank at downstream side of bridge on Farm Road 1565, 2.4 mi upstream from Dry Creek, 6.2 mi upstream from Bearpen Creek, 7 mi southwest of Quinlan, and 25 mi upstream from mouth.

DRAINAGE AREA.--78.7 mi².

PERIOD OF RECORD.--February 1959 to current year.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 461.0 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. The city of Royse City discharged sewage effluent into the river above this station. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1890, 21 ft July 29, 1902, from information by local resident. Flood of Apr. 27, 1957, reached a stage of 17.76 ft, from floodmarks.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 29	0015	13,600	17.85	Mar. 9	1215	3,170	16.34
Dec. 9	0830	6,680	a/17.07	June 29	1430	4,390	16.58

a/ From estimated stage graph.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	835	802	e83	16	5.8	e.92	.24	19	88	e235	e.12
2	.10	103	700	e70	11	3.1	e.64	.13	54	17	e44	e.15
3	.05	28	597	e22	8.0	2.2	e.53	.07	20	4.3	e181	e.31
4	.03	14	70	e7.1	6.5	577	e.47	.04	5.3	2.7	e187	e.27
5	.01	7.4	30	e4.7	5.5	536	e2.4	.01	1.3	.55	e33	e.14
6	.00	4.5	19	e3.8	3.8	74	e3.6	.00	309	.17	e11	e.08
7	.00	4.7	14	e3.4	2.7	33	e2.2	.00	178	.10	e3.1	e.04
8	.00	3.8	12	e3.2	2.1	24	e1.2	.00	430	.04	e.84	e.04
9	.00	1.9	e3900	e2.7	1.2	1530	e.72	.00	107	.03	e.36	e.05
10	.00	.93	e286	e2.7	.80	438	e.45	.00	26	.02	e.19	e.03
11	.00	.96	e94	e2.6	.65	37	e.46	.00	682	.03	e.17	e.02
12	.00	.94	e308	e99	.89	14	e16	93	476	.03	e.14	e.01
13	.00	.68	e131	e100	4.0	6.5	22	22	37	.02	e.55	e.01
14	.00	.75	e47	25	3.4	3.3	4.9	3.0	11	.01	e5.4	.01
15	.00	3.8	e25	18	2.7	1.7	2.0	4.8	4.3	.00	e4.3	.01
16	.00	10	e18	19	1.8	.98	.44	2.3	1.7	.00	e.39	.01
17	.00	883	e16	e36	.89	11	.21	564	.82	.00	e.36	.02
18	.00	238	e15	234	.51	496	.26	1720	.45	.00	e.35	.02
19	.00	413	e17	156	.25	65	28	571	.27	.00	e.48	.02
20	.00	307	e555	e29	.10	14	214	527	5.1	.01	e.34	.02
21	.00	50	e1900	e25	.07	6.2	24	73	15	79	e.25	.13
22	.00	25	e388	e186	32	3.6	8.6	51	3.4	7.3	e.34	.14
23	.00	14	e354	76	e156	1.8	4.1	26	5.3	1.4	e.21	.22
24	.00	8.0	e116	e27	e28	1.4	2.3	11	.72	.33	e.18	.13
25	.00	4.8	e30	e21	e329	65	.90	24	27	.12	e.17	.11
26	.00	3.5	e15	e23	671	e16	.44	45	401	.05	e.20	.08
27	312	3.1	e17	e481	58	e7.3	.31	16	77	.02	e.25	.07
28	2910	2.9	e16	831	20	e4.1	.13	28	464	179	e.17	.04
29	6560	4.5	e12	88	11	e2.3	.16	124	2200	e312	e.13	.02
30	1590	335	e8.9	e38	---	e1.6	.11	34	953	e50	e.13	.00
31	628	---	e5.7	25	---	e1.2	---	13	---	e378	e.13	---
TOTAL	12000.37	3312.16	10518.6	2742.2	1377.86	3983.08	342.45	3952.59	6514.66	1120.23	710.13	2.32
MEAN	387	110	339	88.5	47.5	128	11.4	128	217	36.1	22.9	.077
MAX	6560	883	3900	831	671	1530	214	1720	2200	378	235	.31
MIN	.00	.68	5.7	2.6	.07	.98	.11	.00	.27	.00	.13	.00
AC-FT	23800	6570	20860	5440	2730	7900	679	7840	12920	2220	1410	4.6
CFSM	4.92	1.40	4.31	1.12	.60	1.63	.15	1.62	2.76	.46	.29	.00
IN.	5.67	1.57	4.97	1.30	.65	1.88	.16	1.87	3.08	.53	.34	.00

e Estimated

08017300 SOUTH FORK SABINE RIVER NEAR QUINLAN, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1992, BY WATER YEAR (WY)

MEAN	98.2	43.9	94.1	62.4	110	112	126	155	103	30.5	5.89	28.9
MAX	656	243	459	277	556	572	693	674	1128	490	96.8	353
(WY)	1982	1982	1972	1974	1983	1977	1966	1979	1981	1981	1974	1974
MIN	.000	.000	.000	.000	.000	.11	.062	.038	.000	.000	.000	.000
(WY)	1964	1964	1964	1976	1976	1972	1971	1988	1977	1964	1965	1963

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1960 - 1992	
ANNUAL TOTAL	44857.89		46576.65			
ANNUAL MEAN	123		127		80.6	
HIGHEST ANNUAL MEAN					164	1981
LOWEST ANNUAL MEAN					13.9	1964
HIGHEST DAILY MEAN	6560	Oct 29	6560	Oct 29	13300	Jun 16 1981
LOWEST DAILY MEAN	.00	Jul 7	.00	Oct 6	.00	Oct 21 1959
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 7	.00	Oct 6	.00	Oct 21 1959
INSTANTANEOUS PEAK FLOW			13600	Oct 29	23000	Jun 16 1981
INSTANTANEOUS PEAK STAGE			17.85	Oct 29	18.77	Apr 5 1986
INSTANTANEOUS LOW FLOW					.00	at times
ANNUAL RUNOFF (AC-FT)	88980		92380		58420	
ANNUAL RUNOFF (CFSM)	1.56		1.62		1.02	
ANNUAL RUNOFF (INCHES)	21.20		22.02		13.92	
10 PERCENT EXCEEDS	235		331		55	
50 PERCENT EXCEEDS	2.1		3.8		.29	
90 PERCENT EXCEEDS	.00		.01		.00	

08017400 LAKE TAWAKONI NEAR WILLS POINT, TX

LOCATION.--Lat 32°48'31", long 95°55'10", Van-Zandt County, Hydrologic Unit 12010001, in stairwell at left end of spillway of Iron Bridge Dam on Sabine River, 750 ft upstream from bridge on Farm Road 47, 3.8 mi upstream from McBee Creek, 9.0 mi northeast of Wills Point, and at mile 514.5.

DRAINAGE AREA.--756 mi².

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

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

REMARKS.--The lake is formed by a rolled earthfill dam 29,500 ft long, including a 480-foot uncontrolled concrete ogee spillway. Outlet works consist of two 4- by 6-foot sluice gates and two 20-inch steel pipes controlled by service valves. Closure of earthen dam began July 1, 1960, and deliberate impoundment of water began Oct. 7, 1960. Capacity table is based on a 1956 survey. Diversions are made for municipal use by the city of Dallas and various other users in the Sabine River basin. The lake was built for water conservation. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	454.0	-
Design flood	446.2	1,290,000
Crest of spillway	437.5	936,200
Lowest intake to wet well (invert)	416.5	342,700
Lowest gated outlet (invert)	378.0	0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,130,000 acre-ft May 1, 1966 (elevation, 442.58 ft); minimum since lake first filled in May 1965, 802,700 acre-ft Oct. 21, 1972 (elevation, 433.65 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,059,000 acre-ft Dec. 23 at 0900 hours (elevation, 440.77 ft); minimum, 863,800 acre-ft Oct. 25 (elevation, 435.45 ft).

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

435.0	848,200	438.0	954,300	440.0	1,029,000
436.0	882,800	439.0	992,200	441.0	1,067,000
437.0	918,200				

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	883800	1013000	978700	985700	982400	982000	954300	938800	957600	1016000	946000	903000
2	883100	1010000	988300	983500	979100	978700	952900	938800	956200	1006000	943500	906800
3	881700	1003000	993900	980500	976500	975700	951100	938800	954700	998400	940200	909000
4	884600	994600	990900	977200	976500	982800	950300	937300	952900	991600	937300	910000
5	880000	990500	986800	974300	971300	986100	949600	937000	954300	985300	934400	910000
6	879000	985700	983100	970600	969100	985700	950700	935200	953200	979800	932300	911100
7	877600	981300	979800	969800	966500	982400	950000	933700	953600	975000	928600	911400
8	876200	977900	979800	968400	963900	979400	949600	932600	956500	970900	926500	912200
9	876200	971300	992000	965400	961700	1002000	949300	931200	958700	967200	923600	912900
10	875500	971700	1005000	962800	960600	1009000	948500	930100	960200	963900	921800	913600
11	874800	970200	1007000	960600	960200	1004000	947800	934100	962400	961000	918900	913200
12	874100	969100	1009000	959900	961300	997300	948200	940200	967600	958000	918200	913600
13	873100	967200	1010000	959900	960600	991600	948900	945600	965000	956200	915700	914600
14	872700	963200	1003000	956500	959900	987200	948900	945600	962100	955100	912500	915300
15	871400	962100	996100	956200	959100	982800	948500	944600	959500	952100	909700	915700
16	869600	963900	990500	952900	957300	979100	947800	944900	957600	950700	906800	914600
17	869300	974300	986800	953600	956900	976100	947800	947800	955100	949600	904700	914300
18	868600	981600	980200	956500	955800	981600	946400	960600	953600	948200	903300	913900
19	868300	986400	979800	960200	954300	981600	949600	978000	952500	946400	900800	913200
20	867200	986800	1001000	960200	953200	977200	948200	986800	952100	946000	900500	914600
21	866500	983500	1046000	961300	952900	974300	947800	986100	949600	946000	900800	916400
22	865500	983900	1058000	968700	965400	971300	946700	981600	948200	944600	901200	915700
23	865100	975700	1055000	966500	978000	967600	946000	978000	947100	942400	901200	913900
24	864500	972400	1043000	964700	983900	966100	946700	974300	945300	940600	901500	912200
25	864100	969500	1031000	963900	989000	966500	944200	973100	947400	938100	902600	910700
26	867200	967200	1021000	964700	996900	964700	942700	971300	950300	935500	904700	909700
27	882100	965000	1014000	980200	994600	962100	941300	967600	952500	937000	903000	909700
28	900800	963500	1006000	992800	989800	961000	939100	966100	968000	939100	902200	908600
29	973500	964300	999900	993500	985700	962400	940600	963200	999200	938800	902200	907600
30	1003000	973500	993900	990100	---	956900	939100	960600	1019000	939100	902600	905800
31	1010000	---	989000	986100	---	956200	---	958400	---	944900	902600	---
MAX	1010000	1013000	1058000	993500	996900	1009000	954300	986800	1019000	1016000	946000	916400
MIN	864100	962100	978700	952900	952900	956200	939100	930100	945300	935500	900500	903000
(†)	439.50	438.52	438.94	438.86	438.85	438.05	437.58	438.11	439.73	437.74	436.56	436.65
(ϕ)	+128300	-36500	+15500	-2900	-400	-29500	-17100	+19300	+60600	-74100	-42300	+3200

CAL YR 1991 MAX 1058000 MIN 832900 (ϕ) +154700
WTR YR 1992 MAX 1058000 MIN 864100 (ϕ) +24100

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

08017410 SABINE RIVER NEAR WILLS POINT, TX

LOCATION.--Lat 32°48'22", long 95°55'09", Van Zandt County, Hydrologic Unit 12010001, on right bank at downstream side of bridge on Farm Road 47, 750 ft downstream from Iron Bridge Dam that forms Lake Tawakoni, 3.6 mi upstream from McBee Creek, 9.0 mi northeast of Wills Point, and at mile 514.3.

DRAINAGE AREA.--756 mi².

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 370.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those below 1.0 ft³/s, which are fair, and those for estimated daily discharges, which are poor. Flow regulated by Lake Tawakoni (see station 08017400) 750 ft upstream. Several observations of water temperature were obtained during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since construction of Iron Bridge Dam in 1960, about 21,000 ft³/s May 1, 1966, from theoretical rating curve of flow over dam 750 ft upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.92	4360	1500	2370	2070	1990	588	8.4	830	4640	721	3.9
2	.56	4300	2130	2180	1790	1740	384	7.5	755	4060	691	3.9
3	.32	3890	e2660	1980	1540	1520	308	15	693	3500	633	22
4	4.0	3260	e2760	e1740	1450	1770	257	8.7	610	3000	533	4.6
5	12	2810	e2440	e1510	1430	2090	226	14	509	2610	447	4.8
6	1.2	2490	e2160	e1350	1140	2180	253	78	519	2240	386	4.8
7	2.1	2320	e1940	e1210	1040	2030	248	2.7	546	1890	330	4.9
8	.56	2000	1850	e1100	850	1780	222	6.6	618	1600	277	4.9
9	.90	1540	2280	1020	698	2600	216	10	800	1360	230	4.7
10	.84	1340	3040	921	606	3660	202	8.9	907	1160	192	9.4
11	.98	1210	3530	837	561	3450	186	18	1010	999	195	5.2
12	.90	1060	3550	823	596	3080	176	33	1210	807	168	4.9
13	.66	907	3650	1150	789	2690	175	88	1310	635	188	4.7
14	1.1	802	3510	872	591	2370	199	214	1140	518	180	2.6
15	.57	726	3130	645	550	2100	177	188	980	470	120	3.2
16	.32	674	2720	515	491	1840	159	161	840	411	43	1.9
17	.09	1030	2400	394	454	1630	143	169	677	371	12	4.0
18	.00	1730	2080	485	444	1690	129	384	580	312	33	4.2
19	.00	e2120	1800	636	394	2060	161	1180	497	277	33	4.0
20	.00	e2340	2170	684	334	1790	333	2170	534	237	17	4.1
21	.00	e2140	4780	649	303	1490	239	2550	456	246	4.7	7.8
22	.00	e1940	7030	849	515	1550	160	2380	367	209	4.9	24
23	2.4	1950	7370	1120	1500	1220	132	2130	311	173	4.2	11
24	7.0	1600	6690	977	1700	1000	160	1900	270	138	4.2	4.4
25	6.8	1270	5600	876	2190	1020	253	1730	322	109	4.0	4.4
26	7.4	1100	4830	793	2640	957	127	1640	364	79	33	7.7
27	266	998	4280	1330	2830	847	61	1400	407	69	170	6.2
28	513	900	3820	2290	2570	711	25	1230	548	156	23	5.7
29	863	814	3370	2740	2290	708	159	1250	2140	231	3.8	6.1
30	2990	1070	2980	2620	---	806	39	1050	4250	258	4.0	3.3
31	4000	---	2640	2360	---	480	---	894	---	547	3.7	---
TOTAL	8683.62	54691	104690	39026	34356	54849	6097	22918.8	25000	33312	5688.5	187.3
MEAN	280	1823	3377	1259	1185	1769	203	739	833	1075	183	6.24
MAX	4000	4360	7370	2740	2830	3660	588	2550	4250	4640	721	24
MIN	.00	674	1500	394	303	480	25	2.7	270	69	3.7	1.9
AC-FT	17220	108500	207700	77410	68150	108800	12090	45460	49590	66070	11280	372

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1992, BY WATER YEAR (WY)

MEAN	232	376	461	278	517	635	704	957	712	189	39.4	60.7
MAX	1726	2539	3377	1561	2482	1911	2090	3888	2825	1229	332	868
(WY)	1974	1975	1992	1974	1975	1990	1986	1990	1989	1981	1979	1974
MIN	.21	.76	.16	3.43	1.87	2.84	1.31	6.83	.81	.56	.12	.25
(WY)	1991	1979	1991	1976	1976	1976	1971	1987	1972	1972	1986	1987

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1971 - 1992	
ANNUAL TOTAL	206411.72		389499.22			
ANNUAL MEAN	566		1064		429	
HIGHEST ANNUAL MEAN					1064	1992
LOWEST ANNUAL MEAN					107	1988
HIGHEST DAILY MEAN	7370	Dec 23	7370	Dec 23	20000	May 4 1990
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 18	.00	Oct 1 1971
ANNUAL SEVEN-DAY MINIMUM	.00	Feb 11	.06	Oct 16	.00	Oct 6 1971
INSTANTANEOUS PEAK FLOW			7450	Dec 23	20600	May 4 1990
INSTANTANEOUS PEAK STAGE			16.02	Dec 23	19.11	May 4 1990
INSTANTANEOUS LOW FLOW					.00	at times
ANNUAL RUNOFF (AC-FT)	409400		772600		310700	
10 PERCENT EXCEEDS	2150		2670		1290	
50 PERCENT EXCEEDS	22		614		22	
90 PERCENT EXCEEDS	.01		4.2		.21	

08018500 SABINE RIVER NEAR MINEOLA, TX

LOCATION.--Lat 32°36'49", long 95°29'08", Wood County, Hydrologic Unit 12010001, on left bank at downstream side of highway embankment 3 ft downstream from left end of bridge on U.S. Highway 69, 3.5 mi south of Mineola, 4.5 mi upstream from Missouri Pacific Railway Lines bridge, 16.2 mi upstream from Lake Fork Creek, and at mile 461.1.

DRAINAGE AREA.--1,357 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1939 to September 1959, October 1967 to current year. Gage-height records collected at this site since July 1946 are contained in reports published by the National Weather Service.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 304.16 ft above National Geodetic Vertical Datum of 1929. May 12, 1939, to Dec. 11, 1955, at site 55 ft upstream from downstream side of bridge; Dec. 12, 1955, to Dec. 12, 1959, at downstream side of bridge; Oct. 1, 1967, to Sept. 12, 1968, nonrecording gage at downstream side of bridge; Sept. 13, 1968, to Oct. 23, 1974, water-stage recorder at downstream side of bridge; Oct. 24, 1974, to Oct. 16, 1975, at site on right bank 75 ft downstream from bridge. All gages at present datum.

REMARKS.--No estimated daily discharges. Records good. Since October 1960, flow partly regulated by Lake Tawakoni (see station 08017400), capacity 936,200 acre-ft, 53 mi upstream, and since September 1962, by Lake Holbrook (capacity, 7,990 acre-ft), located on Keys Creek, a tributary to the Sabine River 8.0 mi upstream. Flow may also be slightly affected at times by discharge from one floodwater-retarding structure with a detention capacity of 3,570 acre-ft. This structure controls runoff from a 9.70 mi² area in the Mill Creek drainage basin.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--20 years (water years 1940-59) prior to regulation by Lake Tawakoni, (station 08017400) 1,054 ft³/s (763,600 acre-ft/yr).

EXTREMES FOR PERIOR PRIOR TO REGULATION (WATER YEARS 1940-59).--Maximum discharge 76,000 ft³/s Apr. 1, 1945 (gage height, 24.00 ft); maximum gage height, 24.37 ft June 8, 1943; no flow at times.
Maximum stage since at least 1890, that of June 8, 1943.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	2370	2120	5190	4620	4340	961	127	1710	1650	500	29
2	14	3140	2310	4670	3920	3710	855	138	1610	2180	796	26
3	12	3870	2420	4110	3560	3370	748	81	1460	2650	996	33
4	9.6	4710	2520	3730	3240	3110	636	56	1280	3300	1030	35
5	8.3	5080	2670	3490	2890	3210	490	44	1100	3880	1000	27
6	7.1	4870	2980	3200	2590	3440	398	39	953	4450	881	27
7	7.9	4450	3220	2870	2400	3600	365	37	807	4400	685	47
8	6.6	3900	3280	2580	2240	3710	373	40	724	4040	529	39
9	6.7	3550	3280	2440	2080	4060	375	65	772	3630	418	28
10	6.5	3210	3350	2410	1840	5350	341	44	784	3270	332	21
11	6.3	2820	3420	2320	1550	10800	314	32	823	2790	271	18
12	6.5	2510	3490	2160	1400	11700	290	280	936	2400	225	16
13	6.6	2280	3650	1940	1770	7840	267	370	1010	2040	207	14
14	8.4	2020	4050	1720	2060	5830	249	458	1060	1610	225	13
15	9.2	1730	4610	1530	2290	4720	241	278	1120	1210	253	13
16	9.4	1430	4930	1420	2370	3900	256	267	1170	925	213	14
17	9.8	1220	5000	1310	2180	3490	245	276	1180	828	162	13
18	10	1170	4660	1230	1690	3280	224	292	1120	933	93	12
19	11	1260	4170	1360	1220	3010	220	459	995	677	55	11
20	12	1720	3860	1560	952	2640	437	641	843	515	35	10
21	12	2240	5270	1740	764	2430	563	805	730	436	30	28
22	11	3000	10000	2000	789	2300	605	982	658	378	41	58
23	12	4250	15400	2170	2560	2220	519	1170	607	340	32	42
24	12	4710	15700	2230	5150	2110	331	1410	517	280	23	52
25	12	3960	14400	2240	8790	1980	239	1690	420	228	18	44
26	13	3390	12300	2170	8320	1830	234	1940	356	182	14	35
27	21	2910	10600	2400	6230	1670	289	2100	373	144	12	25
28	58	2520	8580	3170	5410	1500	221	2170	483	116	11	19
29	699	2220	7390	3780	5020	1320	136	2150	778	131	55	15
30	1340	1920	6540	5010	---	1150	95	2030	1160	342	100	13
31	1850	---	5890	5320	---	1020	---	1830	---	437	49	---
TOTAL	4224.9	88430	182060	83470	89895	114640	11517	22301	27539	50392	9291	777
MEAN	136	2948	5873	2693	3100	3698	384	719	918	1626	300	25.9
MAX	1850	5080	15700	5320	8790	11700	961	2170	1710	4450	1030	58
MIN	6.3	1170	2120	1230	764	1020	95	32	356	116	11	10
AC-FT	8380	175400	361100	165600	178300	227400	22840	44230	54620	99950	18430	1540

08018500 SABINE RIVER NEAR MINEOLA, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992#, BY WATER YEAR (WY)

MEAN	279	806	1113	777	1275	1538	1384	2144	1147	263	59.3	72.0
MAX	2158	5296	5873	2707	4334	4175	4086	6934	4083	1626	419	616
(WY)	1974	1975	1992	1974	1975	1969	1990	1968	1973	1992	1979	1974
MIN	3.42	9.88	10.9	28.8	53.4	110	31.8	29.6	5.72	4.87	.071	.048
(WY)	1988	1990	1990	1981	1976	1981	1971	1988	1971	1969	1987	1987

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1968 - 1992#	
ANNUAL TOTAL	438180.3		684536.9			
ANNUAL MEAN	1200		1870		903	
HIGHEST ANNUAL MEAN					1904	1968
LOWEST ANNUAL MEAN					222	1971
HIGHEST DAILY MEAN	15700	Dec 24	15700	Dec 24	36200	Dec 11 1971
LOWEST DAILY MEAN	4.4	Jul 20	6.3	Oct 11	.00	Aug 13 1970
ANNUAL SEVEN-DAY MINIMUM	5.7	Jul 18	6.7	Oct 7	.00	Sep 15 1971
INSTANTANEOUS PEAK FLOW			16400	Dec 23	37700	Dec 11 1971
INSTANTANEOUS PEAK STAGE			19.20	Dec 23	21.53	Dec 11 1971
INSTANTANEOUS LOW FLOW					.00	at times
ANNUAL RUNOFF (AC-FT)	869100		1358000		654000	
10 PERCENT EXCEEDS	3400		4500		2760	
50 PERCENT EXCEEDS	303		1110		143	
90 PERCENT EXCEEDS	10		14		6.7	

Period of regulated streamflow.

08018500 SABINE RIVER NEAR MINEOLA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1967 to current year. Biochemical analyses: October 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to September 1991.
WATER TEMPERATURE: October 1967 to September 1991.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 11,400 microsiemens June 3, 1971; minimum daily, 64 microsiemens May 5, 1990.
WATER TEMPERATURE: Maximum daily, 36.0°C Aug. 21, 1984; minimum daily, 0.0°C Jan. 15, Feb. 1, 1979.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 6,180 microsiemens Nov. 13; minimum daily, 96 microsiemens Nov. 26.
WATER TEMPERATURE: Maximum daily, 29.0°C July 7, Aug. 8; minimum daily, 4.0°C Dec. 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
OCT										
28...	1800	50	526	7.2	21.0	5.6	64	1.5	140	81
DEC										
16...	1555	4830	181	7.5	11.5	9.0	82	0.7	60	2
FEB										
07...	1100	2530	215	7.4	9.5	10.1	89	1.1	72	15
MAR										
24...	0915	2180	189	7.6	13.0	8.8	84	0.9	68	6
MAY										
11...	1600	29	453	7.3	22.5	7.4	86	1.3	120	57
JUL										
07...	2045	3320	182	7.6	28.0	5.2	67	0.9	67	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT										
28...	40	10	45	2	5.4	60	91	66	0.30	14
DEC										
16...	19	3.1	11	0.6	4.1	58	13	9.8	0.20	4.6
FEB										
07...	23	3.5	15	0.8	3.6	57	20	18	0.20	4.3
MAR										
24...	22	3.1	11	0.6	3.1	62	17	11	0.20	3.1
MAY										
11...	36	7.9	40	2	4.0	65	69	59	0.30	8.0
JUL										
07...	22	2.9	9.2	0.5	3.8	72	11	6.8	0.10	3.8

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
OCT									
28...	308	--	0.020	<0.050	0.020	0.58	0.60	0.100	0.040
DEC									
16...	100	0.039	0.020	0.059	0.030	0.47	0.50	0.050	0.040
FEB									
07...	122	0.350	0.020	0.370	0.040	0.46	0.50	0.050	0.040
MAR									
24...	108	0.260	0.020	0.280	0.040	0.36	0.40	0.040	0.040
MAY									
11...	263	0.070	0.040	0.110	0.050	0.75	0.80	0.070	0.050
JUL									
07...	103	--	<0.010	<0.050	0.030	0.77	0.80	0.090	0.050

08018620 BIG CREEK AT FARM ROAD 1567 NEAR BRASHEAR, TX

LOCATION.--Lat 33°01'07", long 95°45'17", Hopkins County, Hydrologic Unit 12010003, on Farm Road 1567 bridge, over center of channel at downstream side of bridge, 2.5 mi upstream from Sand Branch, and 7.1 mi south of Farm Road 2653 and Interstate Highway 30 intersection at Brashear.

DRAINAGE AREA.--15.3 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1991 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from sites at mouths of agricultural basins. This study is in cooperation with the Texas Agriculture Extension Service, Texas Stabilization and Conservation Service, Texas State Soil and Water Conservation Board, and the United States Soil Conservation Service to evaluate the effectiveness of agricultural demonstration projects utilizing new or improved management practices aimed at reducing nonpoint pollution.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV										
04...	1418	1.0	120	7.1	9.0	10.3	89	3.0	9200	6300
DEC										
20...	1315	138	88	7.8	7.5	12.4	104	2.2	22000	35000
JAN										
27...	1452	328	99	7.3	9.0	11.8	104	3.9	74000	700000
28...	1440	61	79	7.2	10.5	11.0	101	3.1	53000	640000
30...	0950	12	128	7.2	9.0	10.7	93	1.7	1900	10000
MAR										
09...	1900	696	85	7.0	16.5	7.8	82	6.5	77000	210000
10...	1524	33	80	7.2	13.0	9.7	93	3.9	28000	22000
16...	1633	2.9	417	7.4	17.0	10.0	105	1.4	K350	K270
SEP										
03...	1152	0.30	629	7.7	24.0	4.0	48	2.9	2200	14000

DATE	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
NOV									
04...	27	0.180	0.040	0.220	0.110	1.2	1.3	0.330	0.200
DEC									
20...	23	0.130	0.050	0.180	0.110	0.99	1.1	0.210	0.170
JAN									
27...	26	0.080	0.070	0.150	0.210	1.3	1.5	0.390	0.290
28...	23	0.090	0.050	0.140	0.170	1.0	1.2	0.270	0.230
30...	29	0.110	0.040	0.150	0.100	0.90	1.0	0.220	0.160
MAR									
09...	26	0.240	0.020	0.260	0.080	1.4	1.5	0.450	0.140
10...	26	0.080	0.060	0.140	0.100	1.1	1.2	0.240	0.180
16...	75	0.100	0.060	0.160	0.030	0.97	1.0	0.150	0.070
SEP									
03...	46	--	<0.010	<0.050	0.040	0.86	0.90	0.140	0.060

08018720 BIRCH CREEK AT FARM ROAD 2297 NEAR YANTIS, TX

LOCATION.--Lat 33°01'31", long 95°38'19", Hopkins County, Hydrologic Unit 12010003, on Farm Road 2297 bridge, over center of channel at downstream side of bridge, 0.96 mi upstream from Gideon Creek, and 7.5 mi northwest of State Highway 154 and Farm Road 17 intersection in Yantis.

DRAINAGE AREA.--17.5 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1991 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from sites at mouths of agricultural basins. This study is in cooperation with the Texas Agriculture Extension Service, Texas Stabilization and Conservation Service, Texas State Soil and Water Conservation Board, and the United States Soil Conservation Service to evaluate the effectiveness of agricultural demonstration projects utilizing new or improved management practices aimed at reducing nonpoint pollution.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV										
04...	1655	2.6	480	7.2	7.0	10.0	83	1.8	410	630
DEC										
20...	1315	63	460	7.8	9.0	11.2	97	1.7	42000	97000
JAN										
27...	1647	152	264	6.9	9.0	11.6	103	4.8	280000	920000
28...	1313	66	265	6.9	10.5	10.7	98	3.0	58000	490000
30...	1215	20	395	7.1	13.0	10.5	100	1.2	700	1200
MAR										
09...	1813	248	126	7.1	17.0	7.0	74	6.8	200000	100000
10...	1216	54	210	7.2	11.0	9.3	85	7.6	73000	55000
16...	1750	0.20	488	7.2	17.0	10.8	114	1.0	K420	K330
SEP										
03...	1451	5.4	430	7.2	24.0	6.2	74	2.3	2500	7400

DATE	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
NOV									
04...	25	0.590	0.030	0.620	0.270	1.0	1.3	0.350	0.230
DEC									
20...	24	0.820	0.050	0.870	0.240	1.1	1.3	0.340	0.290
JAN									
27...	24	0.520	0.060	0.580	0.340	1.6	1.9	0.610	0.500
28...	26	0.620	0.040	0.660	0.240	1.4	1.6	0.580	0.460
30...	28	0.730	0.030	0.760	0.090	1.0	1.1	0.320	0.270
MAR									
09...	22	0.250	0.080	0.330	0.300	1.4	1.7	0.670	0.570
10...	31	0.320	0.060	0.380	0.440	2.2	2.6	0.790	0.610
16...	31	0.770	0.060	0.830	0.040	0.76	0.80	0.210	0.150
SEP									
03...	22	--	<0.010	0.110	0.100	1.3	1.4	0.260	0.180

08018785 CANEY CREEK AT FARM ROAD 269 NEAR COMO, TX

LOCATION.--Lat 33°00'10", long 95°23'40", Hopkins County, Hydrologic Unit 12010003, on Farm Road 269 bridge, over center of channel at downstream side of bridge, 3.6 mi upstream from Briar Branch, and 6.1 mi southeast of the water tower in Como.

DRAINAGE AREA.--7.47 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1991 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from sites at mouths of agricultural basins. This study is in cooperation with the Texas Agriculture Extension Service, Texas Stabilization and Conservation Service, Texas State Soil and Water Conservation Board, and the United States Soil Conservation Service to evaluate the effectiveness of agricultural demonstration projects utilizing new or improved management practices aimed at reducing nonpoint pollution.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV										
05...	0832	0.80	230	7.1	5.0	11.4	90	3.0	K13000	7800
DEC										
20...	1030	12	270	7.3	15.0	12.2	121	1.5	3700	6500
JAN										
27...	1800	168	126	6.9	9.0	11.9	105	3.7	25000	680000
28...	1030	25	150	6.9	9.5	10.5	94	2.2	39000	93000
30...	1631	7.7	234	7.2	11.0	11.5	105	1.2	490	930
MAR										
09...	1548	1340	47	6.7	17.0	8.7	93	5.0	210000	190000
10...	0931	35	102	6.8	10.5	9.4	85	3.0	23000	43000
SEP										
03...	1625	4.0	193	6.9	24.0	8.1	97	9.0	200000	440000

DATE	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
NOV									
05...	25	0.370	0.020	0.390	0.290	1.0	1.3	0.400	0.250
DEC									
20...	23	0.340	0.040	0.380	0.170	0.73	0.90	0.180	0.140
JAN									
27...	19	0.290	0.040	0.330	0.250	1.7	1.9	0.570	0.440
28...	17	0.310	0.020	0.330	0.160	0.94	1.1	0.270	0.220
30...	24	0.520	0.020	0.540	0.090	0.91	1.0	0.240	0.170
MAR									
09...	13	0.130	0.050	0.180	0.160	1.0	1.2	0.530	0.410
10...	12	0.210	0.030	0.240	0.120	0.78	0.90	0.250	0.200
SEP									
03...	11	1.35	0.050	1.40	0.920	2.1	3.0	1.10	0.690

08018800 LAKE FORK RESERVOIR NEAR QUITMAN, TX

LOCATION.--Lat 32°48'48", long 95°31'40", Wood County, Hydrologic Unit 12010003, in room at left end of gated concrete spillway structure of Lake Fork Dam on Lake Fork Creek, 2,000 ft upstream from bridge on State Highway 182, 2.3 mi upstream from Alum Branch, and 4.4 mi west-northwest of the county courthouse in Quitman.

DRAINAGE AREA.--490 mi².

PERIOD OF RECORD.--October 1979 to current year.
Water-quality records.--Chemical analyses: October 1980 to September 1984.

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

REMARKS.--The lake is formed by a rolled earthfill dam 12,660 ft long, including a 260-foot gated concrete spillway. The outlet works consist of two 5- 8-foot low flow sluice gates, five 40- by 20-foot taintor gates, and two 5- by 6-foot sluice gates that open into a wet well where there are two 36-inch and one 10-inch valve-controlled and metered-outlet pipes. Deliberate impoundment began June 29, 1979, and closure of the dam was completed in January 1980. The lake was built for water conservation and is owned by the Sabine River Authority. No known diversions were made from the lake this year. Flow is affected at times by discharge from the flood-detention pools of 21 floodwater-retarding structures with a combined detention capacity of 20,270 acre-ft. These structures control runoff 60 mi² above the lake. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	419.5	1,270,000
Top of tainter gates	405.0	732,900
Crest of gated spillway	385.0	291,900
Invert of upper sluice gate	383.0	260,400
Invert of lower sluice gate	360.5	43,120
Invert of sluice gate in two center pieces	360.0	40,620

COOPERATION.--Area and capacity tables were prepared and provided by URS/Forest and Cotton, Inc., Consulting Engineers for the Sabine River Authority. Observed elevations for the period Oct. 31, 1979, to Jan. 31, 1980, were provided by the Sabine River Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 737,300 acre-ft May 4, 1990 (elevation, 405.15 ft); minimum observed, 46,140 acre-ft Dec. 11-14, 1979 (elevation, 361.10 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 713,500 acre-ft Mar. 9 at 2100 hours (elevation 404.33 ft); minimum, 602,500 acre-ft Sep. 30 (elevation, 400.24).

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

400.0	596,300	402.0	648,500	404.0	703,900
401.0	622,100	403.0	675,800	405.0	732,900

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	639800	670400	677800	673100	678900	671500	664900	660800	676100	685900	655400	612000
2	639500	666800	681400	673100	676400	669000	664100	661100	676400	680300	654500	612300
3	639000	661600	682800	673100	673900	666800	663300	660800	676100	673600	654300	611800
4	641100	659700	682300	673100	673600	672000	663000	660500	676100	671200	652400	610500
5	638700	659500	680900	673100	670600	674700	663000	660800	675800	669800	649600	609500
6	638000	659200	677800	673100	669000	674200	664100	659500	676900	668700	646700	608200
7	637200	660300	675300	673900	667600	672300	664400	658900	676700	667600	643800	607700
8	636600	658600	675500	676100	667100	670100	664100	658600	676700	666300	642700	607100
9	636600	658100	680600	676700	666300	712000	664400	658100	676400	664600	641400	606900
10	636100	658100	683700	675000	666000	697500	664100	657500	676100	663300	640300	606600
11	636100	658100	683400	674500	666800	684500	664400	662500	678100	661600	638700	606400
12	635800	657800	683700	674500	670600	676700	664400	665200	677500	660000	640100	605600
13	635300	657500	686500	676700	672800	671700	664100	666500	676100	658400	638700	605100
14	635300	657500	685900	675800	674500	670400	664400	666800	674700	657000	636900	605100
15	634500	657800	683400	675000	673600	669500	664100	667100	673900	657000	635300	605100
16	633500	658900	680000	673400	674700	668500	663800	666800	672800	656200	633500	605100
17	632900	663000	675800	673900	675300	670600	664100	667900	671700	658100	631900	605100
18	632900	664400	673100	677200	672500	673900	663800	670600	670900	658600	630500	604800
19	632700	673900	670900	678600	671700	674200	667400	672000	669000	657500	629500	604300
20	632100	682800	683700	678900	670600	675300	667600	672500	676900	656500	627900	604000
21	631900	681400	700000	680900	670100	676700	667100	675000	678100	655400	626600	607700
22	631300	680000	702000	685400	678600	670600	665700	675000	679200	653500	625000	607100
23	631300	677500	697700	683700	686500	669000	663500	675300	680000	651800	623700	606400
24	630800	674500	688800	681700	685900	669800	663300	675500	681200	650500	622900	605600
25	630800	672500	682800	680600	685900	670600	663000	673900	681400	648800	621500	604800
26	632900	671200	679500	679800	682300	670400	662500	673900	681200	647200	620800	605300
27	639500	669500	677500	687300	678600	669300	661600	673900	680900	648000	618500	604300
28	643500	668500	676400	689300	675800	669000	659500	673900	675800	650500	616900	604000
29	667400	669000	674700	687100	673900	669500	661400	673400	704500	650500	615600	603300
30	673900	673900	673900	684500	---	667100	661100	672800	696300	651000	614100	602500
31	674500	---	673100	681200	---	666300	---	672800	---	655600	612800	---
MAX	674500	682800	702000	689300	686500	712000	667600	675500	704500	685900	655400	612300
MIN	630800	657500	670900	673100	666000	666300	659500	657500	669000	647200	612800	602500
(†)	403.02	403.00	402.97	403.26	403.00	402.72	402.53	402.96	403.80	402.33	400.72	400.31
(ϕ)	+33900	-600	-800	+8100	-7300	-7600	-5200	+11700	+23500	-40700	-42800	-10300

CAL YR 1991 MAX 702000 MIN 630800 (ϕ) -6700
WTR YR 1992 MAX 712000 MIN 602500 (ϕ) -38100

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

08019000 LAKE FORK CREEK NEAR QUITMAN, TX

LOCATION.--Lat 32°45'47", long 95°27'46", Wood County, Hydrologic Unit 12010003, at downstream side of highway embankment near left end of bridge on State Highway 37, 0.3 mi downstream from Dry Creek, 2.4 mi south of Quitman, and 23.4 mi upstream from mouth.

DRAINAGE AREA.--585 mi².

PERIOD OF RECORD.--June 1924 to April 1926, February 1939 to current year. Discharge from some high-water periods in 1925-26 published in WSP 1342. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1961, published as Lake Fork Sabine River near Quitman.
Water-quality records.--Chemical analyses: December 1961 to August 1989. Specific Conductance: November 1967 to September 1989. Water Temperature: December 1967 to September 1989.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 317.42 ft above National Geodetic Vertical Datum of 1929. From June 27, 1924, to Apr. 30, 1926, a nonrecording gage was located at site 1,000 ft downstream at same datum. Prior to Sept. 5, 1978, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records good. Since May 1962, flow from 31.0 mi² above this station has been controlled by Lake Quitman (capacity, 7,440 acre-ft) on Dry Creek, a tributary above this station and below Lake Fork Reservoir. Construction of Lake Fork Dam and Reservoir (capacity, 675,800 acre-ft), located about 5 mi upstream from this station, began in 1975. Deliberate impoundment began June 29, 1979, and the dam was completed in January 1980. Lake Fork Reservoir controls runoff from 490 mi² above this station. The city of Quitman discharged a small amount of sewage effluent into a tributary above this station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--41 years (water years 1925, 1940-79), prior to regulation by Lake Fork Reservoir, 432 ft³/s (313,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1925, 1940-79).--Maximum discharge, 75,600 ft³/s Mar. 30, 1945 (gage height, 29.85 ft, from floodmark), from rating curve extended above 49,000 ft³/s; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1895 reached a stage of about 25.9 ft, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	3210	1260	585	2450	1770	628	30	113	10700	1690	622
2	23	3120	1480	546	2000	1680	609	28	333	6800	1700	629
3	23	2870	1670	552	1760	1660	445	27	164	4580	1710	633
4	23	2070	1840	488	1580	1740	351	27	95	4170	1710	631
5	24	985	1790	455	1440	2020	100	27	74	2080	1700	624
6	24	207	1730	438	1420	2010	44	24	64	1130	1700	619
7	25	69	1710	429	1370	1850	50	23	63	846	1700	576
8	23	51	1700	485	801	1750	44	21	57	768	1680	141
9	21	43	1840	818	459	3300	38	20	53	740	1270	34
10	21	39	2020	916	375	13800	35	19	48	718	789	26
11	21	36	1990	890	118	10000	31	23	231	705	668	25
12	21	35	1890	575	126	6850	29	412	283	696	647	24
13	21	33	1940	462	330	4230	27	191	364	693	720	23
14	22	33	2040	448	322	2380	26	59	431	697	681	22
15	22	32	2100	395	453	1460	27	42	427	704	650	21
16	22	33	2080	415	479	910	27	35	420	707	642	20
17	22	44	2050	421	448	777	25	34	414	737	639	20
18	22	86	1880	503	424	856	27	44	411	783	637	20
19	22	119	1770	648	405	941	33	67	409	760	635	20
20	22	966	1840	564	395	850	170	55	423	735	634	20
21	22	1540	4140	500	384	781	665	42	454	722	636	33
22	22	1670	8030	732	446	771	853	35	423	713	626	40
23	22	1670	10000	1260	1300	751	860	31	412	707	622	26
24	22	1670	9190	1500	2170	732	810	28	405	704	632	23
25	22	1640	6670	1480	3480	791	301	29	400	700	689	22
26	23	1260	4360	1440	3880	876	57	54	403	698	637	22
27	62	833	2530	1670	3760	809	41	39	404	698	624	21
28	107	724	2080	2700	2940	722	38	31	441	714	624	21
29	339	702	2010	2810	2140	686	33	30	984	1030	622	21
30	807	769	1680	2650	---	660	32	28	11300	1420	619	21
31	1960	---	1120	2530	---	643	---	25	---	1620	617	---
TOTAL	3855	26559	88430	30305	37655	69056	6456	1580	20503	49475	29150	5000
MEAN	124	885	2853	978	1298	2228	215	51.0	683	1596	940	167
MAX	1960	3210	10000	2810	3880	13800	860	412	11300	10700	1710	633
MIN	21	32	1120	395	118	643	25	19	48	693	617	20
AC-FT	7650	52680	175400	60110	74690	137000	12810	3130	40670	98130	57820	9920

08019000 LAKE FORK CREEK NEAR QUITMAN, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1992#, BY WATER YEAR (WY)

MEAN	41.8	284	539	364	763	761	499	737	391	205	88.0	24.5
MAX	247	1551	2853	1478	2326	2938	1991	2807	1280	1596	940	167
(WY)	1982	1989	1992	1991	1986	1990	1990	1990	1986	1992	1992	1992
MIN	1.23	2.92	9.31	4.43	14.1	31.6	4.29	13.1	8.51	1.43	.13	.76
(WY)	1983	1981	1982	1981	1981	1981	1981	1988	1984	1985	1980	1982

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1980 - 1992#	
ANNUAL TOTAL	258562		368024			
ANNUAL MEAN	708		1006		390	
HIGHEST ANNUAL MEAN					1006	1992
LOWEST ANNUAL MEAN					43.2	1984
HIGHEST DAILY MEAN	10000	Dec 23	13800	Mar 10	23600	May 18 1989
LOWEST DAILY MEAN	21	Oct 9	19	May 10	.00	Aug 23 1980
ANNUAL SEVEN-DAY MINIMUM	21	Oct 9	20	Sep 14	.00	Aug 23 1980
INSTANTANEOUS PEAK FLOW			14500	Mar 10	24200	May 18 1989
INSTANTANEOUS PEAK STAGE			19.58	Mar 10	21.75	May 18 1989
INSTANTANEOUS LOW FLOW			18	May 11	.00	*
ANNUAL RUNOFF (AC-FT)	512900		730000		282300	
10 PERCENT EXCEEDS	2030		2070		1070	
50 PERCENT EXCEEDS	70		618		31	
90 PERCENT EXCEEDS	23		23		3.0	

\# Period of regulated streamflow.
* No flow for many days most years.

08019500 BIG SANDY CREEK NEAR BIG SANDY, TX

LOCATION.--Lat 32°36'14", long 95°05'29", Upshur County, Hydrologic Unit 12010002, on downstream side of highway embankment near left end of bridge on State Highway 155, 0.5 mi upstream from St. Louis Southwestern Railway Lines bridge, 1.6 mi northeast of Big Sandy, and 6.5 mi upstream from mouth.

DRAINAGE AREA.--231 mi².

PERIOD OF RECORD.--February 1939 to current year.
Water-quality records.--Chemical analyses: March 1961 to September 1986. Chemical and biochemical analyses: October 1984 to September 1986.

REVISED RECORDS.--WSP 1732: 1941(M), 1945-46, 1956, drainage area. WSP 1922: 1944(M), 1945-46.

GAGE.--Water-stage recorder. Datum of gage is 278.38 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 5, 1940, nonrecording gage, and Oct. 5, 1940, to Nov. 26, 1951, water-stage recorder at site 1.3 mi upstream at datum 3.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Since June 1962, streamflow has been affected by Lake Winnsboro, about 27 miles upstream (capacity 8,100 acre-ft, drainage area 27.1 mi²) and by several other smaller lakes. Several observations of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 24	1300	1,890	13.69	July 2	0500	2,510	14.64
Mar. 12	1130	2,350	14.41				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	626	194	344	680	475	246	90	197	1260	115	60
2	26	681	250	335	502	388	209	86	292	2310	161	70
3	27	745	331	314	392	334	188	83	315	1550	213	109
4	29	628	448	275	329	403	172	84	321	1030	169	113
5	26	480	707	247	321	561	157	79	317	711	148	98
6	22	385	708	250	332	513	149	68	277	484	131	80
7	21	286	517	248	302	553	145	60	173	333	115	76
8	20	185	371	231	276	697	141	56	126	226	93	64
9	21	134	304	213	271	667	138	53	106	147	79	53
10	20	111	262	199	254	708	135	53	97	100	72	48
11	19	97	231	196	224	1160	134	52	96	75	64	51
12	18	90	251	238	245	2210	129	82	95	62	58	55
13	18	84	458	259	411	1610	122	109	109	54	66	53
14	20	79	601	250	434	1060	115	125	163	49	65	45
15	18	75	480	240	591	779	110	130	249	49	58	41
16	17	73	385	250	517	581	112	132	217	56	58	39
17	18	98	367	270	465	450	105	104	105	70	58	38
18	18	162	338	280	382	403	107	91	69	193	53	37
19	18	150	282	296	320	383	109	112	54	263	47	36
20	17	225	246	283	269	336	119	124	47	393	46	35
21	18	332	414	288	230	342	201	135	42	545	44	92
22	21	416	663	382	281	395	336	164	39	611	43	164
23	21	348	1140	444	745	377	299	150	35	468	40	166
24	20	302	1810	405	716	321	243	110	42	303	39	133
25	21	253	1550	474	922	297	175	91	43	179	37	120
26	23	183	1260	597	1140	290	132	85	37	126	39	94
27	27	145	1010	621	944	280	110	79	35	99	39	68
28	45	126	778	739	696	317	95	84	70	83	38	56
29	73	114	593	651	557	474	89	105	511	80	37	48
30	174	123	474	744	---	413	90	118	684	87	37	44
31	356	---	391	834	---	309	---	117	---	92	36	---
TOTAL	1219	7736	17814	11397	13748	18086	4612	3011	4963	12088	2298	2186
MEAN	39.3	258	575	368	474	583	154	97.1	165	390	74.1	72.9
MAX	356	745	1810	834	1140	2210	336	164	684	2310	213	166
MIN	17	73	194	196	224	280	89	52	35	49	36	35
AC-FT	2420	15340	35330	22610	27270	35870	9150	5970	9840	23980	4560	4340

08019500 BIG SANDY CREEK NEAR BIG SANDY, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1992, BY WATER YEAR (WY)

MEAN	59.0	129	217	228	280	315	327	324	175	75.1	33.4	50.9
MAX	448	884	884	745	915	1746	1068	977	704	390	150	441
(WY)	1950	1975	1988	1946	1950	1945	1973	1953	1946	1992	1979	1974
MIN	8.38	19.2	24.6	32.3	59.7	47.5	42.2	35.1	9.61	6.99	4.65	8.51
(WY)	1957	1956	1957	1957	1967	1966	1956	1984	1984	1984	1984	1956

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1940 - 1992	
ANNUAL TOTAL	104807		99158			
ANNUAL MEAN	287		271		184	
HIGHEST ANNUAL MEAN					415	1945
LOWEST ANNUAL MEAN					40.6	1956
HIGHEST DAILY MEAN	2460	May 7	2310	Jul 2	17900	Mar 31 1945
LOWEST DAILY MEAN	17	Oct 16	17	Oct 16	3.5	Jul 24 1984
ANNUAL SEVEN-DAY MINIMUM	18	Oct 15	18	Oct 15	4.0	Aug 16 1984
INSTANTANEOUS PEAK FLOW			2510	Jul 2	24000	Mar 31 1945
INSTANTANEOUS PEAK STAGE			14.64	Jul 2	a/24.10	Mar 31 1945
INSTANTANEOUS LOW FLOW			17	Oct 15	3.5	*
ANNUAL RUNOFF (AC-FT)	207900		196700		133200	
10 PERCENT EXCEEDS	679		635		413	
50 PERCENT EXCEEDS	183		159		79	
90 PERCENT EXCEEDS	27		37		17	

a/ Maximum stage since at least 1875.
* Occurred on July 24, Aug. 7-8, 1984.

08020000 SABINE RIVER NEAR GLADEWATER, TX

LOCATION.--Lat 32°31'37", long 94°57'36", Gregg County, Hydrologic Unit 12010002, on right bank 46 ft downstream from bridge on U.S. Highway 271, 0.4 mi downstream from Glade Creek, 1.2 mi southwest of Gladewater, and at mile 397.5.

DRAINAGE AREA.--2,791 mi².

PERIOD OF RECORD.--October 1932 to current year.

REVISED RECORDS.--WSP 1732: Drainage area. WDR TX-73-1: 1972.

GAGE.--Water-stage recorder. Datum of gage is 243.85 ft above National Geodetic Vertical Datum of 1929 (Texas Reclamation Department bench mark based on Geological Survey datum). Prior to Oct. 13, 1933, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow partially regulated by Lake Tawakoni (station 08017400), capacity 936,200 acre-ft, by Lake Fork Creek Reservoir (station 08018800), capacity 675,800 acre-ft, and by five tributary reservoirs with a total combined capacity of 42,370 acre-ft. There are many diversions above station for oil field operations and municipal supply. Several observations of water temperature were obtained during the year. A rain gage and gage-height telemeter are located at station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--28 years (water years 1933-60) prior to regulation by Lake Tawakoni, 2,012 ft³/s (1,458,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1933-60).--Maximum discharge, 138,000 ft³/s Apr. 2, 1945 (gage height, 44.16 ft, from floodmark), from rating curve extended above 91,000 ft³/s; minimum, 5.6 ft³/s Aug. 16, 1939. Maximum stage since at least 1892, that of Apr. 2, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1914 reached a stage of about 41.7 ft (discharge, 85,900 ft³/s), from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	2490	5360	16000	6660	9260	3180	668	2450	e3380	1260	668
2	113	2820	5410	14600	6900	10200	2730	608	2790	e3220	1510	822
3	114	3060	5350	13400	7230	10700	2370	567	2900	e3770	2090	956
4	119	3320	5160	12400	7620	11200	2140	569	2810	e4490	2220	1050
5	120	3600	4960	11400	7960	11700	1940	533	2630	e5110	2270	966
6	111	3930	4840	10400	8210	11300	1730	477	2370	e5690	2330	842
7	99	4320	4790	9430	8280	10600	1490	412	2060	e6260	2370	740
8	92	4730	4760	8660	8150	9640	1260	371	1710	e6780	2340	696
9	87	5070	4910	7920	7860	8980	1130	345	1420	7230	2230	676
10	86	5360	5100	7240	7480	8630	1080	329	1230	7370	2060	589
11	87	5500	5230	6510	6930	8180	1040	333	1190	7380	1890	436
12	86	5480	5390	6000	6410	8200	991	765	1210	7300	1730	311
13	82	5280	5640	5560	6230	9490	939	1300	1240	7020	1530	258
14	79	4900	5830	5160	5830	14300	889	1390	1360	6600	1290	206
15	76	4370	5990	4750	5450	18500	845	1370	1470	6060	1120	188
16	72	3730	6120	4290	5100	18500	815	1260	1590	5390	1010	166
17	71	3150	6200	3780	4730	16600	799	1000	1650	4560	952	155
18	71	2870	6290	3450	4440	14700	788	834	1640	3670	896	147
19	71	2760	6400	3370	4210	12700	781	934	1620	2910	837	142
20	72	3130	6620	3280	3960	11000	813	1170	1590	2600	770	138
21	72	3130	7550	3170	3570	9590	1120	1210	1500	2370	722	249
22	73	3120	8330	3260	3310	8460	1430	1220	1390	2110	692	602
23	76	3120	9200	3480	4420	7510	1550	1280	1280	1880	692	687
24	78	3200	10200	3640	4970	6840	1640	1360	1190	1620	696	618
25	84	3420	12700	3740	5380	6330	1650	1460	1160	1400	671	504
26	89	3760	18500	3840	5780	5850	1530	1580	1150	1210	653	412
27	94	4160	23800	4460	6250	5370	1320	1740	1140	1090	652	323
28	105	4570	25000	5440	6930	4870	1020	1900	1150	1010	654	246
29	333	4850	23500	6030	8000	4400	820	2060	1580	987	636	197
30	1010	5080	21100	6330	---	4010	721	2220	e3260	955	614	163
31	1790	---	18400	6500	---	3610	---	2340	---	1030	623	---
TOTAL	5632	118280	288630	207490	178250	301220	40551	33605	51730	122452	40010	14153
MEAN	182	3943	9311	6693	6147	9717	1352	1084	1724	3950	1291	472
MAX	1790	5500	25000	16000	8280	18500	3180	2340	3260	7380	2370	1050
MIN	71	2490	4760	3170	3310	3610	721	329	1140	955	614	138
AC-FT	11170	234600	572500	411600	353600	597500	80430	66660	102600	242900	79360	28070

e Estimated

08020000 SABINE RIVER NEAR GLADEWATER, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1992#, BY WATER YEAR (WY)

MEAN	414	1201	2326	1879	2557	3119	2892	4146	2002	620	184	299
MAX	3361	7839	10580	6693	9664	9717	9644	17100	6745	3950	1291	2566
(WY)	1974	1975	1972	1992	1975	1992	1990	1966	1973	1992	1992	1974
MIN	29.4	86.9	101	199	319	316	241	188	49.0	17.9	18.1	27.0
(WY)	1964	1964	1966	1964	1981	1967	1971	1988	1971	1964	1964	1985

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1961 - 1992#	
ANNUAL TOTAL	996773		1402003			
ANNUAL MEAN	2731		3831		1800	
HIGHEST ANNUAL MEAN					3831	1992
LOWEST ANNUAL MEAN					232	1964
HIGHEST DAILY MEAN	25000	Dec 28	25000	Dec 28	51000	May 22 1989
LOWEST DAILY MEAN	71	Oct 17	71	Oct 17	7.4	Jul 20 1971
ANNUAL SEVEN-DAY MINIMUM	72	Oct 16	72	Oct 16	9.5	Jul 16 1971
INSTANTANEOUS PEAK FLOW			25300	Dec 28	48000	Apr 30 1966
INSTANTANEOUS PEAK STAGE			36.05	Dec 28	38.98	Apr 30 1966
ANNUAL RUNOFF (AC-FT)	1977000		2781000		1304000	
10 PERCENT EXCEEDS	6180		8510		5200	
50 PERCENT EXCEEDS	1390		2370		525	
90 PERCENT EXCEEDS	120		203		53	

Period of regulated streamflow.

08020450 SABINE RIVER ABOVE LONGVIEW, TX

LOCATION.--Lat 32°28'47", long 94°48'15", Gregg County, Hydrologic Unit 12010002, on left bank at city of Longview pumping station at the end of Swinging Bridge Road, 1.4 mi southwest of the intersection of Swinging Bridge Road and Farm Road 2206 in Longview, 2.5 mi downstream from Hawkins Creek, 2.6 mi upstream from U.S. Highway 259, and at mile 357.4.

DRAINAGE AREA.--2,943 mi².

PERIOD OF RECORD.--August 1983 to current year (operated as a low-flow station only).

GAGE--Water-stage recorder and concrete control. Datum of gage is 230.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Daily discharges above 500 ft³/s are not published. Flow partially regulated by Lake Tawakoni (station 08017400), capacity 936,200 acre-ft, by Lake Fork Reservoir (station 08018800), capacity 675,800 acre-ft, and by five tributary reservoirs with a combined capacity of 42,370 acre-ft. There are many diversions above station for municipal, industrial supply, and for oil field operations.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 31.64 ft May 10, 1990; minimum daily discharge, 0.50 ft³/s Sept. 4, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 30.11 ft Dec. 29 at 1500 hours; minimum daily discharge, 91 ft³/s Oct. 22-24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	---	---	---	---	---	---	---	---	---	---	---
2	148	---	---	---	---	---	---	---	---	---	---	---
3	141	---	---	---	---	---	---	---	---	---	---	---
4	144	---	---	---	---	---	---	---	---	---	---	---
5	145	---	---	---	---	---	---	---	---	---	---	---
6	145	---	---	---	---	---	---	464	---	---	---	---
7	140	---	---	---	---	---	---	405	---	---	---	---
8	129	---	---	---	---	---	---	356	---	---	---	---
9	121	---	---	---	---	---	---	320	---	---	---	---
10	107	---	---	---	---	---	---	303	---	---	---	---
11	112	---	---	---	---	---	---	287	---	---	---	---
12	122	---	---	---	---	---	---	---	---	---	---	397
13	113	---	---	---	---	---	---	---	---	---	---	307
14	111	---	---	---	---	---	---	---	---	---	---	236
15	106	---	---	---	---	---	---	---	---	---	---	199
16	98	---	---	---	---	---	---	---	---	---	---	179
17	96	---	---	---	---	---	---	---	---	---	---	163
18	105	---	---	---	---	---	---	---	---	---	---	159
19	98	---	---	---	---	---	---	---	---	---	---	150
20	93	---	---	---	---	---	---	---	---	---	---	144
21	88	---	---	---	---	---	---	---	---	---	---	159
22	91	---	---	---	---	---	---	---	---	---	---	393
23	91	---	---	---	---	---	---	---	---	---	---	---
24	91	---	---	---	---	---	---	---	---	---	---	---
25	96	---	---	---	---	---	---	---	---	---	---	---
26	107	---	---	---	---	---	---	---	---	---	---	466
27	123	---	---	---	---	---	---	---	---	---	---	390
28	121	---	---	---	---	---	---	---	---	---	---	300
29	202	---	---	---	---	---	---	---	---	---	---	230
30	---	---	---	---	---	---	---	---	---	---	---	192
31	---	---	---	---	---	---	---	---	---	---	---	---

CAL YR 1991	TOTAL	---	MEAN	---	MAX	---	MIN	---	AC-FT	---		
WTR YR 1992	TOTAL	---	MEAN	---	MAX	---	MIN	---	AC-FT	---		

08022040 SABINE RIVER NEAR BECKVILLE, TX

LOCATION.--Lat 32°19'38", long 94°21'12", Panola County, Hydrologic Unit 12010002, at downstream side of highway embankment near right end of downstream bridge on U.S. Highway 59, 0.9 mi upstream from Eightmile Creek, 6.0 mi upstream from Farm Road 1794, 8.4 mi northeast of Beckville, 12.4 mi downstream from State Highway 43, and at mile 327.0.

DRAINAGE AREA.--3,589 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Prior to October 1978, published as "near Tatum" (station 08022000).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 190.00 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1978, at site 12.4 mi upstream at datum 14.18 ft higher. Prior to Sept. 21, 1945, nonrecording gage.

REMARKS.--No estimated daily discharges. Records good. Eight major upstream reservoirs, with a combined capacity of 1,701,000 acre-ft, largely regulate the flow. There are several diversions above this station and below Lake Tawakoni for municipal, industrial and for oil field operations. Low flows are sustained by sewage effluents that are returned to the river above the station. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08018500.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--22 years (water years 1939-60) prior to regulation by Lake Tawakoni, 2,663 ft³/s (1,929,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD PRIOR TO REGULATION (WATER YEARS 1939-60).--Maximum discharge, 123,000 ft³/s Apr. 4, 1945 (gage height, 33.80 ft), site and datum then in use, from graph based on gage readings, from rating curve extended above 66,000 ft³/s on basis of partly estimated discharge measurement of 88,900 ft³/s; minimum observed, 2.4 ft³/s Aug. 11, 1964.
Maximum stage since at least 1984, that of Apr. 4, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1884 reached a stage of about 2 ft lower than flood of Apr. 4, 1945. These dates and gage heights are based on information for stations near Tatum (08022000) and at Logansport, La. (08022500).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	249	3390	5390	14000	10000	9820	6960	1260	2800	2740	1090	745
2	236	3470	6660	15700	9350	9220	5910	1090	3480	3050	1200	891
3	222	3410	7190	17300	8910	8940	4960	973	3850	2970	1440	1030
4	195	3300	7100	17500	8410	9410	4130	912	3850	3210	1890	1480
5	195	3310	6660	16900	8950	11700	3570	863	3670	3680	2240	1420
6	256	3440	6330	16100	10300	13400	3180	823	3410	4110	2320	1220
7	205	3640	6040	15300	10700	13500	2950	730	3130	4500	2370	1090
8	179	3870	5800	14600	10100	13400	2660	657	2790	4820	2430	958
9	173	4130	6750	13900	9610	13500	2310	598	2390	5140	2420	883
10	167	4420	9350	13400	9420	13400	2020	551	2030	5390	2380	821
11	150	4700	9550	12800	9260	13400	1870	517	1790	5610	2270	770
12	145	5010	8390	12300	9040	13300	1760	649	1680	5790	2120	693
13	147	5170	7830	12000	9250	12900	1670	1640	1580	5930	1940	545
14	147	5280	7900	11400	10100	12500	1580	2110	1500	6020	1790	440
15	145	5330	7700	10500	10100	12000	1500	2170	1520	6070	1670	377
16	144	5250	7230	9210	9610	11500	1420	2060	1600	6050	1430	323
17	148	5050	6950	7930	8890	11300	1330	2010	1710	5980	1230	289
18	138	5190	6850	7340	8150	11900	1280	1720	1790	5840	1120	246
19	126	5190	6780	7720	7520	13000	1300	1440	1810	5490	1040	234
20	123	6090	7200	7560	6740	13700	1600	1420	1790	4670	979	231
21	133	6860	8350	6800	6100	14200	1820	1710	1770	3690	930	227
22	131	6640	10200	6380	5810	14400	1710	1730	1710	3130	869	266
23	124	5580	12600	6470	6820	14400	1840	1610	1590	2660	829	403
24	136	4750	13800	6240	7900	14200	2030	1740	1450	2300	790	639
25	143	4210	13600	5890	9430	13900	2120	1840	1360	2020	783	721
26	145	3960	13200	5600	11300	13400	2150	2020	1360	1750	780	684
27	143	3990	12600	6480	12100	12800	2070	2160	1340	1490	737	589
28	169	4170	12200	9590	11700	11900	1900	2210	1220	1310	717	490
29	602	4420	12100	11300	10700	10800	1650	2420	1160	1210	698	408
30	2790	4710	12500	11100	---	9470	1450	2560	1650	1130	695	344
31	3470	---	13200	10600	---	8130	---	2640	---	1090	714	---
TOTAL	11476	137930	278000	339910	266270	379390	72700	46833	62780	118840	43911	19457
MEAN	370	4598	8968	10960	9182	12240	2423	1511	2093	3834	1416	649
MAX	3470	6860	13800	17500	12100	14400	6960	2640	3850	6070	2430	1480
MIN	123	3300	5390	5600	5810	8130	1280	517	1160	1090	695	227
AC-FT	22760	273600	551400	674200	528100	752500	144200	92890	124500	235700	87100	38590

08022040 SABINE RIVER NEAR BECKVILLE, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1992#, BY WATER YEAR (WY)

MEAN	548	1540	3072	2924	3830	4083	3955	4905	2897	925	282	449
MAX	4325	8221	9866	10960	11930	12240	11330	21010	11580	3834	1725	3434
(WY)	1974	1975	1975	1992	1975	1992	1990	1966	1989	1992	1979	1974
MIN	42.5	82.1	144	239	448	445	355	317	77.5	32.1	36.7	33.8
(WY)	1964	1964	1966	1964	1964	1967	1971	1972	1971	1964	1969	1985

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1961 - 1992#	
ANNUAL TOTAL	1587398		1777497			
ANNUAL MEAN	4349		4857		2443	
HIGHEST ANNUAL MEAN					4857	1992
LOWEST ANNUAL MEAN					311	1964
HIGHEST DAILY MEAN	18700	May 4	17500	Jan 4	48100	May 2 1966
LOWEST DAILY MEAN	123	Oct 20	123	Oct 20	2.4	Aug 11 1964
ANNUAL SEVEN-DAY MINIMUM	130	Oct 18	130	Oct 18	3.8	Aug 7 1964
INSTANTANEOUS PEAK FLOW*			17900	Jan 4	49400	May 2 1966
INSTANTANEOUS PEAK STAGE*			28.30	Jan 4	38.87	Mar 30 1989
ANNUAL RUNOFF (AC-FT)	3149000		3526000		1770000	
10 PERCENT EXCEEDS	10800		12400		7110	
50 PERCENT EXCEEDS	3300		3130		840	
90 PERCENT EXCEEDS	224		367		81	

Period of regulated streamflow.

08022040 SABINE RIVER NEAR BECKVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: February 1952 to current year. Chemical and biochemical analyses: January 1968 to current year. Pesticide analyses: March 1968 to June 1981.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1952 to current year.
WATER TEMPERATURE: February 1952 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request. Formerly published as 08022000 Sabine River near Tatum.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,040 microsiemens Jan. 13, 1966; minimum daily, 53 microsiemens Mar. 31, 1979, Mar. 30, 1989.
WATER TEMPERATURE: Maximum daily, 38.0°C July 8, 1969; minimum daily, 0.0°C on several days during December 1983.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 580 microsiemens July 22; minimum daily, 68 microsiemens Dec. 1.
WATER TEMPERATURE: Maximum daily, 33.5°C July 22, 24; minimum daily, 4.0°C Dec. 27.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT												
30...	1345	2970	250	6.7	20.0	6.2	68	1.3	42	22	12	3.0
DEC												
18...	1200	6850	195	7.3	12.5	9.2	85	0.1	49	14	14	3.5
FEB												
04...	1230	8380	156	7.0	11.0	9.6	88	1.0	40	18	11	3.1
MAR												
25...	1445	13900	154	7.2	15.0	7.7	77	0.9	46	9	13	3.3
MAY												
13...	1215	1680	311	7.3	23.0	6.9	81	0.9	55	9	15	4.2
JUL												
08...	1133	4790	153	7.6	28.0	5.6	72	0.8	40	12	11	3.0

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT												
30...	30	2	4.1	20	38	31	0.10	6.3	136	0.180	0.040	0.220
DEC												
18...	15	0.9	4.8	35	20	21	0.20	8.2	108	0.080	0.020	0.100
FEB												
04...	13	0.9	3.5	22	21	19	0.10	7.9	92	0.180	0.020	0.200
MAR												
25...	12	0.8	3.4	37	16	15	0.20	3.9	89	0.035	0.020	0.055
MAY												
13...	38	2	3.0	46	40	44	0.30	12	184	0.530	0.060	0.590
JUL												
08...	12	0.8	5.0	28	18	16	<0.10	4.5	87	0.070	0.030	0.100

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
OCT												
30...	0.070	0.73	0.80	0.260	0.100	--	--	--	--	--	--	--
DEC												
18...	0.030	0.47	0.50	0.080	0.040	--	--	--	--	--	--	--
FEB												
04...	0.050	0.65	0.70	0.080	0.030	<1	47	<0.5	<1.0	<5	<3	<10
MAR												
25...	0.040	0.46	0.50	0.050	0.030	--	--	--	--	--	--	--
MAY												
13...	0.110	0.49	0.60	0.190	0.150	--	--	--	--	--	--	--
JUL												
08...	0.060	0.84	0.90	0.140	0.080	<1	49	<0.5	<1.0	<5	<3	<10

08022040 SABINE RIVER NEAR BECKVILLE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 30...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 04...	320	<10	<4	30	<0.1	<10	<10	<1	<1.0	120	<6	10
MAR 25...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 08...	220	<10	<4	26	0.2	<10	<10	<1	<1.0	110	<6	<3

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	11476	396	218	6760	63	1950	34	1070	63
NOV.	1991	137930	188	104	38800	26	9680	20	7290	38
DEC.	1991	278000	165	91	68600	23	16900	17	13000	33
JAN.	1992	339910	175	97	88800	24	22000	18	16800	35
FEB.	1992	266270	165	91	65600	23	16200	17	12500	33
MAR.	1992	379390	151	84	85600	20	20900	16	16400	31
APR.	1992	72700	235	130	25500	33	6530	24	4670	45
MAY	1992	46833	241	134	16900	34	4350	24	3070	46
JUNE	1992	62780	224	124	21000	32	5350	23	3870	44
JULY	1992	118840	184	102	32600	25	8140	19	6140	37
AUG.	1992	43911	213	118	14000	30	3540	22	2590	42
SEPT	1992	19457	263	145	7640	38	1990	26	1370	49
TOTAL		1777497	**	**	472000	**	118000	**	88800	**
WTD.AVG.		4857	177	98	**	24	**	19	**	36

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY EQUIVALENT MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	577	238	173	149	148	144	201	277	200	203	264	240
2	525	217	180	145	155	141	204	275	200	137	280	234
3	455	228	178	142	159	140	e208	279	198	136	275	233
4	448	229	182	139	160	139	214	292	191	164	201	295
5	445	208	179	145	153	136	219	299	195	138	190	246
6	463	177	186	152	151	135	217	296	195	144	183	234
7	490	153	196	157	155	131	219	298	218	147	177	e230
8	440	157	202	161	154	134	228	305	236	152	184	230
9	510	160	176	170	157	138	230	308	258	154	195	212
10	535	160	174	181	162	142	233	330	272	158	212	217
11	559	162	176	188	167	147	242	352	e260	e164	205	237
12	530	166	185	193	174	153	248	369	245	167	199	240
13	568	173	178	194	181	158	249	287	238	172	200	241
14	656	178	181	199	188	163	253	253	252	178	200	259
15	614	180	183	203	184	161	265	210	292	184	207	276
16	632	182	184	204	186	e158	280	169	273	190	216	280
17	648	186	192	208	186	153	285	205	224	193	209	280
18	670	198	193	212	198	149	284	208	243	197	210	296
19	645	230	193	221	213	140	291	229	237	e212	213	320
20	589	217	197	225	215	137	271	242	215	219	226	358
21	602	170	194	214	210	135	266	255	210	216	234	396
22	670	170	149	202	211	136	256	237	210	303	231	410
23	690	185	135	206	203	139	266	270	211	194	237	401
24	695	210	135	233	164	149	256	233	216	206	238	391
25	723	224	137	223	138	159	240	216	220	217	234	375
26	825	228	137	205	125	172	231	277	224	217	245	225
27	723	186	139	190	124	180	277	228	226	220	235	228
28	768	e165	143	169	129	178	273	212	235	232	e246	238
29	485	178	146	150	135	178	243	216	241	244	250	250
30	223	170	142	145	---	182	246	201	255	255	246	270
31	274	---	150	141	---	191	---	198	---	252	242	---
MEAN	570	189	171	183	168	152	246	259	230	192	222	278
MAX	825	238	202	233	215	191	291	369	292	303	280	410
MIN	223	153	135	139	124	131	201	169	191	136	177	212

e Estimated

08022040 SABINE RIVER NEAR BECKVILLE, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	16.5	12.5	10.5	11.0	14.5	15.5	22.0	22.0	28.5	28.5	27.0
2	24.0	15.0	12.5	11.0	11.5	15.0	16.0	23.0	22.0	27.5	28.5	27.0
3	24.0	14.5	12.0	11.0	12.0	14.5	---	22.5	22.5	28.0	29.0	25.5
4	23.0	12.5	12.5	11.5	11.5	14.5	17.0	23.5	23.0	28.0	28.0	26.5
5	22.0	13.0	12.0	11.5	11.0	15.0	16.0	24.5	23.5	28.0	29.0	26.5
6	22.0	11.0	11.5	11.5	11.5	18.0	15.5	23.0	24.0	28.0	29.0	27.5
7	21.5	9.5	11.0	12.0	11.5	19.0	16.0	23.0	25.0	28.0	29.0	---
8	---	9.0	14.0	12.0	11.0	17.5	17.5	23.5	25.0	28.5	29.0	29.0
9	20.0	9.0	14.5	11.0	11.0	18.5	19.0	23.0	26.0	28.5	29.0	29.0
10	20.0	7.0	14.0	11.0	11.0	15.0	19.0	22.5	27.0	28.5	30.0	28.0
11	18.0	10.0	14.0	10.5	11.5	15.0	19.5	23.0	---	---	29.5	28.0
12	24.0	10.0	15.0	11.0	12.5	15.5	21.0	24.0	28.0	28.0	29.5	28.0
13	19.5	10.0	15.5	10.5	12.0	15.0	22.0	24.0	28.5	28.5	29.5	27.5
14	21.0	12.0	15.0	10.0	13.5	17.0	22.5	24.0	28.0	28.5	29.0	28.0
15	19.0	13.0	14.0	9.0	---	16.0	23.0	24.0	29.0	27.5	28.5	28.0
16	20.5	13.0	14.0	8.5	14.5	---	23.0	23.0	29.0	28.5	27.5	27.5
17	18.5	13.0	14.0	7.0	14.5	16.0	---	23.5	29.5	28.0	27.0	28.5
18	18.0	15.5	13.0	6.5	14.5	17.5	23.0	24.5	29.5	28.0	26.5	29.0
19	18.0	15.0	11.0	7.0	15.0	16.5	22.0	24.5	29.5	---	26.0	28.5
20	18.0	14.5	12.0	7.5	15.0	17.0	21.5	25.0	29.0	26.5	26.5	29.5
21	19.5	15.5	12.0	7.0	14.5	16.0	22.0	26.0	28.0	28.0	27.0	28.5
22	17.0	15.0	13.0	9.0	14.0	15.5	22.5	24.5	28.0	27.0	27.0	28.0
23	---	13.0	12.5	9.0	15.0	16.0	22.5	24.5	28.0	26.5	28.0	26.0
24	---	13.0	12.5	8.5	16.0	15.0	---	24.5	29.0	28.5	27.5	25.0
25	---	12.5	11.5	9.0	14.0	15.5	21.5	24.0	28.0	27.0	28.0	25.0
26	---	11.5	11.0	9.0	13.5	16.5	21.0	24.0	28.0	27.5	28.5	25.0
27	22.0	11.5	10.5	9.5	13.0	16.5	21.5	24.0	28.5	28.0	27.0	25.0
28	23.5	---	10.0	10.5	14.0	16.0	20.5	22.5	27.5	29.0	---	24.0
29	22.0	14.0	11.0	10.0	14.5	17.0	19.5	21.5	28.0	28.0	27.5	24.0
30	20.0	16.5	11.0	10.5	---	16.5	20.5	22.0	28.0	28.5	27.5	21.5
31	20.0	---	11.0	12.0	---	17.5	---	21.5	---	28.0	28.0	---
MEAN	20.5	12.5	12.5	10.0	13.0	16.0	20.0	23.5	27.0	28.0	28.0	27.0
MAX	24.0	16.5	15.5	12.0	16.0	19.0	23.0	26.0	29.5	29.0	30.0	29.5
MIN	17.0	7.0	10.0	6.5	11.0	14.5	15.5	21.5	22.0	26.5	26.0	21.5

08022060 MARTIN LAKE NEAR TATUM, TX

LOCATION.--Lat 32°15'42", long 94°34'23", Rusk County, Hydrologic Unit 12010002, on retaining wall, 30 ft to right of intake to generating plant No. 1, 1.9 mi upstream from Martin Dam on Martin Creek, 5.8 mi southwest of Tatum, and 21.9 mi upstream from mouth.

DRAINAGE AREA.--130 mi².

PERIOD OF RECORD.--April 1974 to current year.
Water-quality records.--Chemical analyses: October 1974 to September 1984.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 15, 1976, non-recording gage near left end of dam 1.9 mi downstream at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam 8,675 ft long, including a 1,000-foot uncontrolled spillway. Deliberate impoundment began in April 1974. The uncontrolled spillway is an excavated channel cut through natural ground and located at the left end of the dam. The controlled spillway is a concrete ogee design with four 14.0-by 40.0-foot-wide tainter gates located near the left end of the dam. The low-flow outlet works consist of a 3.0-by 5.0-foot conduit with a sluice gate located in one of the gate piers. There is an 8-inch pipe with sluice gate. The area and capacity tables are based on an aerial survey made in October 1971. There are no known diversions. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	321.5	-
Crest of uncontrolled spillway	312.0	111,500
Top of gates	308.0	87,960
Top of conservation pool	306.0	77,500
Crest of gated spillway	294.0	31,040
Lowest gated outlet (invert)	284.0	10,320

COOPERATION.--Area and capacity tables provided by Forrest and Cotton, Consulting Engineers, for Texas Utilities Services, Inc.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 118,000 acre-ft Mar. 29, 1989 (elevation, 313.00 ft); minimum since first appreciable storage, 54,380 acre-ft Oct. 25, 1988 (elevation, 300.87 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 79,120 acre-ft Jan. 27 at 1600 hours (elevation, 306.32 ft); minimum, 65,030 acre-ft Sept. 30 (elevation, 303.37 ft).

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

303.0	63,360	306.0	77,500
304.0	67,880	307.0	82,620
305.0	72,580		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72680	78000	77250	77450	77200	78660	76900	76250	76850	75260	71770	67360
2	72580	78000	77450	76650	77500	79070	77100	76150	76850	75020	71720	67280
3	72490	77000	77750	77050	77700	76850	77100	76150	76850	74870	71630	70730
4	72300	77000	77750	77350	77400	77050	77100	76150	76650	74670	71440	70880
5	72010	77000	77950	76750	77200	77450	77200	75950	76750	74570	71250	70790
6	71910	77000	78150	76950	78200	77350	77100	75850	76650	74380	71150	70580
7	71630	77100	78260	77050	78610	77650	77300	75850	76450	74180	70960	70450
8	71630	77200	76750	77250	77100	76650	77400	75660	76450	73990	70770	70240
9	71530	77200	77550	77350	77300	76950	77400	75660	76450	73790	70680	70050
10	71440	77200	77150	77450	77500	77150	77300	75460	76350	73600	70490	69780
11	71340	77300	76950	77650	77700	77350	77000	75360	76350	73410	70310	69570
12	71250	77300	76950	76500	77500	77350	77000	76950	76150	73210	70170	69330
13	71150	77200	77550	77400	77600	77500	77000	77150	76150	73070	70040	69110
14	70960	77400	77750	77800	77200	77400	77000	77150	76050	72780	69840	68970
15	70770	77400	77550	77900	77500	77700	77000	77150	75950	72680	69740	68720
16	70680	77500	76550	78100	77700	77600	77000	76750	75660	72580	69530	68600
17	70390	77000	76650	77000	76650	77900	76900	76450	75560	72580	69390	68480
18	70390	77700	76750	77400	76850	78200	76900	76450	75360	72490	69240	68290
19	70300	76900	77550	77300	76950	78610	77250	76850	75160	73070	69070	68100
20	70110	77800	77750	77100	76950	78610	76350	76850	74970	72970	68870	67850
21	70020	78310	77950	77600	77150	77600	76350	76650	74670	72780	68780	67520
22	69920	76700	78260	77000	77850	77400	76450	76750	74480	72780	68630	67190
23	70200	76900	77250	77400	76850	77600	76350	76650	74570	72730	68450	66760
24	70110	77050	78260	77500	77650	77900	76350	76450	74670	72630	68300	66510
25	70110	77050	77050	77700	78150	78100	76150	76750	74670	72340	68200	66370
26	69920	77150	77250	76700	77350	76300	76150	76750	75460	72340	68010	66210
27	69920	77250	77050	77600	77850	76400	75950	76750	75560	72060	67670	65960
28	70110	77350	77250	77300	78150	76700	75950	76650	75460	72250	67500	65620
29	77300	77250	77650	77100	78560	76900	76150	76650	75460	72150	67320	65280
30	77200	77550	77550	77300	---	76900	76250	76650	75360	71960	67050	65030
31	77500	---	77150	77900	---	76900	---	76650	---	71870	66790	---
MAX	77500	78310	78260	78100	78610	79070	77400	77150	76850	75260	71770	70880
MIN	69920	76700	76550	76500	76650	76300	75950	75360	74480	71870	66790	65030
(†)	306.00	306.01	305.93	306.08	306.21	305.88	305.75	305.83	305.57	304.85	303.76	303.37
(Φ)	+4720	+50	-400	+750	+660	-1660	-650	+400	-1290	-3490	-5080	-1760

CAL YR 1991 MAX 80550 MIN 69920 (Φ) -50
WTR YR 1992 MAX 79070 MIN 65030 (Φ) -7750

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

08022070 MARTIN CREEK NEAR TATUM, TX

LOCATION.--Lat 32°17'44", long 94°29'29", Panola County, Hydrologic Unit 1201002, on right bank, 35 ft downstream from right abutment, 360 ft to right of bridge on State Highway 149, 50 ft upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 1.7 mi upstream from Hogan Creek, 2.0 mi southeast of Tatum, 5.0 mi downstream from Martin Lake, and 15.0 mi upstream from mouth.

DRAINAGE AREA.--148 mi².

PERIOD OF RECORD.--April 1974 to current year.

REVISED RECORDS.--WDR TX-76-1: 1975; WRD TX-91-1: 1989 & 1990.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 240.26 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 31, 1978, at site 50 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow is largely regulated by Martin Lake, located 5 mi upstream. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORDS.--The second highest stage since 1948 occurred in April 1969 and reached a stage of 18.15 ft. A flood in April 1957 reached a stage of 13.95 ft, from information by State Department of Highways and Public Transportation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	183	178	141	53	35	21	15	21	10	7.5	6.2
2	8.0	29	663	508	562	34	20	13	26	8.8	8.2	9.2
3	8.0	127	392	261	69	916	19	13	17	7.6	7.7	19
4	7.6	525	45	34	333	735	19	13	14	7.1	7.4	17
5	7.7	45	24	29	1250	2480	18	13	13	6.8	7.3	9.0
6	8.1	17	20	426	526	521	19	12	12	6.8	7.2	7.7
7	8.4	16	19	59	64	451	20	11	12	6.8	6.7	7.0
8	9.0	21	467	29	443	89	19	11	11	6.5	6.3	6.6
9	8.4	16	927	26	638	762	18	11	11	6.7	5.9	7.1
10	8.3	15	717	23	55	82	17	10	10	6.7	5.5	8.6
11	8.1	15	808	21	33	34	186	11	11	6.7	5.9	7.9
12	8.0	14	542	646	45	32	88	195	11	6.5	7.0	7.2
13	8.0	13	178	769	759	30	19	46	10	6.6	6.5	6.6
14	7.7	13	42	73	831	29	16	18	8.9	6.6	5.9	8.4
15	7.6	13	28	30	137	30	15	18	8.4	6.5	5.6	6.0
16	8.3	13	770	26	33	29	15	18	9.1	6.5	5.8	6.0
17	8.6	133	166	134	700	27	14	366	8.9	9.6	4.8	7.4
18	7.9	880	27	711	139	479	14	106	7.9	12	5.2	6.3
19	7.8	258	48	933	31	276	16	120	7.6	9.3	5.3	6.8
20	8.1	1390	413	1020	27	39	441	47	7.4	13	5.5	7.2
21	8.2	174	1770	146	26	699	205	20	7.1	9.1	5.7	7.2
22	8.2	713	2100	126	138	250	21	17	6.9	8.1	5.4	6.5
23	8.6	273	3060	854	1800	33	15	17	6.7	7.8	5.2	5.6
24	16	32	880	92	943	27	15	13	6.7	7.7	5.2	5.6
25	11	22	186	32	1370	59	14	33	14	7.4	5.9	6.0
26	9.6	19	802	91	2010	1400	13	38	39	7.2	5.9	5.8
27	9.4	18	117	1930	468	176	13	20	23	7.2	6.1	5.9
28	11	18	409	3170	54	30	12	21	12	9.9	6.7	5.9
29	482	18	50	1080	37	34	14	18	14	12	6.1	5.8
30	e2550	19	30	1010	---	26	16	17	11	10	6.0	5.7
31	1410	---	429	174	---	22	---	15	---	9.1	5.8	---
TOTAL	4686.0	5042	16307	14604	13574	9866	1352	1296	377.6	252.6	191.2	227.2
MEAN	151	168	526	471	468	318	45.1	41.8	12.6	8.15	6.17	7.57
MAX	2550	1390	3060	3170	2010	2480	441	366	39	13	8.2	19
MIN	7.6	13	19	21	26	22	12	10	6.7	6.5	4.8	5.6
AC-FT	9290	10000	32340	28970	26920	19570	2680	2570	749	501	379	451

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1992, BY WATER YEAR (WY)

MEAN	19.2	43.2	146	162	296	195	153	155	127	23.7	12.1	7.99
MAX	151	320	526	708	880	786	1020	548	854	198	119	37.4
(WY)	1992	1991	1992	1991	1983	1989	1991	1990	1989	1976	1977	1979
MIN	1.40	2.15	3.72	3.07	12.2	5.46	4.12	5.84	3.51	1.85	1.65	1.37
(WY)	1981	1978	1981	1981	1981	1986	1981	1977	1978	1977	1982	1980

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1975 - 1992	
ANNUAL TOTAL	110310.6		67775.6			
ANNUAL MEAN	302		185		111	
HIGHEST ANNUAL MEAN					273	1991
LOWEST ANNUAL MEAN					21.6	1981
HIGHEST DAILY MEAN	8160	Apr 14	3170	Jan 28	11300	Mar 29 1989
LOWEST DAILY MEAN	6.6	Aug 1	4.8	Aug 17	.42	Aug 27 1986
ANNUAL SEVEN-DAY MINIMUM	7.0	Aug 5	5.3	Aug 17	.91	Sep 24 1982
INSTANTANEOUS PEAK FLOW			5880	Jan 28	16900	Mar 29 1989
INSTANTANEOUS PEAK STAGE			14.58	Jan 28	a/19.52	Mar 29 1989
INSTANTANEOUS LOW FLOW			4.3	Aug 17	.25	Oct 17 1977
ANNUAL RUNOFF (AC-FT)	218800		134400		80150	
10 PERCENT EXCEEDS	843		699		266	
50 PERCENT EXCEEDS	23		17		9.8	
90 PERCENT EXCEEDS	7.7		6.5		2.6	

a/ Maximum stage since at least 1948.

08022500 SABINE RIVER AT LOGANSPORT, LA

LOCATION.--Lat 31°58'20", long 94°00'22", De Soto Parish, Louisiana-Shelby County, Texas State line at Logansport, Hydrologic Unit 12010004, on left bank just upstream from bridge on U.S. Highway 84, 3 mi upstream from Bayou Castor, 111 mi upstream from Toledo Bend Dam, and at mile 267.1.

DRAINAGE AREA.--4,842 mi².

PERIOD OF RECORD.--Gage-height record March 1968 to current year. Discharge record July 1903 to February 1968.

REVISED RECORDS.--WSP 1312: 1903-6 (monthly and annual means). WSP 1732: 1929(M), 1933(M).

GAGE.--Water-stage recorder. Datum of gage is 147.72 ft above National Geodetic Vertical Datum of 1929. July 1, 1903, to Sept. 30, 1956, nonrecording gage. Oct. 1, 1956, to Jan. 16, 1964, water-stage recorder 4,600 ft upstream. Jan. 16, 1964, to Dec. 10, 1968, water-stage recorder 4,700 ft upstream. All gages to present datum except prior to Dec. 31, 1906 when datum was 2.00 ft lower.

REMARKS.--Station discontinued as a daily streamflow station Mar. 1, 1968, due to backwater from storage in Toledo Bend Reservoir (station 08025350). Ten major reservoirs, with a combined capacity of 1,824,000 acre-ft, largely regulate the flow. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08018500. Numerous diversions above station for oil field operations, municipal, and industrial uses. Gage-height telemeter at station.

AVERAGE DISCHARGE.--64 years (water years 1904-67), 3,208 ft³/s (2,324,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height (1968-91), 34.78 ft Apr. 16, 1991; minimum since initial filling of Toledo Bend Reservoir in June 1968, 16.85 ft Nov. 9, 1987. Maximum discharge (1903-67), 92,000 ft³/s Apr. 8, 1945 (gage height, 44.07 ft, from floodmark); minimum, 16 ft³/s Sept. 26-28, Oct. 3, 4, 1939. Maximum stage since at least 1884, that of Apr. 8, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1884 reached a stage of 39.4 ft, present site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 28.92 ft Mar. 8 at 0930 hours; minimum recorded, 17.53 ft on Oct. 30.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.14	18.94	19.07	24.83	26.57	27.66	26.35	23.63	24.09	24.27	23.10	21.40
2	20.07	19.12	20.04	24.61	26.19	27.41	25.95	23.44	24.31	24.30	22.94	21.44
3	20.01	18.84	20.59	24.55	25.95	27.08	25.66	23.35	24.33	24.20	22.86	21.45
4	19.93	18.59	20.89	24.70	25.54	27.26	25.32	23.37	24.32	24.10	22.85	21.46
5	19.63	18.54	21.06	25.01	25.69	27.70	25.07	23.36	24.32	24.14	22.82	21.42
6	19.62	18.54	21.14	25.54	26.00	28.33	24.65	23.16	24.28	24.18	22.78	21.36
7	19.53	18.36	20.98	26.08	26.15	28.83	24.48	23.20	24.28	24.23	22.72	21.32
8	19.47	18.36	20.63	26.50	26.22	28.81	24.39	23.22	24.12	24.26	22.77	21.35
9	19.31	18.50	20.44	26.62	26.26	28.53	24.31	23.38	24.08	24.34	22.80	21.35
10	19.23	18.55	20.63	26.46	26.14	27.97	24.11	23.43	24.08	24.32	22.61	21.22
11	19.15	18.58	21.00	26.25	25.89	27.71	23.91	23.39	24.02	24.40	22.77	21.11
12	19.03	18.61	21.35	26.30	25.79	27.39	23.69	23.18	23.85	24.40	22.56	21.15
13	18.97	18.72	21.67	26.18	25.95	27.21	23.58	23.20	23.97	24.58	22.49	21.19
14	---	18.84	21.95	25.97	26.05	27.04	23.54	23.25	23.91	24.54	22.44	21.05
15	---	18.84	22.10	25.61	25.98	26.93	23.38	23.33	23.99	24.56	22.36	21.01
16	---	18.89	22.11	25.42	26.17	26.88	23.31	23.40	24.01	24.50	22.38	20.98
17	---	19.19	22.01	25.16	26.34	26.81	23.22	23.45	23.98	24.39	22.29	20.94
18	---	19.50	21.78	25.20	26.36	26.78	23.39	23.37	23.81	24.40	22.14	20.91
19	---	19.91	21.62	25.17	26.32	26.63	23.29	23.39	23.71	24.39	22.13	21.00
20	---	20.11	21.51	25.03	26.22	26.63	23.04	23.44	23.76	24.38	22.04	21.17
21	---	20.46	21.58	24.80	26.07	26.85	23.32	23.41	23.73	24.32	22.01	20.98
22	---	20.70	22.27	24.75	26.14	26.53	23.41	23.30	23.72	24.11	21.94	20.69
23	---	20.63	22.88	24.54	26.17	26.69	23.32	23.21	23.76	23.97	22.04	20.58
24	---	20.70	23.76	24.31	26.24	26.89	23.25	23.20	23.69	24.02	21.89	20.65
25	---	20.18	25.09	24.04	26.59	27.07	23.05	23.26	23.65	23.79	21.85	20.75
26	---	19.45	26.26	23.80	27.36	27.26	23.13	23.42	23.95	23.61	21.73	20.51
27	---	19.00	26.76	24.16	27.47	27.31	23.17	23.52	24.22	23.45	21.67	20.54
28	---	18.83	26.59	24.82	27.61	27.34	23.35	23.56	24.15	23.33	21.62	20.47
29	---	18.91	26.18	25.25	27.71	27.15	23.43	23.53	23.97	23.31	21.69	20.34
30	17.93	18.80	25.69	25.79	---	26.95	23.52	23.62	24.15	23.15	21.45	20.26
31	18.57	---	25.22	26.38	---	26.70	---	23.68	---	22.98	21.45	---
MAX	---	20.70	26.76	26.62	27.71	28.83	26.35	23.68	24.33	24.58	23.10	21.46
MIN	---	18.36	19.07	23.80	25.54	26.53	23.04	23.16	23.65	22.98	21.45	20.26

CAL YR 1991 MAX --- MIN ---
WTR YR 1992 MAX --- MIN ---

08025350 TOLEDO BEND RESERVOIR NEAR BURKEVILLE, TX

LOCATION.--Lat 31°10'25", long 93°33'57", Newton County, Hydrologic Unit 12010004, in powerhouse at right end of Toledo Bend Dam on Sabine River, 15 mi northeast of Burkeville, and at mile 156.5.

DRAINAGE AREA.--7,178 mi².

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Sabine River Authority). Prior to July 20, 1967, nonrecording gage at same site and datum. July 20, 1967, to June 30, 1973, recording gage at right end of spillway 1.6 mi north of present site and at same datum.

REMARKS.--The reservoir is formed by a rolled earthfill dam. Closure of embankment completed and deliberate impoundment began Oct. 3, 1966. The reservoir is operated for hydro-electric power generation and water conservation. Releases during high inflow periods are controlled by eleven 40- x 28-foot tainter gates. An 8.33- x 12-foot gated conduit through the dam is used for low-flow releases. Two additional 20-inch-diameter conduits, that bypass the larger conduit, may also be used for low-flow releases. Water for turbines is admitted through four 16.75- x 29-foot penstocks and controlled by vertically operated caterpillar-type gates. The capacity table is based on U.S. Geological Survey topographic maps. For statement regarding regulation by upstream reservoirs, see station 08020000. Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	185.0	-
Design flood	175.3	5,102,000
Top of gates	173.0	4,660,000
Top of power drawdown storage	172.0	4,476,000
Top of power head storage	162.2	2,922,000
Crest of spillway (controlled)	145.0	1,162,000
Lowest gated outlet (invert)	100.0	4,090

COOPERATION.--Capacity table furnished by the Sabine River Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,840,000 acre-ft May 18, 1989 (elevation, 173.95 ft); minimum since initial filling of reservoir in June 1968, 3,290,000 acre-ft Nov. 14, 15, 1987 (elevation, 164.78 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,686,000 acre-ft Feb. 25 at 2000 hours (elevation, 173.14 ft); minimum, 3,307,000 acre-ft Nov. 15 (elevation, 164.90 ft).

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

164.0	3,175,000	168.0	3,788,000	172.0	4,476,000
166.0	3,473,000	170.0	4,123,000	174.0	4,849,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3758000	3382000	3382000	3786000	4179000	4621000	4550000	4278000	4383000	4390000	4222000	3946000
2	3740000	3387000	3393000	3796000	4193000	4596000	4548000	4294000	4415000	4386000	4227000	3935000
3	3719000	3390000	3404000	3808000	4205000	4586000	4528000	4306000	4422000	4404000	4210000	3945000
4	3694000	3382000	3396000	3816000	4262000	4618000	4511000	4297000	4426000	4406000	4198000	3943000
5	3705000	3372000	3401000	3824000	4297000	4627000	4476000	4301000	4406000	4403000	4182000	3941000
6	3671000	3372000	3413000	3831000	4310000	4675000	4487000	4301000	4404000	4408000	4173000	3938000
7	3652000	3397000	3416000	3842000	4333000	4660000	4458000	4280000	4421000	4401000	4160000	3928000
8	3630000	3379000	3428000	3869000	4349000	4632000	4444000	4278000	4413000	4394000	4147000	3922000
9	3622000	3357000	3446000	3875000	4354000	4631000	4412000	4259000	4404000	4386000	4154000	3923000
10	3606000	3351000	3446000	3874000	4351000	4612000	4397000	4259000	4383000	4386000	4153000	3920000
11	3582000	3340000	3456000	3884000	4354000	4559000	4376000	4245000	4386000	4386000	4175000	3920000
12	3572000	3336000	3462000	3923000	4381000	4570000	4354000	4269000	4392000	4401000	4170000	3915000
13	3550000	3325000	3485000	4002000	4424000	4548000	4322000	4278000	4386000	4397000	4160000	3900000
14	3547000	3310000	3496000	3982000	4471000	4564000	4283000	4276000	4388000	4394000	4147000	3902000
15	3527000	3322000	3496000	4016000	4515000	4564000	4269000	4281000	4372000	4383000	4140000	3889000
16	3504000	3313000	3502000	3987000	4542000	4546000	4260000	4280000	4370000	4378000	4135000	3887000
17	3489000	3349000	3506000	3990000	4550000	4526000	4252000	4281000	4369000	4395000	4125000	3879000
18	3484000	3352000	3515000	4055000	4550000	4557000	4226000	4290000	4385000	4404000	4109000	3869000
19	3471000	3382000	3504000	4069000	4550000	4581000	4245000	4292000	4386000	4419000	4096000	3859000
20	3456000	3397000	3513000	4075000	4533000	4572000	4295000	4280000	4372000	4417000	4087000	3839000
21	3435000	3382000	3532000	4079000	4522000	4548000	4262000	4278000	4376000	4392000	4069000	3849000
22	3414000	3379000	3549000	4096000	4555000	4618000	4260000	4283000	4370000	4379000	4053000	3864000
23	3388000	3399000	3585000	4106000	4586000	4561000	4262000	4294000	4365000	4369000	4050000	3854000
24	3387000	3387000	3592000	4092000	4588000	4546000	4276000	4295000	4349000	4336000	4050000	3829000
25	3373000	3382000	3608000	4091000	4679000	4570000	4299000	4333000	4335000	4322000	4048000	3819000
26	3361000	3370000	3641000	4099000	4647000	4572000	4278000	4315000	4374000	4311000	4053000	3828000
27	3346000	3367000	3671000	4120000	4656000	4575000	4262000	4326000	4383000	4294000	4038000	3823000
28	3322000	3366000	3697000	4137000	4645000	4574000	4240000	4336000	4406000	4278000	4004000	3821000
29	3367000	3364000	3724000	4147000	4636000	4592000	4287000	4342000	4422000	4252000	3984000	3808000
30	3352000	3367000	3740000	4161000	---	4574000	4285000	4342000	4421000	4238000	3972000	3790000
31	3387000	---	3759000	4170000	---	4568000	---	4351000	---	4234000	3950000	---
MAX	3758000	3399000	3759000	4170000	4679000	4675000	4550000	4351000	4426000	4419000	4227000	3946000
MIN	3322000	3310000	3382000	3786000	4179000	4526000	4226000	4245000	4335000	4234000	3950000	3790000
(†)	165.43	165.30	167.82	170.72	172.87	172.50	170.93	171.30	171.69	170.64	168.98	168.01
(ϕ)	-385000	-20000	+392000	+411000	+466000	-68000	-283000	+66000	+70000	-187000	-284000	-160000

CAL YR 1991 MAX 4758000 MIN 3310000 (ϕ) -214000
WTR YR 1992 MAX 4679000 MIN 3310000 (ϕ) +18000

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

08025360 SABINE RIVER AT TOLEDO BEND RESERVOIR NEAR BURKEVILLE, TX

LOCATION.--Lat 31°10'25", long 93°33'57", Newton County, Hydrologic Unit 12010005, in powerhouse at right end of Toledo Bend Dam, 10 mi upstream from Sabine River near Burkeville gage, and at mile 156.5.

DRAINAGE AREA.--7,178 mi².

PERIOD OF RECORD.--October 1971 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1967 to September 1986.

GAGE.--Water-stage recorders. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Sabine River Authority).

REMARKS.--No estimated daily discharges. Records poor. Daily discharges are a combination of releases from various outlets at the dam. Discharges for releases through the turbines are computed using scroll case differential pressure relationships and operation logs. Tainter gate releases, low-flow sluiceway releases, bypass gate releases, and turbine leakages are based on discharge measurements and operation logs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 114,000 ft³/s May 19, 1989; minimum daily (estimated), 30 ft³/s Oct. 1-4, 1972.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7530	2500	7240	7130	14400	25800	19300	2480	2560	2610	3270	7440
2	7310	164	7230	7110	14300	25800	17200	164	5310	2460	164	6480
3	7550	164	7170	11200	14400	25600	14400	164	8720	2690	6120	2970
4	7280	2600	7150	11000	14400	25800	14100	2640	7080	164	6170	2860
5	7320	2700	7140	10900	14500	29500	14100	2760	7200	164	6160	2920
6	7380	2660	7140	11300	14500	36500	14200	2690	7070	2330	5910	2870
7	7480	4860	7200	11200	14400	36800	14100	2700	7220	3670	6230	2670
8	7650	7280	7210	10700	14500	37000	14100	2540	7160	3760	3220	1720
9	7590	7310	7220	11800	14500	36800	13600	164	6950	3810	164	1610
10	7500	7320	7240	14800	14500	36800	14200	164	7290	3750	6190	1730
11	7480	7320	7250	15100	14200	30100	14300	2440	7140	164	6310	3230
12	7510	7270	7230	15000	14100	22800	14000	2600	2750	164	6290	3140
13	7410	7300	6640	15000	13800	18200	14300	2540	164	3810	6110	134
14	7430	7340	7250	15000	14600	14300	14200	2440	164	7250	6030	3190
15	7480	4990	7230	14600	14400	14100	11500	2940	2540	6050	3250	3210
16	6410	4900	7210	14600	14300	14300	6750	164	2540	6120	164	3210
17	7650	1940	7170	14700	14400	14300	6650	164	2610	6300	6350	3220
18	7430	4930	7310	15000	14400	14300	6640	2810	2340	3230	6160	3210
19	7070	4850	7360	14900	14300	14000	6770	2650	2770	1770	6190	3260
20	7170	6160	7370	14800	14200	14100	6700	2590	164	6300	6150	134
21	7700	7390	7320	14800	14300	14200	247	2510	164	8640	6100	3350
22	6250	7370	7320	14700	14200	14200	2450	2500	2690	13100	2880	3270
23	7200	7210	7380	14800	17700	14000	2600	164	2400	10300	164	3300
24	7250	7160	7480	14700	19400	14000	2140	164	2810	9940	4300	3160
25	7250	7150	7490	14700	23300	14200	2240	2790	2570	10200	164	3420
26	7190	7140	7670	14500	25900	14100	1760	2770	2450	9840	2990	3170
27	7140	7210	7790	14600	25900	16300	1820	2580	164	9870	7650	134
28	7120	7210	7780	14400	25900	19200	164	2400	164	9880	7340	3020
29	2840	7240	7770	14600	25600	19300	164	2520	2530	9430	7430	3340
30	886	7250	7310	14700	---	19300	164	164	2670	9050	7610	3370
31	2620	---	6910	14600	---	19300	---	164	---	5670	7440	---
TOTAL	211076	166888	226180	416940	479300	665000	264859	56530	108354	172486	150670	88742
MEAN	6809	5563	7296	13450	16530	21450	8829	1824	3612	5564	4860	2958
MAX	7700	7390	7790	15100	25900	37000	19300	2940	8720	13100	7650	7440
MIN	886	164	6640	7110	13800	14000	164	164	164	164	164	134
AC-FT	418700	331000	448600	827000	950700	1319000	525300	112100	214900	342100	298900	176000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1992, BY WATER YEAR (WY)

MEAN	1108	1718	5658	9248	9789	9691	7822	8307	6688	4832	3562	2812
MAX	6809	6567	17720	27680	20510	21450	19270	22170	24960	18790	6732	7323
(WY)	1992	1974	1975	1974	1975	1992	1991	1991	1989	1989	1976	1991
MIN	59.0	50.7	74.5	90.0	339	231	247	311	1999	1004	764	424
(WY)	1976	1976	1976	1978	1981	1972	1978	1984	1982	1988	1984	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1972 - 1992	
ANNUAL TOTAL	3996154		3007025			
ANNUAL MEAN	10950		8216		5920	
HIGHEST ANNUAL MEAN					10070	1975
LOWEST ANNUAL MEAN					1588	1981
HIGHEST DAILY MEAN	84400	Apr 19	37000	Mar 8	114000	May 19 1989
LOWEST DAILY MEAN	164	Nov 2	134	Sep 13	30	Oct 1 1972
ANNUAL SEVEN-DAY MINIMUM	1660	Oct 30	731	Apr 27	34	Nov 21 1975
ANNUAL RUNOFF (AC-FT)	7926000		5964000		4289000	
10 PERCENT EXCEEDS	26200		14800		14800	
50 PERCENT EXCEEDS	7350		7200		3700	
90 PERCENT EXCEEDS	3010		1690		108	

08026000 SABINE RIVER NEAR BURKEVILLE, TX

LOCATION.--Lat 31°03'50", long 93°31'10", Newton County, Texas-Vernon Parish, Louisiana State line, Hydrologic Unit 12010005, near left edge of low-water channel at downstream side of bridge on State Highway 63, about 200 ft downstream from Pearl Creek, 10 mi northeast of Burkeville, 16 mi downstream from Bayou Toro, and at mile 139.7.

DRAINAGE AREA.--7,482 mi².

PERIOD OF RECORD.--September 1955 to current year. Published as "below Toledo Bend near Burkeville" for period 1955-75. Water-quality records.--Chemical and biochemical analyses: May 1968 to September 1986. Pesticide analyses: October 1972 to September 1981.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 60.59 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 23, 1958, nonrecording gage at current site. Prior to Jan. 1, 1989, at datum 10.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Toledo Bend Reservoir (station 08025350) 16.8 mi upstream, capacity, 4,660,000 acre-ft. National Weather Service rain gage and gage-height telemeters at gage.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--11 years (water years 1956-66) prior to completion of Toledo Bend Reservoir, 4,653 ft³/s (3,371,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1956-66).--Maximum discharge, 52,900 ft³/s May 15, 1957 (gage height, 32.43 ft); minimum, 60 ft³/s Sept. 26-30, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1860, that of May 20, 1989. Flood in May 1884 reached a stage of 45.9 ft, current datum from information by local resident. Flood of Apr. 15, 1945, reached a stage of 45.8 ft, current datum, and flood of May 23, 1953, reached a stage of 45.3 ft, current datum, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7310	3530	7510	7220	14800	25300	19300	1410	1420	2890	4430	7290
2	7150	2620	7680	7080	14600	25300	18800	2010	4750	2730	2570	7380
3	7250	718	7670	10100	14600	25200	15400	431	12000	2550	3870	3540
4	7120	2240	7570	10500	15000	25400	14500	1450	9000	2000	6540	2810
5	7070	2260	7390	11000	18300	28300	14400	2150	8170	305	6920	2990
6	7080	2920	7290	11800	17900	33400	14500	2750	7940	1110	6570	2940
7	7100	3690	7370	11600	16300	35600	14500	2800	7970	3020	6690	3160
8	7250	7000	7370	10800	15200	36300	14400	2710	8480	4080	4410	2220
9	7230	7340	8490	11200	14800	36200	14000	1810	7910	4160	2300	1810
10	7120	7390	9090	14600	14700	35700	14400	321	7750	4300	3810	1660
11	7190	7400	8170	15000	14400	34400	14500	1040	7720	2390	7060	3070
12	7220	7380	7850	16000	14300	29500	14400	2670	4010	268	7340	3170
13	7190	7380	7900	16900	14600	23500	14500	2800	1760	1700	7180	2240
14	7170	7410	7780	16400	17100	17300	14600	2350	356	5260	6940	1520
15	7200	6440	7640	15300	17500	15300	13700	2590	1130	8220	4490	3260
16	6490	4280	7510	14900	16700	14900	7870	2000	2630	6480	2290	3350
17	7010	3100	7420	14800	15500	15000	6990	315	2800	6450	3920	3400
18	7690	4880	7520	16200	15000	15000	6940	1260	2900	4360	6660	3430
19	7380	5030	7710	18200	14800	14700	6900	2490	2780	2960	6840	3390
20	7150	6980	7770	17200	14300	14600	7000	2820	1700	4710	6910	2040
21	7440	7790	7580	16100	14300	14700	3400	2600	242	6790	6750	1380
22	6410	7810	7770	15400	15600	14700	1990	2470	1270	13500	4950	3270
23	7120	7440	7810	15100	19400	14500	2840	1580	2740	10600	1500	e3400
24	7540	7350	7560	14900	21200	14400	2580	267	2370	10200	4260	e3200
25	7490	7290	7460	14800	22200	14600	2330	1220	2810	10300	1000	e3500
26	7430	7270	7520	14700	25800	14600	2370	2470	2750	10300	747	e3200
27	7360	7340	7560	15300	26300	15200	2070	2700	1850	10200	6870	1770
28	7320	7380	7590	16200	25900	18500	1380	2680	427	10300	7270	790
29	5640	7400	7550	15900	25400	19500	433	2740	1200	10200	7180	3540
30	2270	7460	7440	15400	---	19400	604	1940	2850	10300	7380	e3400
31	2850	---	7130	15200	---	19400	---	386	---	6760	7340	---
TOTAL	212240	174518	237670	435800	506500	680400	281597	59230	121685	179393	162987	92120
MEAN	6846	5817	7667	14060	17470	21950	9387	1911	4056	5787	5258	3071
MAX	7690	7810	9090	18200	26300	36300	19300	2820	12000	13500	7380	7380
MIN	2270	718	7130	7080	14300	14400	433	267	242	268	747	790
AC-FT	421000	346200	471400	864400	1005000	1350000	558500	117500	241400	355800	323300	182700

e Estimated

08026000 SABINE RIVER NEAR BURKEVILLE, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1992#, BY WATER YEAR (WY)

MEAN	1153	1682	5516	8439	8934	9663	8242	8346	6484	4569	3219	2686
MAX	6846	6737	17940	28510	21470	22180	26530	23660	25310	23750	6662	7099
(WY)	1992	1974	1975	1974	1975	1969	1969	1991	1989	1989	1976	1991
MIN	82.5	86.2	247	484	266	485	231	471	400	292	91.7	77.6
(WY)	1968	1968	1968	1968	1968	1968	1971	1967	1970	1967	1967	1967

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1967 - 1992#	
ANNUAL TOTAL	4104928		3144140			
ANNUAL MEAN	11250		8591		5731	
HIGHEST ANNUAL MEAN					10730	1975
LOWEST ANNUAL MEAN					548	1967
HIGHEST DAILY MEAN	72500	Apr 20	36300	Mar 8	111000	May 20 1989
LOWEST DAILY MEAN	310	Aug 4	242	Jun 21	38	Sep 14 1967
ANNUAL SEVEN-DAY MINIMUM	1820	Jul 15	1100	Apr 28	41	Sep 9 1967
INSTANTANEOUS PEAK FLOW			36700	Mar 8	116000	May 20 1989
INSTANTANEOUS PEAK STAGE			38.17	Mar 8	47.45	May 20 1989
ANNUAL RUNOFF (AC-FT)	8142000		6236000		4152000	
10 PERCENT EXCEEDS	26100		16300		15300	
50 PERCENT EXCEEDS	7500		7280		2820	
90 PERCENT EXCEEDS	2770		1800		239	

Period of regulated streamflow.

08028500 SABINE RIVER NEAR BON WIER,TX

LOCATION.--Lat 30°44'49", long 93°36'30", Beauregard Parish, Louisiana-Newton County, Texas State line, Hydrologic Unit 12010005, near left bank at downstream side of bridge on U.S. Highway 190, 0.7 mi upstream from Quicksand Creek, 0.8 mi upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 2.0 mi east of Bon Wier, 2.4 mi upstream from Caney Creek, and at mile 97.7.

DRAINAGE AREA.--8,229 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1923 to current year. Monthly discharge only for some periods, published in WSP 1312. Gage-height records collected in this vicinity since 1913 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1342: 1953. WSP 1442: 1924, 1926-27(M), 1929(M), 1939. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 33.42 ft above National Geodetic Vertical Datum of 1929. Prior to July 8, 1931, nonrecording gage at site 0.8 mi downstream at datum 13.00 ft higher. July 8, 1931, to Oct. 15, 1958, non-recording gage at present site at datum 13.00 ft higher. Oct. 16, 1958, to Sept. 30, 1975, water-stage recorder at present site at datum 13.00 ft higher. Oct. 1, 1975, to Dec. 31, 1988, at present site at datum 10.00 ft higher.

REMARKS.--Records fair, including those of estimated daily discharges. Since October 1966, flow regulated by Toledo Bend Reservoir (station 08025350) 58.8 mi upstream. Gage-height telemeter at station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--43 years (water years 1924-66) prior to completion of Toledo Bend Reservoir, 6,846 ft³/s (4,960,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1924-66).--Maximum discharge, 115,000 ft³/s May 19, 1953 (gage height, 38.70 ft, current datum); minimum, 160 ft³/s Sept. 29, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1833, 43.5 ft Apr. 23 or 24, 1913, from information by Gulf, Colorado, and Santa Fe Railway Co. and local residents. Flood in May 1884 reached a stage of 39 ft. Floods occurring about 1844 and 1860 were higher than flood in May 1884, from information by local residents. All flood data referenced to current datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7550	4650	8010	8250	17200	26700	20700	e2000	1470	3500	6970	7600
2	7530	4510	8300	8180	16600	26300	20400	e2750	4490	3430	4740	7560
3	7380	2860	9650	8400	16300	26100	19400	e3000	9680	3170	2490	6530
4	7460	1700	9910	11100	16700	26200	16900	1700	13000	3090	5070	3960
5	7320	3020	9170	11500	22000	29800	16000	3000	10800	2190	6800	3530
6	7280	3140	8370	11900	25600	33400	16300	3400	9510	e910	6980	3520
7	7330	3470	8040	12400	23300	35500	17100	3610	8970	1580	6740	3490
8	7400	5230	8000	12600	20700	37900	16700	3590	9490	3360	6820	3470
9	7500	7570	8600	12900	18400	39400	16000	3480	9670	4170	4570	2570
10	7510	7830	12700	13800	17300	38800	15400	2300	8850	4310	2310	2310
11	7490	7850	12100	15600	16800	37700	15700	e1240	8820	4370	5200	2200
12	7480	7860	10600	16800	16400	36200	15700	2150	8340	2450	7980	3560
13	7490	7870	13100	19400	16400	32100	15500	3350	4880	e1030	8500	3580
14	7460	7880	16700	19400	17900	26600	15600	3450	2500	2440	8280	2050
15	7440	7890	14500	18200	19800	20600	15600	3180	1480	6090	7300	2500
16	7440	6050	13500	16900	19800	18300	13400	3370	2310	7530	4740	3540
17	6670	5280	12600	16200	19000	17400	10200	2340	3220	6720	2400	3620
18	7550	4770	10200	17300	18100	17400	10100	1180	3310	6800	5110	3620
19	7870	6510	9680	22600	17400	18300	9340	2180	3290	4710	6750	3680
20	7510	7720	9720	22800	16800	17700	8750	3140	3310	3210	6860	3810
21	7480	9360	9490	21100	16300	17100	e7000	3360	2020	5570	6880	2290
22	7580	9610	9630	19100	16800	16900	e4000	3200	e1000	9490	6740	2560
23	6740	8920	9920	17900	20800	16700	e2500	3090	e1950	12700	4660	3730
24	7660	8280	9770	17100	22800	16400	e3500	2050	3060	11200	2200	3730
25	7860	8040	9450	16600	24000	16300	e3200	1100	3050	10900	4340	3700
26	7780	7950	9260	16300	26100	16500	e3000	2100	3290	11000	1510	3730
27	7690	7920	9440	16900	27600	16400	e3000	3240	3520	10900	2450	3690
28	7640	7990	9450	19600	27900	17400	e2200	3920	2260	10800	7160	2250
29	7590	8010	9100	19700	27400	20100	e1750	4730	e1260	10800	7530	2020
30	5540	8000	8830	18800	---	21200	e1500	4370	2040	10800	7540	3780
31	4540	---	8480	17800	---	21100	---	2610	---	9470	7690	---
TOTAL	226760	197740	316270	497130	582200	758500	336440	88180	150840	188690	175310	108180
MEAN	7315	6591	10200	16040	20080	24470	11210	2845	5028	6087	5655	3606
MAX	7870	9610	16700	22800	27900	39400	20700	4730	13000	12700	8500	7600
MIN	4540	1700	8000	8180	16300	16300	1500	1100	1000	910	1510	2020
AC-FT	449800	392200	627300	986100	1155000	1504000	667300	174900	299200	374300	347700	214600

e Estimated

08028500 SABINE RIVER NEAR BON WIER,TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATERYEARS 1967 - 1992#, BY WATER YEAR (WY)

MEAN	1688	2452	6898	10020	10820	11240	9790	9551	7519	5471	3760	3177
MAX	7315	8913	21420	30930	23200	24470	27370	28150	26340	31490	7288	8247
(WY)	1992	1987	1983	1974	1975	1992	1969	1991	1989	1989	1976	1991
MIN	188	217	822	1000	746	1288	634	1186	663	621	211	206
(WY)	1968	1968	1981	1981	1968	1981	1971	1971	1970	1967	1967	1967

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1967 - 1992#	
ANNUAL TOTAL	4869540		3626240			
ANNUAL MEAN	13340		9908		6849	
HIGHEST ANNUAL MEAN					12670	1975
LOWEST ANNUAL MEAN					1172	1967
HIGHEST DAILY MEAN	67800	Apr 22	39400	Mar 9	98000	Jul 4 1989
LOWEST DAILY MEAN	1210	Aug 5	910	Jul 6	134	Nov 9 1966
ANNUAL SEVEN-DAY MINIMUM	2830	Jul 16	2130	Apr 28	142	Nov 3 1966
INSTANTANEOUS PEAK FLOW			39900	Mar 9	98200	Jul 4 1989
INSTANTANEOUS PEAK STAGE			34.33	Mar 9	37.90	Jul 4 1989
ANNUAL RUNOFF (AC-FT)	9659000		7193000		4962000	
10 PERCENT EXCEEDS	28800		19700		17000	
50 PERCENT EXCEEDS	9070		7800		3750	
90 PERCENT EXCEEDS	4020		2330		709	

Period of regulated streamflow.

08028500 SABINE RIVER NEAR BON WIER,TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1969 to current year. Chemical and biochemical analyses: October 1969 to May 1973. Sediment analyses: April 1957 to September 1962.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1969 to June 1983.
WATER TEMPERATURE: November 1969 to June 1983.
COLOR: November 1969 to June 1983.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 407 microsiemens Aug. 31, 1978; minimum daily, 34 microsiemens Feb. 3, 1983.
WATER TEMPERATURE: Maximum daily, 33.0°C July 17, 1978, and July 14, 26, 1980; minimum daily, 4.0°C Feb. 2, 1980.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT							
02...	1615	7530	116	25.0	70	13	15
07...	1620	7350	117	25.0	70	14	14
15...	1300	7400	116	24.0	70	13	15
21...	1450	7470	112	22.0	70	12	14
29...	1055	7610	109	28.0	60	12	13
NOV							
05...	1115	3660	127	23.0	70	13	14
12...	1210	7850	117	17.0	60	12	14
23...	1215	8870	108	18.0	60	12	13
26...	0750	7930	120	14.0	20	13	15
DEC							
04...	1605	9790	101	16.0	40	11	13
08...	1340	8010	115	16.0	20	13	15
15...	1500	14200	80	15.0	50	8.8	10
22...	1655	9700	105	16.0	20	11	13
31...	1400	8450	111	14.0	20	12	15
JAN							
10...	1025	13600	110	13.5	20	11	14
18...	1655	17800	108	11.5	20	11	14
25...	1655	16600	112	13.0	20	12	14
FEB							
01...	1635	17200	109	20.0	20	12	13
15...	1800	20000	100	15.0	20	12	14
22...	1715	17000	117	--	20	15	17
29...	1820	27100	129	--	20	16	18
MAR							
06...	1720	33500	115	19.0	40	14	16
13...	1700	31000	133	17.0	30	16	17
21...	1710	17000	135	19.0	30	18	17
27...	1800	16400	138	17.0	40	18	17
APR							
04...	0640	17200	136	17.5	60	21	18
08...	1140	20400	130	19.0	40	19	17
18...	1900	9860	116	19.0	40	15	14
22...	0905	3910	130	22.0	70	18	15
27...	1040	3630	119	21.0	50	16	14
MAY							
09...	1725	3960	142	23.0	30	19	16
14...	0945	3010	148	24.0	30	19	16
23...	1220	2970	148	25.0	40	19	16
30...	1100	4070	123	22.0	60	18	13
JUN							
06...	1820	8590	126	26.0	30	18	15
11...	1045	9730	125	27.0	40	18	14
20...	1925	3930	129	28.0	40	17	15
24...	2010	3470	124	30.0	30	17	14
JUL							
02...	1945	3910	125	28.0	30	21	18
10...	1955	4910	131	29.5	30	19	16
18...	1955	6880	131	28.0	30	18	16
25...	1950	10600	133	28.0	30	19	16
AUG							
01...	0725	7360	132	28.0	30	19	18
08...	0745	7290	129	31.0	20	19	17
15...	0855	8040	133	28.0	30	20	17
21...	1910	6730	137	28.0	20	18	16
29...	1925	7520	134	27.0	20	19	17
SEP							
05...	1945	3910	146	27.0	40	20	16
12...	1845	4200	131	29.0	30	17	15
13...	1700	4120	133	28.0	30	17	16
26...	1840	4220	134	25.5	30	17	15

08029500 BIG COW CREEK NEAR NEWTON, TX

LOCATION.--Lat 30°49'08", long 93°47'07", Newton County, Hydrologic Unit 12010005, near center of span at downstream side of bridge on State Highway 87, 2.6 mi southwest of Newton, 5.0 mi downstream from Melhomes Creek, and 8.0 mi upstream from White Oak Creek.

DRAINAGE AREA.--128 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 134.69 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 19, 1957, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. No known diversion above station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1907, 27.5 ft in April 1922, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 10	1400	1,500	14.82	Feb. 5	2100	2,260	15.45
Jan. 13	0500	1,240	14.40	Feb. 23	1100	1,280	14.48
Jan. 19	1300	1,800	15.13	Feb. 26	1000	1,810	15.14
Jan. 28	0800	1,150	14.21	Mar. 5	1800	2,620	15.63

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	171	91	96	163	208	164	361	160	78	e42	e40
2	89	252	144	94	140	190	148	161	467	80	e50	e39
3	88	107	274	100	131	181	140	129	412	74	68	62
4	86	80	164	96	484	277	135	124	378	70	62	81
5	84	73	105	91	1700	1780	134	136	245	72	e60	86
6	82	72	92	93	1520	1340	279	112	131	64	e55	62
7	78	72	87	91	498	586	255	100	113	61	e50	e60
8	76	76	87	125	272	300	164	95	150	e58	e46	e55
9	76	83	392	176	220	252	141	94	208	e55	e45	e54
10	76	72	1280	117	195	235	132	93	125	e52	e54	e52
11	75	69	530	95	181	205	129	93	102	e49	98	62
12	75	68	225	589	175	188	126	95	104	e45	203	126
13	74	67	243	982	224	180	120	96	146	e42	131	80
14	73	67	203	369	285	171	116	93	102	e42	147	e55
15	73	69	142	175	289	166	113	88	108	e50	79	e53
16	72	70	118	132	257	162	125	89	89	98	64	63
17	70	105	108	119	252	158	213	114	81	83	e60	e55
18	70	405	104	576	254	210	165	108	78	86	e58	e50
19	70	246	118	1550	179	286	135	114	75	122	e55	e46
20	71	305	133	667	153	192	130	134	73	120	e50	e44
21	72	248	144	248	143	158	173	95	70	82	e48	e42
22	72	131	385	226	381	157	128	84	69	74	e45	e43
23	73	99	248	238	1110	156	109	80	67	69	e44	70
24	75	87	151	168	474	144	105	96	67	82	e56	63
25	79	81	118	138	711	142	189	112	67	141	64	55
26	78	78	111	128	1540	167	154	89	66	94	80	53
27	78	79	152	445	699	147	111	165	76	83	60	51
28	92	80	165	976	301	156	100	221	119	e60	e55	49
29	99	81	129	408	237	485	165	334	117	e52	e50	48
30	231	80	112	247	---	380	681	190	81	e48	e45	46
31	208	---	102	203	---	216	---	123	---	e45	e42	---
TOTAL	2706	3573	6457	9758	13168	9575	4979	4018	4146	2231	2066	1745
MEAN	87.3	119	208	315	454	309	166	130	138	72.0	66.6	58.2
MAX	231	405	1280	1550	1700	1780	681	361	467	141	203	126
MIN	70	67	87	91	131	142	100	80	66	42	42	39
AC-FT	5370	7090	12810	19350	26120	18990	9880	7970	8220	4430	4100	3460
CFSM	.68	.93	1.63	2.46	3.55	2.41	1.30	1.01	1.08	.56	.52	.45
IN.	.79	1.04	1.88	2.84	3.83	2.78	1.45	1.17	1.20	.65	.60	.51

e Estimated

08029500 BIG COW CREEK NEAR NEWTON, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1992, BY WATER YEAR (WY)

MEAN	63.5	103	158	175	214	164	158	156	107	71.7	55.1	64.1
MAX	243	440	489	645	743	345	533	817	407	426	221	353
(WY)	1974	1987	1983	1974	1984	1990	1953	1953	1989	1989	1973	1961
MIN	17.4	27.3	39.3	42.2	58.6	57.5	29.4	31.7	16.6	14.2	14.5	17.3
(WY)	1957	1968	1982	1982	1968	1955	1971	1971	1971	1971	1956	1956

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1953 - 1992	
ANNUAL TOTAL	78958		64422			
ANNUAL MEAN	216		176		124	
HIGHEST ANNUAL MEAN					246	1973
LOWEST ANNUAL MEAN					46.1	1965
HIGHEST DAILY MEAN	2240	Jan 11	1780	Mar 5	9720	Feb 12 1984
LOWEST DAILY MEAN	48	Aug 5	39	Sep 2	10	Jul 7 1971
ANNUAL SEVEN-DAY MINIMUM	50	Aug 2	47	Aug 27	11	Jul 17 1971
INSTANTANEOUS PEAK FLOW			2620	Mar 5	20200	Apr 29 1953
INSTANTANEOUS PEAK STAGE			15.63	Mar 5	19.45	Apr 29 1953
ANNUAL RUNOFF (AC-FT)	156600		127800		89640	
ANNUAL RUNOFF (CFSM)	1.69		1.38		.97	
ANNUAL RUNOFF (INCHES)	22.95		18.72		13.13	
10 PERCENT EXCEEDS	507		302		220	
50 PERCENT EXCEEDS	121		105		62	
90 PERCENT EXCEEDS	72		54		27	

08030500 SABINE RIVER NEAR RULIFF, TX
(Radiochemical and national stream-quality accounting network)

LOCATION.--Lat 30°18'13", long 93°44'37", Calcasieu Parish, Louisiana-Newton County, Texas State line, Hydrologic Unit 12010005, at downstream side of bridge on State Highway 12, 2.4 mi north of Ruliff, 4.2 mi upstream from the Kansas City Southern Railway Co. bridge, 4.5 mi downstream from Cypress Creek, and at mile 40.2.

DRAINAGE AREA.--9,329 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1282: 1941(M), 1942. WSP 1442: 1925-29, 1937-39, 1943. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5.92 ft below National Geodetic Vertical Datum of 1929. Prior to Mar. 1, 1941, nonrecording gage at Kansas City Southern Railway Co. bridge, 4.2 mi downstream and at datum 7.98 ft higher than current datum. Mar. 1, 1941, to Dec. 8, 1948, nonrecording gage at present site and at datum 10.00 ft higher than current datum. Dec. 9, 1948, to Dec. 31, 1989, recording gage at present site and at datum 10.00 ft higher than current datum.

REMARKS.--No estimated daily discharges. Records good. Flow is partly regulated by Toledo Bend Reservoir (station 08025350) 116.3 mi upstream. Gage-height telemeter at station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--42 years (water years 1925-66) prior to completion of Toledo Bend Reservoir, 8,422 ft³/s (6,102,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 121,000 ft³/s May 22, 1953 (gage height, 29.98 ft, current datum); minimum, 270 ft³/s Sept. 27-30, Oct. 1-3, 17-20, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1835, 32.2 ft in May or June 1884 (adjusted to present site and datum on basis of slope of flood of June 8, 9, 1950); flood of Apr. 26-29, 1913, reached a stage of 29.5 ft, present site and datum, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7640	8320	8280	9350	17100	26000	16200	8470	5500	2790	10700	7350
2	7440	7090	8710	8980	16200	24900	16600	8370	4510	3920	10500	7730
3	7450	6320	9090	8690	15400	23900	16400	7390	4520	4530	9790	8000
4	7380	5650	9340	8470	16100	24900	16000	6320	5770	4540	7920	8090
5	7270	4150	9620	8470	16800	30900	15800	5330	7690	4160	5420	7480
6	7130	3230	9850	8830	18300	33600	15900	4620	9930	3670	5520	5870
7	7060	3530	9820	9370	23000	40300	15300	4590	10700	2440	6370	4490
8	7010	3810	9650	10300	29900	44900	14900	4500	10700	1720	6920	3930
9	6970	4190	9450	11200	30700	44600	14800	4330	10400	2580	7130	3730
10	6980	5290	9310	11600	26200	41900	14600	4160	10100	3670	7030	3430
11	7030	6170	9430	11600	21500	40300	14100	3800	10000	4260	5930	2850
12	7060	6700	10100	12100	18500	39300	13400	2890	9870	4520	4370	2570
13	7070	7010	13800	12800	17000	38400	13100	2410	9570	4240	5840	2730
14	7050	7210	21400	13500	16300	36400	12900	3120	9070	2620	7600	3340
15	7050	7370	23800	14600	16200	32700	12800	3550	7530	1930	8620	3280
16	6990	7470	23200	15600	16100	26700	12500	3630	4810	3770	8930	2430
17	6990	7570	21000	15900	16600	21000	12500	3580	3140	5650	8520	2880
18	6960	7250	17600	17300	16900	17700	12400	3490	3480	6610	7030	3330
19	6880	6730	15000	18000	16400	16100	11700	2660	3840	7060	4770	3490
20	6880	6910	13100	18000	15800	15200	10900	2190	3940	7110	5290	3540
21	7010	7600	11900	20500	15400	15200	10200	2950	3890	6350	6230	3620
22	7120	8290	11000	24100	15200	15600	9530	3370	3570	5560	6790	3420
23	7160	8890	10500	23500	14900	14900	8830	3490	2320	6280	7080	2560
24	7140	9240	10100	20300	15100	14100	7400	3440	1840	7800	7040	2970
25	7010	9340	10000	17400	16400	13800	6510	3220	2840	9360	5800	3390
26	7020	9160	10000	15600	18900	13400	5950	2360	3280	10200	4170	3520
27	7180	8840	10100	15400	21300	13200	5880	1990	3570	10600	3660	3520
28	7330	8540	9920	15400	23400	13300	5680	2920	3800	10700	2450	3540
29	7400	8330	9850	15300	25600	14300	5720	3890	3610	10800	3700	3200
30	8430	8270	9750	15900	---	14500	7710	4880	2620	10800	5710	2200
31	8800	---	9580	17100	---	15000	---	5570	---	10700	6750	---
TOTAL	223890	208470	374250	445160	547200	777000	356210	127480	176410	180940	203580	122480
MEAN	7222	6949	12070	14360	18870	25060	11870	4112	5880	5837	6567	4083
MAX	8800	9340	23800	24100	30700	44900	16600	8470	10700	10800	10700	8090
MIN	6880	3230	8280	8470	14900	13200	5680	1990	1840	1720	2450	2200
AC-FT	444100	413500	742300	883000	1085000	1541000	706500	252900	349900	358900	403800	242900

08030500 SABINE RIVER NEAR RULIFF, TX--Continued
(Radiochemical and national stream-quality accounting network)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1992#, BY WATER YEAR (WY)

MEAN	2419	3221	8409	11950	12590	13070	11810	10720	8990	6635	4367	3719
MAX	7222	11850	22070	32800	27990	27480	33240	29510	26240	42320	7982	10530
(WY)	1992	1987	1983	1974	1974	1969	1969	1991	1989	1989	1975	1973
MIN	292	327	1366	1422	1559	2287	1030	1505	1428	805	382	333
(WY)	1968	1968	1981	1981	1968	1981	1971	1971	1970	1967	1967	1967

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1967 - 1992#	
ANNUAL TOTAL	5213230		3743070			
ANNUAL MEAN	14280		10230		8139	
HIGHEST ANNUAL MEAN					14210	1975
LOWEST ANNUAL MEAN					1959	1967
HIGHEST DAILY MEAN	58200	Apr 25	44900	Mar 8	108000	Jul 6 1989
LOWEST DAILY MEAN	2180	Aug 7	1720	Jul 8	278	Oct 28 1967
ANNUAL SEVEN-DAY MINIMUM	3540	Aug 6	2870	Sep 11	282	Oct 9 1967
INSTANTANEOUS PEAK FLOW			45700	Mar 8	109000	Jul 6 1989
INSTANTANEOUS PEAK STAGE			25.66	Mar 8	29.15	Jul 6 1989
ANNUAL RUNOFF (AC-FT)	10340000		7424000		5897000	
10 PERCENT EXCEEDS	30200		18100		18900	
50 PERCENT EXCEEDS	10100		7960		4900	
90 PERCENT EXCEEDS	5270		3360		1190	

Period of regulated streamflow.

08030500 SABINE RIVER NEAR RULIFF, TX--Continued
(Radiochemical and national stream-quality accounting network)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: September 1945 to September 1946, October 1947 to current year. Chemical and biochemical analyses: February 1968 to current year. Pesticide analyses: January 1968 to May 1982. Radiochemical analyses: October 1969 to current year. Sediment analyses: October 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: September 1945 to September 1946, October 1947 to current year.
WATER TEMPERATURE: October 1947 to current year.
pH: July 1968 to May 1975
COLOR: November 1969 to December 1975.
DISSOLVED OXYGEN: July 1968 to May 1975.
CHLORIDE: July 1968 to September 1968.

INSTRUMENTATION.--From February 1967 to December 1975, a water-quality monitor continuously recorded specific conductance, pH, water temperature, dissolved oxygen, and chloride at this station.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 779 microsiemens Aug. 31, 1966; minimum, 27 microsiemens Feb. 16, 1984.
WATER TEMPERATURE: Maximum, 36.0°C Aug. 14, 1962; minimum, 1.0°C Jan. 28, 1948.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, (less than 30 percent estimated record) 170 microsiemens Sept. 21; minimum daily, 46 microsiemens Dec. 14-16.
WATER TEMPERATURE: Maximum daily, 31.0°C July 9, 10, 14, 15; minimum daily, 10.0°C Feb. 9-10.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
DEC 04...	1056	9490	108	6.7	14.0	10	9.8	93	1.1	600	120
MAR 10...	1415	42000	90	6.4	17.0	21	7.8	81	1.0	3100	84
JUN 15...	1413	7510	122	6.8	28.0	10	6.0	77	1.4	92	150
JUL 28...	1100	10900	128	6.7	27.5	5.5	6.2	78	0.9	110	140

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)
DEC 04...	25	11	6.3	2.3	11	1	2.7	0	18	15	13
MAR 10...	20	6	4.8	1.8	9.5	0.9	2.1	0	17	11	11
JUN 15...	29	11	7.6	2.3	13	1	2.5	0	21	17	16
JUL 28...	28	12	7.0	2.5	13	1	2.7	0	19	15	19

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
DEC 04...	15	0.20	8.2	84	69	0.100	--	0.020	<0.010	0.120	0.130
MAR 10...	12	0.20	7.4	74	58	0.059	--	0.020	<0.010	0.079	0.071
JUN 15...	17	<0.10	8.8	91	78	0.043	0.059	0.020	0.010	0.063	0.069
JUL 28...	16	<0.10	7.5	89	77	--	--	0.010	<0.010	<0.050	<0.050

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
DEC 04...	0.020	0.021	0.38	0.40	0.040	0.040	0.040	0.040	0.12	23	589
MAR 10...	0.060	0.050	0.34	0.40	0.030	0.030	0.010	0.030	0.03	19	2150
JUN 15...	0.030	0.030	0.37	0.40	0.060	<0.010	0.020	0.020	0.06	50	1010
JUL 28...	0.040	0.040	0.26	0.30	0.020	<0.010	0.010	0.010	0.03	29	853

08030500 SABINE RIVER NEAR RULIFF, TX--Continued
(Radiochemical and national stream-quality accounting network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	BARIUM, DIS-SOLVED (UG/L AS BA)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)
DEC 04...	80	100	36	<3	400	<4	29	<10	<1	<1	<1.0
MAR 10...	93	80	44	<3	220	<4	56	<10	<1	<1	<1.0
JUN 15...	72	60	49	<3	230	<4	40	<10	6	<1	<1.0
JUL 28...	88	40	46	<3	91	<4	29	<10	1	<1	<1.0

DATE	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)
DEC 04...	81	<6	<0.6	<0.6	2.7	0.6	2.3	0.6	0.05	0.06
MAR 10...	64	<6	--	--	--	--	--	--	--	--
JUN 15...	84	<6	--	--	--	--	--	--	--	--
JUL 28...	92	<6	<0.6	0.8	2.1	1.1	1.9	1.0	0.06	0.04

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	223890	112	69	41700	14	8540	14	8220	24
NOV.	1991	208470	109	67	37700	14	7700	13	7400	24
DEC.	1991	374250	82	51	51100	10	10400	9.7	9850	19
JAN.	1992	445160	95	59	70400	12	14300	11	13700	22
FEB.	1992	547200	86	53	78700	11	16000	10	15100	20
MAR.	1992	777000	102	63	132000	13	27000	12	25900	23
APR.	1992	356210	105	65	62400	13	12800	13	12300	23
MAY	1992	127480	112	69	23700	14	4860	14	4690	24
JUNE	1992	176410	114	70	33400	14	6840	14	6600	25
JULY	1992	180940	120	74	36100	15	7410	15	7170	26
AUG.	1992	203580	130	79	43700	16	9010	16	8770	27
SEPT	1992	122480	133	81	26900	17	5550	16	5410	27
TOTAL		3743070	**	**	638000	**	130000	**	125000	**
WTD.AVG.		10230	102	63	**	13	**	12	**	23

08030500 SABINE RIVER NEAR RULIFF, TX--Continued
(Radiochemical and national stream-quality accounting network)

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY EQUIVALENT MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	92	109	114	94	100	108	61	101	113	130	e129
2	113	109	103	104	80	86	70	81	101	132	100	e125
3	111	98	106	e97	91	97	108	105	103	107	110	e135
4	112	110	108	108	90	e103	e118	117	105	101	130	e130
5	114	99	109	e85	102	119	126	e100	101	101	e135	e132
6	112	112	99	e103	101	109	89	88	101	119	e145	e136
7	115	134	101	e92	70	88	90	106	108	113	e125	e130
8	112	112	107	e108	80	76	90	120	113	112	130	e125
9	112	113	110	e84	67	80	94	120	113	125	120	e120
10	109	109	107	e99	69	88	100	128	112	105	120	e130
11	111	113	114	e76	79	105	102	125	114	101	130	e140
12	118	118	83	97	96	112	89	127	101	101	e135	e125
13	101	114	100	97	95	79	89	120	113	102	130	e120
14	112	119	46	111	103	98	125	113	120	113	e150	e125
15	113	99	46	106	72	113	128	112	116	106	130	e130
16	112	e95	46	90	99	106	112	e119	107	101	e145	e125
17	109	e90	52	105	80	124	128	e122	113	117	e135	e140
18	112	e108	56	112	70	98	98	e125	134	125	130	e145
19	112	e125	48	90	96	109	99	e128	e130	124	e120	e150
20	105	e120	65	103	e84	113	127	132	e138	124	125	130
21	111	e110	93	70	e105	119	109	137	e132	e129	130	170
22	110	e112	98	80	e88	120	125	119	e140	132	125	130
23	106	e97	97	100	95	120	118	132	e145	e122	130	130
24	111	113	83	76	110	123	123	134	e135	114	e140	140
25	111	112	67	99	99	115	128	131	e130	124	e150	130
26	108	111	113	112	80	109	127	129	e121	108	e135	150
27	108	113	100	98	96	98	112	120	e125	129	e140	130
28	111	105	92	91	70	115	87	119	e130	130	125	130
29	109	112	85	80	84	136	115	118	121	e132	130	130
30	161	105	107	107	---	127	70	109	103	e135	130	130
31	100	---	106	81	---	124	---	129	---	e129	e134	---
MEAN	112	109	89	96	88	107	107	117	118	117	130	133
MAX	161	134	114	114	110	136	128	137	145	135	150	170
MIN	100	90	46	70	67	76	70	61	101	101	100	120

WTR YR 1992 MEAN 110 MAX 170 MIN 46

e Estimated

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	20.0	14.0	15.0	12.0	12.0	17.0	22.0	25.0	29.0	29.0	---
2	25.0	19.0	13.0	15.0	12.0	13.0	16.0	21.0	26.0	29.0	28.0	---
3	25.0	18.0	13.0	---	12.0	13.0	16.0	21.0	26.0	29.0	28.0	---
4	25.0	17.0	13.0	15.0	12.0	---	21.0	21.0	25.0	30.0	28.0	---
5	24.0	15.0	13.0	---	12.0	13.0	22.0	---	25.0	29.0	29.0	---
6	24.0	14.0	13.0	---	12.0	14.0	16.0	22.0	25.0	30.0	29.0	---
7	23.0	14.0	14.0	---	11.0	15.0	16.0	22.0	25.0	30.0	29.0	---
8	22.0	14.0	15.0	---	11.0	17.0	16.0	22.0	25.0	30.0	28.0	---
9	22.0	14.0	16.0	---	10.0	17.0	15.0	23.0	25.0	31.0	29.0	---
10	22.0	14.0	16.0	---	10.0	17.0	15.0	23.0	26.0	31.0	29.0	---
11	22.0	15.0	16.0	---	12.0	14.0	15.0	23.0	26.0	30.0	29.0	---
12	23.0	15.0	15.0	15.0	12.0	14.0	14.0	23.0	26.0	30.0	28.0	---
13	24.0	15.0	15.0	15.0	13.0	14.0	14.0	23.0	26.0	30.0	28.0	---
14	24.0	16.0	17.0	14.0	13.0	14.0	14.0	21.0	26.0	31.0	28.0	---
15	24.0	17.0	17.0	14.0	13.0	14.0	14.0	22.0	26.0	31.0	28.0	---
16	23.0	---	15.0	14.0	13.0	14.0	14.0	---	26.0	30.0	28.0	---
17	22.0	---	14.0	14.0	13.0	14.0	14.0	---	29.0	30.0	28.0	---
18	22.0	---	14.0	14.0	12.0	16.0	14.0	---	29.0	27.0	28.0	---
19	22.0	---	15.0	14.0	12.0	15.0	13.0	---	---	27.0	28.0	---
20	22.0	---	15.0	13.0	---	15.0	13.0	25.0	---	27.0	28.0	20.0
21	22.0	---	15.0	13.0	---	16.0	12.0	26.0	---	25.0	27.0	30.0
22	22.0	---	15.0	12.0	---	16.0	12.0	26.0	---	28.0	27.0	29.0
23	22.0	---	16.0	11.0	---	16.0	12.0	25.0	---	28.0	27.0	29.0
24	22.0	15.0	16.0	11.0	13.0	16.0	12.0	26.0	---	28.0	27.0	29.0
25	22.0	14.0	16.0	11.0	13.0	16.0	18.0	26.0	---	28.0	27.0	28.0
26	23.0	14.0	16.0	11.0	13.0	16.0	21.0	26.0	---	28.0	27.0	28.0
27	23.0	14.0	15.0	11.0	13.0	15.0	22.0	27.0	---	29.0	28.0	28.0
28	23.0	14.0	15.0	12.0	13.0	17.0	22.0	25.0	---	27.5	28.0	28.0
29	23.0	14.0	15.0	12.0	12.0	17.0	22.0	25.0	29.0	---	27.0	27.0
30	23.0	14.0	16.0	12.0	---	17.0	22.0	25.0	28.0	---	27.0	27.0
31	22.0	---	16.0	12.0	---	17.0	---	25.0	---	---	---	---
MEAN	23.0	15.5	15.0	13.0	12.0	15.0	16.0	23.5	26.0	29.0	28.0	27.5
MAX	25.0	20.0	17.0	15.0	13.0	17.0	22.0	27.0	29.0	31.0	29.0	30.0
MIN	22.0	14.0	13.0	11.0	10.0	12.0	12.0	21.0	25.0	25.0	27.0	20.0

WTR YR 1992 MEAN 20.0 MAX 31.0 MIN 10.0

08031400 LAKE PALESTINE NEAR FRANKSTON, TX

LOCATION.--Lat 32°03'12", long 95°26'12", Anderson-Cherokee County line, Hydrologic Unit 12020001, in outlet tower near right bank, 140 ft upstream from Blackburn Crossing Dam on Neches River, 5 mi east of Frankston, 21 mi upstream from gage (station 08032000), and at mile 354.0.

DRAINAGE AREA.--839 mi².

PERIOD OF RECORD.--February 1962 to current year. Water-quality records.--Chemical analyses: October 1976 to September 1984.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 20, 1962, non-recording gage read once daily.

REMARKS.--The lake is formed by a rolled earthfill dam with a 500-foot-wide uncontrolled spillway near left end of dam. Deliberate impoundment began May 1, 1962. The enlargement of lake began Sept. 26, 1969, and was completed on Mar. 3, 1971. The outlet works consist of two 5- x 7-foot gates located in concrete tower near center of dam and connected to an 8.5-foot-diameter concrete conduit through the dam. The low-flow outlet consists of two 3-foot iron pipes connected to the tower structure for low-flow releases. Water is used for municipal and industrial purposes in the Palestine area. The diversion point is downstream from gage (station 08032000). There are no large diversions above station. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	364.0	-
Design flood	355.3	726,000
Crest of spillway (top of conservation pool)	345.0	412,000
Lowest gated outlet (invert)	298.0	550

COOPERATION.--The capacity table, furnished by the Upper Neches River Municipal Water Authority, is based on Geological Survey topographic maps dated 1946 and 1948-49.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 531,100 acre-ft May 19, 1989 (elevation, 349.31 ft); minimum since first appreciable storage, 11,450 acre-ft Nov. 28, 1970 (elevation, 310.00 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 475,300 acre-ft Dec. 23 at 1000 to 1300 hours (elevation, 347.37 ft); minimum, 370,100 acre-ft Sept. 30 (elevation, 343.31 ft).

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

343.0	362,600	346.0	437,900
344.0	386,700	347.0	464,900
345.0	411,800	348.0	492,900

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	401500	403500	422500	437400	449500	452200	426400	415200	416000	406000	397700	379000
2	400800	405000	422200	435600	445700	447600	424600	416000	417800	408000	397700	382100
3	400300	402300	423300	434000	443000	444600	423500	416200	418100	407500	397500	383800
4	403000	402500	423300	432700	446300	448700	422800	416000	418300	408500	397000	383800
5	399800	403000	423800	431400	440300	449000	421200	416800	416800	407300	396500	384500
6	397000	403500	423800	430300	438400	448400	422000	414400	414400	406300	395700	383800
7	398200	406300	423800	429300	436900	446300	421200	414100	414100	405300	394700	383800
8	397500	403800	423800	429000	435000	443300	420400	413400	413400	403800	394000	383100
9	397000	403800	427500	427500	432700	449800	420400	411800	411500	404000	392700	383100
10	397000	404000	426900	425600	431100	443800	420200	411000	410000	403300	392700	383300
11	396700	404500	424600	426200	430300	444400	420200	417000	411800	402000	392700	382100
12	396500	404300	430100	425900	431600	446300	420200	412800	412600	401800	393000	381600
13	395200	404500	432400	426900	431600	444100	419400	412600	413600	400500	392700	381200
14	395500	404000	429300	425400	431100	441700	418600	413400	412800	401300	392500	380400
15	395500	405000	428800	425600	431400	439200	418600	412800	412100	400000	391000	380000
16	394000	405000	424300	423000	429800	436100	417500	412800	411300	399200	390000	378700
17	392700	407300	424600	424300	430600	434200	417800	414700	412100	401300	389200	377500
18	393500	408800	428200	427200	430300	438700	417000	416000	410800	400800	388700	377100
19	393500	414900	428200	427500	429500	435600	418800	416200	409800	402500	387500	375900
20	392700	415500	435000	428000	428000	433700	418600	416200	409500	401500	386900	375400
21	392500	416000	450900	430300	427500	431400	418800	417000	409800	401800	386500	377800
22	391500	419400	465500	433200	435300	432700	418100	417000	409800	401300	385500	376600
23	391200	416200	475000	432900	444400	430100	418800	416800	409800	400300	384000	375400
24	390700	416500	471300	432900	462200	428000	420900	416800	409800	400500	384000	373700
25	391500	415500	466000	433200	470800	430600	419400	415700	409000	399200	383600	373700
26	391700	417000	460800	434800	470200	430100	418600	416000	408500	399000	383600	373700
27	391000	415700	455200	445500	467100	429000	417800	415200	407500	398200	382400	372700
28	390000	415500	449800	452700	462500	428500	413600	416800	408300	398200	380900	371800
29	400800	416000	445500	456300	457600	430900	417500	414900	409300	397200	380200	371000
30	398700	422500	441900	456000	---	428500	416500	414700	408300	397000	379700	370100
31	400800	---	438700	453000	---	427500	---	414900	---	397000	378500	---
MAX	403000	422500	475000	456300	470800	452200	426400	417000	418300	408500	397700	384500
MIN	390000	402300	422200	423000	427500	427500	413600	411000	407500	397000	378500	370100
(†)	344.56	345.41	346.03	346.56	346.73	345.60	345.18	345.12	344.86	344.41	343.66	343.31
(ϕ)	-700	+21700	+16200	+14300	+4600	-30100	-11000	-1600	-6600	-11300	-18500	-8400

CAL YR 1991 MAX 475000 MIN 390000 (ϕ) +6000
WTR YR 1992 MAX 475000 MIN 370100 (ϕ) -31400

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

08032000 NECHES RIVER NEAR NECHES, TX

LOCATION.--Lat 31°53'32", long 95°25'50", Anderson-Cherokee County line, Hydrologic Unit 12020001, on left bank just downstream from bridge on U.S. Highway 79, 1.0 mi downstream from Missouri Pacific Railroad Co. bridge, 1.4 mi downstream from Walnut Creek, 4.4 mi northeast of Neches, and at mile 333.2.

DRAINAGE AREA.--1,145 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 264.06 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 27, 1945, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records good. Some regulation by Lake Palestine (station 08031400) 11 mi upstream and by Lake Athens 50 mi upstream (combined capacity 454,600 acre-ft). There are no large diversions above station. Gage-height telemeter at station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--22 years (water years 1940-61) unregulated, 804 ft³/s (502,500 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1940-61).--Maximum discharge, 45,500 ft³/s Apr. 2, 1945 (gage height, 22.07 ft); no flow Oct. 3-5, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1908 (stage 24.3 ft) was the highest since flood in May 1884, which was probably higher.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	557	829	2950	4390	5160	1430	559	463	159	164	169
2	146	487	1050	2780	3990	4440	1340	486	567	139	156	184
3	147	394	1210	2490	3530	3790	1250	451	609	122	162	396
4	143	353	1210	2240	3160	3790	1120	560	625	119	206	945
5	148	259	1150	2080	3160	4710	1020	644	596	116	246	1040
6	198	227	1100	1950	3180	4570	942	547	547	108	245	888
7	141	220	1070	1830	2920	3860	894	475	528	103	243	523
8	132	284	1060	1740	2550	3430	865	399	521	103	240	311
9	134	290	1170	1640	2270	3160	823	350	489	93	238	256
10	130	220	1530	1560	2080	3090	783	306	441	91	237	238
11	129	201	1760	1480	1910	3520	750	281	402	88	235	226
12	129	194	1840	1450	1780	3260	722	267	369	85	237	222
13	126	201	1820	1450	1880	2970	706	270	364	84	249	209
14	128	190	1830	1430	1990	2930	688	280	332	93	254	202
15	129	188	1870	1410	1880	2760	652	304	282	114	245	198
16	128	187	1860	1340	1790	2540	612	312	234	116	238	196
17	127	229	1780	1270	1740	2300	584	311	195	119	235	192
18	126	417	1670	1290	1650	2210	562	417	177	236	232	189
19	127	455	1680	1540	1580	2200	548	494	175	272	229	187
20	127	1370	1900	1690	1530	2320	595	521	175	446	230	184
21	127	1770	4890	1690	1470	2180	689	525	214	418	236	182
22	128	1570	8840	1730	1490	1980	698	505	190	373	238	184
23	130	1180	9510	1810	2210	1820	643	530	165	279	235	195
24	133	988	9490	1930	3250	1750	608	515	147	226	228	193
25	135	830	8810	1970	4780	1680	633	498	136	200	213	188
26	139	713	7790	1920	7490	1620	676	524	141	185	178	184
27	220	667	6770	2090	7530	1600	636	553	135	172	171	182
28	234	657	5800	2650	6710	1550	571	527	147	163	168	179
29	261	634	4880	3690	5920	1530	508	508	228	186	166	176
30	457	621	4070	4300	---	1490	574	525	194	179	166	176
31	504	---	3440	4560	---	1490	---	459	---	166	165	---
TOTAL	5205	16553	103679	63950	89810	85700	23122	13903	9788	5353	6685	8794
MEAN	168	552	3344	2063	3097	2765	771	448	326	173	216	293
MAX	504	1770	9510	4560	7530	5160	1430	644	625	446	254	1040
MIN	126	187	829	1270	1470	1490	508	267	135	84	156	169
AC-FT	10320	32830	205600	126800	178100	170000	45860	27580	19410	10620	13260	17440

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1992#, BY WATER YEAR (WY)

MEAN	208	398	734	737	1020	1203	1276	1303	815	219	114	205
MAX	2064	2559	3344	3097	3097	2879	4162	5289	4129	1076	617	1313
(WY)	1974	1975	1992	1991	1992	1987	1966	1968	1973	1976	1979	1973
MIN	12.8	16.0	82.1	102	180	92.0	60.1	43.3	23.7	12.5	9.70	8.37
(WY)	1964	1964	1990	1981	1981	1972	1972	1972	1971	1964	1964	1964

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1962 - 1992#	
ANNUAL TOTAL	498102		432542			
ANNUAL MEAN	1365		1182		684	
HIGHEST ANNUAL MEAN					1265	1973
LOWEST ANNUAL MEAN					106	1972
HIGHEST DAILY MEAN	9510	Dec 23	9510	Dec 23	26200	May 13 1968
LOWEST DAILY MEAN	105	Jul 21	84	Jul 13	3.3	Nov 1 1963
ANNUAL SEVEN-DAY MINIMUM	108	Jul 18	91	Jul 8	3.4	Oct 29 1963
INSTANTANEOUS PEAK FLOW			9660	Dec 22	26900	May 13 1968
INSTANTANEOUS PEAK STAGE			16.90	Dec 22	19.46	May 13 1968
ANNUAL RUNOFF (AC-FT)	988000		857900		495300	
10 PERCENT EXCEEDS	3220		3160		1670	
50 PERCENT EXCEEDS	794		522		258	
90 PERCENT EXCEEDS	133		139		49	

Period of regulated streamflow.

08032000 NECHES RIVER NEAR NECHES, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: December 1969 to current year. Biochemical analyses: October 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1969 to September 1991.
WATER TEMPERATURES: December 1983 to September 1991.

INSTRUMENTATION.--Since December 1969, specific conductance is recorded continuously at this station. Beginning December 1983 water temperature is recorded continuously at this station. On October 1, 1991 the continuously recording instrumentation was discontinued.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (1974-88): Maximum, 1,190 microsiemens Aug. 29, 1976; minimum 65 microsiemens June 1, 1990.
WATER TEMPERATURE: Maximum, 36.0°C July 16, 1985; minimum, 0.0°C Dec. 24, 25, 1989.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
FEB 20...	1340	1530	150	7.0	14.5	10.2	100	1.2	38	17
MAR 31...	0745	1480	146	6.8	12.0	8.5	79	1.7	36	20
MAY 15...	0744	285	156	6.8	23.0	6.6	78	1.0	32	11
JUL 06...	1507	107	177	7.1	29.0	6.5	85	1.4	46	12
AUG 20...	0837	230	169	7.3	25.0	6.5	80	2.2	42	16
SEP 18...	1447	187	181	7.2	27.0	6.5	82	1.4	44	10

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
FEB 20...	9.6	3.5	13	0.9	3.7	21	19	21	0.10	5.0
MAR 31...	8.8	3.4	12	0.9	3.2	16	22	21	0.20	4.0
MAY 15...	7.7	3.2	11	0.8	2.7	21	16	19	<0.10	9.3
JUL 06...	12	4.0	14	0.9	3.9	34	16	23	<0.10	10
AUG 20...	11	3.6	13	0.9	4.2	26	19	21	0.10	7.7
SEP 18...	11	3.9	14	0.9	4.2	34	18	22	0.10	10

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
FEB 20...	87	--	<0.010	0.053	<0.010	--	0.50	0.040	0.020
MAR 31...	84	--	<0.010	0.071	0.010	0.69	0.70	<0.010	0.030
MAY 15...	81	0.180	0.020	0.200	0.080	0.52	0.60	0.110	0.050
JUL 06...	103	0.130	0.020	0.150	0.060	0.34	0.40	0.040	0.030
AUG 20...	95	--	<0.010	0.069	0.040	0.36	0.40	0.010	0.020
SEP 18...	104	--	<0.010	0.160	0.020	0.58	0.60	0.050	0.010

08033000 NECHES RIVER NEAR DIBOLL, TX
(Flood-hydrograph Partial-record Station)

LOCATION.--Lat 31°07'58", long 94°48'35", Angelina-Polk County line, Hydrologic Unit 12020002, near center of main span of downstream bridge on U.S. Highway 59, 700 ft downstream from Texas and New Orleans Railroad Co. bridge, 2.9 mi downstream from Alabama Creek, 3.8 mi south of Diboll, and at mile 203.5

DRAINAGE AREA.--2,724 mi².

PERIOD OF RECORD.--October 1923 to September 1925, March 1939 to September 1985. Monthly discharge only for some periods, published in WSP 1312. October 1985 to September 1989 (annual maximum), October 1989 to September 1991 (peaks above base discharge including annual maximum).
Water-quality records: Chemical and biochemical analyses: October 1969 to September 1981.

REVISED RECORDS.--WSP 1242: 1950. WSP 1732: Drainage area.

GAGE.--Water-stage recorder and Data Collection Platform (DCP). Datum of gage is 136.46 ft above National Geodetic Vertical Datum of 1929. Prior to July 10, 1925, nonrecording gage at site 630 ft upstream; July 10 to Aug. 31, 1925, and Mar. 30, 1939, to Sept. 24, 1943, nonrecording gage at site 500 ft upstream; Sept. 25, 1943, to Aug. 16, 1973, nonrecording gage at site 70 ft upsgtream; all at present datum.

REMARKS.--Satellite telemeter (DCP) at station.

AVERAGE DISCHARGE.--24 years (water years 1923-25, 1939-61) unregulated, 1,807 ft³/s (1,309,000 acre-ft/yr); 24 years (water years 1962-85) regulated, 1,353 ft³/s (980,200 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,900 ft³/s May 4, 1944 (gage height, 18.70 ft); no flow Aug. 15-22, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1874, 21 ft in May 1884 (discharge, about 110,000 ft³/s from rating curve extended above 40,000 ft³/s; flood in 1900 reached a stage of 19.9 ft (discharge, about 80,000 ft³/s), from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 11	2200	17,400	15.84	Apr. 16	1900	10,400	14.72
Jan. 16	1100	16,300	15.68	Apr. 21	1600	11,000	14.83
Feb. 6	1100	6,850	13.84	May 9	0100	13,100	15.21
Feb. 22	2300	11,800	14.98	May 23	1900	8,730	14.36
Mar. 3	2200	7,790	14.13	Aug. 21	1500	6,720	13.79

08033500 NECHES RIVER NEAR ROCKLAND, TX

LOCATION.--Lat 31°01'29", long 94°23'55", Tyler County, Hydrologic Unit 12020003, at downstream side of bridge at U.S. Highway 69, 2,200 ft upstream from abandoned ferry crossing, 0.8 mi upstream from Texas and New Orleans Railway Co. bridge, 1.2 mi north of Rockland, 3.2 mi downstream from Billiams Creek, and 32.4 mi upstream from Angelina River.

DRAINAGE AREA.--3,636 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1903 to current year.

REVISED RECORDS.--WSP 878: 1926-27. WSP 1342: 1922(M), 1935. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 88.41 ft above National Geodetic Vertical Datum of 1929. Prior to May 23, 1973, nonrecording gage located 2,200 ft downstream at datum 3.00 ft higher. May 23, 1973, to Sept. 30, 1975, recording gage at present site at datum 3.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. At times, low flow may be affected by regulation from Lake Athens, by Lake Palestine (station 08031400), and by Lake Jacksonville, with a combined capacity of 130,700 acre-ft. During the current year, the Upper Neches Municipal Water Authority diverted 2,170 acre-ft from the Neches River River at a diversion point about 10 mi downstream from station Neches River near Neches (08032000). This water is used for municipal and industrial purposes in the Palestine area. Gage-height telemeter at station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--58 years (water years 1904-61) 2,362 (1,711,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1904-61).--Maximum discharge, 49,800 ft³/s May 6, 1944 (gage height, 35.04 ft), present site; minimum observed during period of daily records, 1.6 ft³/s Sept. 28-30, and Oct. 1, 2, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Historical flood information begins with flood in May 1884, which reached a stage of 38.0 ft, present site, from information by local resident (discharge, about 62,000 ft³/s).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	537	342	2120	18200	9860	23100	5940	2080	6030	831	398	278
2	525	434	2720	17800	9590	21400	5690	1830	6910	741	378	269
3	503	658	2980	16900	9190	19600	5440	1680	6720	786	327	270
4	470	850	2610	15800	10100	18600	5160	2520	6030	789	310	294
5	430	960	2320	14500	13200	21100	4830	2730	5170	812	308	317
6	396	1040	2120	13100	15100	24300	4650	2320	4210	813	314	476
7	372	1110	1930	11700	17000	27000	4320	2050	3330	805	354	609
8	356	1150	1770	10600	18000	26600	4000	1950	2560	783	374	745
9	344	1130	2360	9680	18100	24500	3740	1930	1940	643	369	846
10	334	1050	3180	9030	17600	22200	3500	1870	1550	452	344	857
11	325	941	2490	8450	16700	20200	3280	1800	1350	368	376	900
12	317	833	2200	9140	15300	18600	3090	1760	1270	328	669	911
13	311	749	2140	9520	14000	17000	2910	1690	1190	303	454	885
14	308	695	2120	9860	13100	15300	2740	1530	1160	282	388	840
15	303	659	2090	10100	13000	13500	2580	1300	1130	264	368	724
16	290	631	2080	9690	12600	11800	2410	1100	1030	251	364	582
17	280	837	2100	8940	11900	10400	2230	976	926	235	364	485
18	272	1510	2170	9400	11000	9080	2060	947	822	232	356	419
19	264	1300	2520	10300	10200	8120	1930	1000	750	300	350	379
20	260	1470	2940	10600	9410	7250	4070	1150	693	288	350	353
21	254	1770	4080	11100	8750	6660	5570	1190	644	305	342	334
22	249	1770	6800	11000	8790	6290	5050	1170	603	337	334	312
23	249	1710	7450	10700	9480	6050	4350	1160	554	425	320	298
24	245	1760	8410	10200	9770	5870	4240	1150	510	495	303	283
25	244	1850	8910	9710	13100	5810	4130	1160	468	511	317	275
26	244	1910	9410	9100	18000	5750	4040	1250	439	536	305	268
27	245	1900	10700	9110	22400	5700	3760	1510	435	556	324	259
28	263	1860	12900	9400	24300	5680	3220	2520	441	568	310	253
29	290	1820	15300	9490	24300	6420	2690	5160	454	557	299	246
30	288	1830	17200	9890	---	6330	2440	5840	466	510	293	239
31	295	---	18100	9970	---	6140	---	5590	---	448	283	---
TOTAL	10063	36529	166220	342980	403840	426350	114060	61913	59785	15554	10945	14206
MEAN	325	1218	5362	11060	13930	13750	3802	1997	1993	502	353	474
MAX	537	1910	18100	18200	24300	27000	5940	5840	6910	831	669	911
MIN	244	342	1770	8450	8750	5680	1930	947	435	232	283	239
AC-FT	19960	72460	329700	680300	801000	845700	226200	122800	118600	30850	21710	28180

08033500 NECHES RIVER NEAR ROCKLAND, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1992, BY WATER YEAR (WY)

MEAN	547	1137	2244	3187	3658	3585	3673	4043	2694	1145	378	465
MAX	4832	6142	7805	12570	13930	13750	11990	12730	10360	11260	2673	3042
(WY)	1974	1974	1974	1991	1992	1992	1979	1969	1990	1989	1991	1979
MIN	36.6	65.8	213	263	368	475	282	469	102	42.9	34.2	43.1
(WY)	1964	1965	1981	1981	1971	1967	1971	1971	1971	1971	1964	1964

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1962 - 1992	
ANNUAL TOTAL	1738878		1662445			
ANNUAL MEAN	4764		4542		2222	
HIGHEST ANNUAL MEAN					4542	1992
LOWEST ANNUAL MEAN					352	1971
HIGHEST DAILY MEAN	22800	Jan 21	27000	Mar 7	41600	Jul 2 1989
LOWEST DAILY MEAN	244	Oct 25	232	Jul 18	18	Aug 30 1970
ANNUAL SEVEN-DAY MINIMUM	247	Oct 21	247	Oct 21	23	Jul 21 1971
INSTANTANEOUS PEAK FLOW			27300	Mar 7	42000	Jul 2 1989
INSTANTANEOUS PEAK STAGE			29.00	Mar 7	33.20	Jul 2 1989
ANNUAL RUNOFF (AC-FT)	3449000		3297000		1609000	
10 PERCENT EXCEEDS	11700		13100		5860	
50 PERCENT EXCEEDS	2490		1760		885	
90 PERCENT EXCEEDS	351		299		100	

08033500 NECHES RIVER NEAR ROCKLAND, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: April 1941 to September 1942, September 1945 to September 1947. Chemical and biochemical analyses: December 1967 to current year. Sediment analyses: 1961 to 1963.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1941 to September 1942, and September 1945 to September 1947.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
DEC												
10...	1015	3210	158	6.9	15.5	8.6	86	2.1	36	18	9.5	3.0
JAN												
24...	1030	10300	138	6.6	9.0	9.8	84	0.4	30	19	7.4	2.7
MAR												
09...	1545	24100	83	6.2	19.5	6.2	68	1.1	21	9	5.3	1.9
APR												
30...	1740	2380	167	6.9	20.5	7.7	86	1.9	37	18	9.2	3.3
JUN												
17...	0850	946	186	6.7	28.0	6.4	82	1.3	41	18	10	3.9
JUL												
30...	1335	507	168	7.0	30.0	6.6	88	1.0	35	15	8.2	3.5

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
DEC												
10...	15	1	4.0	18	22	21	0.10	15	101	0.080	0.050	0.130
JAN												
24...	12	1	3.0	11	23	18	<0.10	11	84	--	0.020	<0.050
MAR												
09...	8.2	0.8	2.3	12	12	9.0	0.20	6.5	53	--	0.020	<0.050
APR												
30...	17	1	2.9	19	24	22	<0.10	13	103	0.170	0.050	0.220
JUN												
17...	18	1	3.1	23	21	25	<0.10	14	109	0.150	0.030	0.180
JUL												
30...	16	1	4.0	20	22	23	<0.10	13	102	0.300	0.030	0.330

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
DEC												
10...	0.050	0.75	0.80	0.130	0.070	<1	50	<0.5	<1.0	<5	<3	<10
JAN												
24...	0.030	0.47	0.50	0.050	0.030	--	--	--	--	--	--	--
MAR												
09...	0.060	0.34	0.40	0.050	0.030	--	--	--	--	--	--	--
APR												
30...	0.080	0.52	0.60	0.090	0.080	--	--	--	--	--	--	--
JUN												
17...	0.050	0.45	0.50	0.140	0.050	--	--	--	--	--	--	--
JUL												
30...	0.060	0.34	0.40	0.060	0.040	1	45	<0.5	<1.0	<5	<3	<10

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC												
10...	230	<10	5	39	<0.1	<10	<10	<1	<1.0	78	<6	8
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
09...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
30...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
17...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
30...	120	<10	8	29	<0.1	<10	<10	<1	<1.0	97	<6	12

08036500 ANGELINA RIVER NEAR ALTO, TX

LOCATION.--Lat 31°40'10", long 94°57'24", Nacogdoches-Cherokee County line, Hydrologic Unit 12020004, near center of rectified channel at downstream side of bridge on State Highway 21, 0.4 mi upstream from Allen Creek, 1.5 mi upstream from Bingham Creek, 7.5 mi east of Alto, and 149.3 mi upstream from mouth.

DRAINAGE AREA.--1,276 mi².

PERIOD OF RECORD.--May to August 1940 (discharge measurements only), September 1940 to March 1949 (fragmentary for 1941-42, 1944-49), February 1959 to current year.
Water-quality records.--Chemical analyses: November 1961 to September 1963.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 204.30 ft above National Geodetic Vertical Datum of 1929. May 9, 1940, to Mar. 31, 1949, nonrecording gage on bridge at natural channel 1,400 ft to right at same datum. Feb. 18 to Sept. 15, 1959, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges, Records good. No large diversions above station. Flow partly regulated since May 1957 by Lake Striker, 35.5 mi upstream and by Lake Tyler, 69.9 mi upstream since January 1949 (combined capacity, 110,700 acre-ft). Several observations of water temperature were made during the year. Gage height and rainfall telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1905, that of Mar. 31, 1989. A flood in May 1908 reached a stage of about 22 ft, from information by local residents. Flood in 1932 reached a stage of 21.5 ft, from floodmarks and from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	209	1360	1120	3750	6640	6580	1530	456	612	258	116	46
2	168	1700	1050	3210	6340	5790	1490	495	582	253	126	85
3	223	1930	1030	2850	5730	4880	1440	507	628	235	125	84
4	256	2010	1060	2570	5050	4210	1320	509	691	215	125	182
5	194	1890	1110	2370	4730	4190	1160	471	637	191	106	301
6	135	1660	1180	2270	4200	4050	998	530	509	171	107	418
7	126	1390	1200	2200	3950	5280	911	581	426	162	142	407
8	125	1120	1200	2100	3840	6410	927	473	377	161	137	280
9	119	876	1240	1940	3820	6440	909	410	357	160	101	269
10	110	730	1340	1780	3760	5890	827	385	361	150	80	261
11	104	629	1370	1640	3560	5140	765	373	400	138	94	170
12	101	523	1390	1680	3250	4230	756	362	333	130	120	115
13	101	459	1500	1710	3190	3520	814	355	293	124	84	95
14	101	425	1630	1670	2980	3000	846	355	284	121	127	86
15	99	400	1760	1710	2690	2640	826	376	270	116	219	82
16	96	384	1930	1840	2440	2390	706	401	251	114	169	79
17	93	433	2110	1990	2360	2220	610	383	238	114	118	72
18	92	591	2210	2310	2370	2290	594	448	225	131	103	71
19	91	713	2230	2550	2360	2210	634	570	215	157	101	71
20	90	1050	2210	2570	2320	2110	794	587	203	221	87	71
21	90	1170	2620	2790	2220	2080	833	513	194	285	72	67
22	91	1380	3240	3230	2800	2110	843	473	188	368	65	63
23	92	1520	4770	3550	3370	2110	826	455	181	413	63	64
24	106	1600	8370	3660	3320	2060	762	434	179	337	59	64
25	106	1630	11400	3650	5700	2040	654	500	178	234	58	66
26	107	1580	11000	3560	7660	1970	573	574	178	184	55	69
27	119	1490	9140	3650	8410	1850	519	672	177	161	54	68
28	128	1400	7660	3800	8410	1770	471	809	186	137	49	63
29	154	1310	6520	4070	7500	1740	449	816	243	114	46	59
30	567	1220	5600	5610	---	1650	452	723	265	94	41	55
31	932	---	4580	6570	---	1580	---	616	---	90	39	---
TOTAL	5125	34573	104770	88850	124970	104430	25239	15612	9861	5739	2988	3883
MEAN	165	1152	3380	2866	4309	3369	841	504	329	185	96.4	129
MAX	932	2010	11400	6570	8410	6580	1530	816	691	413	219	418
MIN	90	384	1030	1640	2220	1580	449	355	177	90	39	46
AC-FT	10170	68580	207800	176200	247900	207100	50060	30970	19560	11380	5930	7700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1992, BY WATER YEAR (WY)

MEAN	239	506	1141	1338	1558	1501	1487	1342	783	274	130	188
MAX	2350	2081	4836	4874	4642	4622	4301	4484	2661	1718	519	950
(WY)	1974	1986	1961	1991	1983	1969	1969	1966	1979	1976	1979	1973
MIN	5.56	18.0	67.8	150	158	183	172	119	34.2	18.0	22.4	16.2
(WY)	1968	1968	1965	1981	1967	1967	1972	1972	1971	1971	1972	1972

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1960 - 1992	
ANNUAL TOTAL	747759		526040			
ANNUAL MEAN	2049		1437		870	
HIGHEST ANNUAL MEAN					1917	1991
LOWEST ANNUAL MEAN					154	1964
HIGHEST DAILY MEAN	11500	Apr 17	11400	Dec 25	41600	Mar 31 1989
LOWEST DAILY MEAN	90	Oct 20	39	Aug 31	2.1	Aug 14 1964
ANNUAL SEVEN-DAY MINIMUM	91	Oct 17	47	Aug 26	3.5	Aug 8 1964
INSTANTANEOUS PEAK FLOW			11900	Dec 25	42500	Mar 31 1989
INSTANTANEOUS PEAK STAGE			19.12	Dec 25	23.20	Mar 31 1989
INSTANTANEOUS LOW FLOW			37	Aug 31	2.0	Aug 14 1964
ANNUAL RUNOFF (AC-FT)	1483000		1043000		630500	
10 PERCENT EXCEEDS	5500		3870		2190	
50 PERCENT EXCEEDS	1330		581		320	
90 PERCENT EXCEEDS	162		90		46	

08036700 LAKE NACOGDOCHES NEAR NACOGDOCHES, TX

LOCATION.--Lat 31°35'19", long 94°49'31", Nacogdoches County, Hydrologic Unit 12020004, at upstream side of dam on Bayou Loco near service outlet tower and 10 mi west of Nacogdoches.

DRAINAGE AREA.--87.9 mi².

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

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

REMARKS.--The lake is formed by a rolled earthfill dam. Deliberate impoundment began July 14, 1976. Water is used for industrial and municipal supply by the city of Nacogdoches. The spillway is an uncontrolled 500-foot-wide cut through natural ground located near the right end of dam. There is an uncontrolled drop inlet with a 20.5-foot-diameter top opening that is connected to an 8- x 7-foot conduit that extends through the dam. A separate multi-gated inlet tower is connected to a valve by a 30-inch conduit through the dam. The valve box directs water to a purification plant. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	303.0	-
Top of design flood	298.5	102,900
Crest of spillway	286.0	59,570
Crest of drop inlet (top of conservation pool)	279.0	42,320
Lowest gated outlet (invert of 30 in. conduit)	238.25	254

COOPERATION.--The capacity table, furnished by the city of Nacogdoches, is based on Geological Survey topographic maps dated 1952.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 53,550 acre-ft June 3, 1979 (elevation, 283.76 ft); minimum since first appreciable storage, 20,540 acre-ft Nov. 26, 1977 (elevation, 266.62 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 48,650 acre-ft Feb. 25 at 2200 to 2400 hours (elevation, 281.64 ft); minimum, 35,720 acre-ft Dec. 1,12 (elevation, 275.78 ft).

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

275.0	34,220	278.0	40,200	281.0	47,770
276.0	36,140	279.0	42,320	282.0	49,140
277.0	38,140	280.0	44,500		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40200	e37600	36100	e42800	43500	e45500	e42200	40600	40400	40300	39300	38600
2	40100	e37600	36100	e42500	43200	e44800	e42100	40600	40600	40300	39300	38600
3	39900	e37500	36100	e42300	43000	e44300	e42100	40500	40600	40300	39200	38900
4	39900	e37400	36100	e43100	43200	e44500	e42000	40500	40600	40300	39100	38800
5	39700	e37300	36100	e43700	44500	e44800	e41900	40500	40600	40200	39100	38800
6	39700	37100	36000	e44300	44300	e45200	e41900	40400	40600	40100	39000	38800
7	39500	36900	35900	e44000	44000	e45500	41600	39900	40600	40100	39000	38800
8	39500	36800	35800	e43600	43600	e45800	41600	39800	40600	40000	38900	38800
9	39400	36800	35800	e43300	43300	e46100	41600	39800	40600	40000	38900	38700
10	39300	36700	35700	e43000	43100	e45500	41600	39800	40600	39900	38800	38700
11	39200	36600	35700	e42700	42900	e44900	41500	39800	40500	39900	39300	38600
12	39100	36600	35700	e42300	42900	e44300	41500	39500	40500	39800	39300	38500
13	39000	36400	35700	e42100	43000	e43900	41300	39500	40500	39700	39200	38600
14	39000	36300	35800	42100	43000	e43500	41300	39500	40500	39700	39200	38500
15	38900	36200	35700	42100	43000	e43100	41200	39500	40400	39700	39100	38500
16	38700	36000	35800	41900	42900	e42600	41100	39500	40400	39600	39000	38400
17	38600	36000	35800	41900	42900	e43200	41000	39500	40300	39800	39000	38400
18	38600	36000	35800	43100	42800	e43800	41000	39500	40300	39800	38900	38300
19	38500	36000	35800	43500	42600	e44400	41000	39500	40300	39800	38900	38300
20	38400	36000	e35900	43300	42500	e45200	41000	39500	40200	39800	38900	38300
21	38300	36000	e38400	43200	43700	e46100	41000	39500	40300	39800	38800	38200
22	38200	36000	e40700	43300	45300	e46900	41000	39500	40200	39700	38800	38200
23	38200	36000	e43200	43200	45400	e46200	41000	39500	40200	39700	38700	38100
24	38100	36000	e44100	43000	46100	e45500	41000	39600	40200	39600	38800	38000
25	38000	36000	e44800	42800	48600	e44800	41000	39600	40100	39600	38700	38000
26	37900	36100	e45000	42600	47900	e44200	41000	39600	40100	39600	38700	38000
27	37800	36100	e44800	43800	46500	e43700	41000	39700	40100	39500	38600	38000
28	37600	36100	e44300	44400	e46100	e43300	41000	39900	40400	39500	38600	37900
29	37900	36100	e43800	44200	e45800	e42800	40900	39900	40400	39400	38500	37800
30	37800	36100	e43400	44100	---	e42300	40900	39800	40300	39400	38400	37800
31	37700	---	e43000	43900	---	e42300	---	40400	---	39300	38400	---
MAX	40200	37600	45000	44400	48600	46900	42200	40600	40600	40300	39300	38900
MIN	37600	36000	35700	41900	42500	42300	40900	39500	40100	39300	38400	37800
(†)	276.78	275.98	279.30	279.71	280.40	278.97	278.32	278.11	278.07	277.57	277.13	276.81
(Φ)	-2540	-1600	+6900	+900	+1900	-3500	-1400	-500	-100	-1000	-900	-600
(††)	310	181	209	197	180	180	222	284	289	402	410	369

CAL YR 1991 MAX 50840 MIN 35700 (Φ) +4900 (††) 2990
WTR YR 1992 MAX 48600 MIN 35700 (Φ) -2440 (††) 3233

e Estimated

(†) Elevation, in feet, at end of month.
(Φ) Change in contents, in acre-feet.
(††) Diversions, in acre-feet, by the city of Nacogdoches.

08037050 BAYOU LANANA AT NACOGDOCHES, TX

LOCATION.--Lat 31°36'58", long 94°38'28", Nacogdoches County, Hydrologic Unit 12020005, on right bank at downstream side of bridge on Farm Road 1878 in Nacogdoches and 14.5 mi upstream from mouth.

DRAINAGE AREA.--31.3 mi².

PERIOD OF RECORD.--October 1964 to September 1986, May 1988 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Prior to July 1974, concrete control. Datum of gage is 264.23 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversion above station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 23	0400	1,240	12.48	Mar. 4	1300	1,130	11.92

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.81	5.4	13	37	60	54	24	e15	e30	3.0	.51	19
2	.54	2.5	27	51	49	47	22	e9.5	e12	2.0	.74	1.6
3	.53	1.8	20	47	47	46	20	e7.0	e7.0	1.7	1.3	35
4	.70	1.5	11	36	136	654	18	e5.5	e4.5	1.7	1.1	1.7
5	9.0	1.4	9.5	33	370	329	16	e4.8	3.8	1.5	.61	.43
6	1.3	1.5	8.7	31	131	130	15	e4.2	7.8	1.1	.64	.27
7	1.0	11	8.3	28	82	82	13	e3.8	4.1	1.2	.58	.23
8	.90	4.3	8.3	45	60	64	e12	e3.4	3.3	1.6	.68	.19
9	.90	2.6	28	31	49	63	e11	e3.1	3.1	1.4	.49	.13
10	1.1	2.2	15	27	44	57	e10	e2.8	2.8	.99	.39	.12
11	1.2	2.0	12	27	41	46	e9.8	e2.4	2.9	.87	41	.13
12	1.0	1.9	18	142	67	42	e8.5	e2.2	2.4	.69	7.9	.16
13	1.0	1.8	75	67	166	37	e8.0	e2.1	2.2	.65	2.2	.15
14	.98	1.8	29	42	111	33	e7.2	e2.0	2.1	.65	1.6	.13
15	1.0	1.7	16	35	82	30	e7.0	e2.0	2.0	.75	1.6	.13
16	.97	1.8	13	29	58	27	e6.5	e2.1	1.9	.63	1.3	.11
17	.98	95	12	34	63	27	e6.0	e2.2	1.7	25	1.4	.13
18	1.1	32	13	357	48	198	e5.8	e3.0	1.5	5.2	1.2	.11
19	1.0	72	46	164	35	66	e124	e5.5	1.4	1.8	1.2	.10
20	1.2	91	65	77	33	39	e94	e4.1	1.3	1.6	1.2	.10
21	1.4	17	395	61	32	34	e18	e3.5	1.2	1.4	1.3	.10
22	1.2	11	525	134	438	34	e11	e2.5	1.2	1.2	1.0	.32
23	1.4	8.3	503	69	270	29	e8.3	e2.3	1.0	1.2	1.2	.15
24	1.7	7.2	99	48	98	27	e7.6	e2.1	1.0	1.3	1.3	.15
25	1.4	6.9	63	41	60	56	e7.2	e2.0	1.0	1.9	1.1	.24
26	1.6	6.9	82	44	147	99	e6.9	e50	12	1.6	1.1	.15
27	1.3	7.9	172	363	110	88	e5.9	e40	2.1	1.8	.79	.15
28	1.9	6.9	102	205	85	75	e92	e15	33	1.8	.66	.15
29	69	6.6	66	113	66	73	e36	e8.0	6.9	2.1	.31	.15
30	19	6.6	51	124	---	39	e20	e5.5	3.6	1.3	.22	.15
31	23	---	41	79	---	29	---	e4.0	---	1.1	.28	---
TOTAL	150.11	420.5	2546.8	2621	3038	2654	650.7	221.6	160.8	70.73	76.90	61.63
MEAN	4.84	14.0	82.2	84.5	105	85.6	21.7	7.15	5.36	2.28	2.48	2.05
MAX	69	95	525	363	438	654	124	50	33	25	41	35
MIN	.53	1.4	8.3	27	32	27	5.8	2.0	1.0	.63	.22	.10
AC-FT	298	834	5050	5200	6030	5260	1290	440	319	140	153	122
CFSM	.15	.45	2.62	2.70	3.35	2.74	.69	.23	.17	.07	.08	.07
IN.	.18	.50	3.03	3.12	3.61	3.15	.77	.26	.19	.08	.09	.07

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1992, BY WATER YEAR (WY)

MEAN	9.75	24.8	34.3	51.2	62.4	47.4	52.3	54.0	36.3	10.9	2.84	5.95
MAX	56.8	129	167	156	246	145	178	234	295	72.1	12.1	39.3
(WY)	1985	1986	1983	1979	1975	1969	1968	1979	1979	1989	1991	1981
MIN	.000	.001	.41	1.49	4.62	2.44	.64	4.18	.25	.004	.018	.000
(WY)	1965	1968	1968	1971	1971	1971	1971	1972	1971	1970	1967	1967

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1965 - 1992	
ANNUAL TOTAL	19005.11		12672.77			
ANNUAL MEAN	52.1		34.6		32.6	
HIGHEST ANNUAL MEAN					90.4	1979
LOWEST ANNUAL MEAN					1.98	1971
HIGHEST DAILY MEAN	1260	Apr 18	654	Mar 4	5730	Jun 2 1979
LOWEST DAILY MEAN	.38	Aug 7	.10	Sep 19	.00	Oct 1 1964
ANNUAL SEVEN-DAY MINIMUM	.70	Aug 2	.11	Sep 15	.00	Oct 1 1964
INSTANTANEOUS PEAK FLOW			1240	Dec 23	13500	Jun 2 1979
INSTANTANEOUS PEAK STAGE			12.48	Dec 23	22.18	Jun 2 1979
INSTANTANEOUS LOW FLOW			.00	Nov 6	.00	at times
ANNUAL RUNOFF (AC-FT)	37700		25140		23640	
ANNUAL RUNOFF (CFSM)	1.66		1.11		1.04	
ANNUAL RUNOFF (INCHES)	22.59		15.06		14.17	
10 PERCENT EXCEEDS	97		83		58	
50 PERCENT EXCEEDS	13		6.9		5.8	
90 PERCENT EXCEEDS	1.2		.62		.13	

08038000 ATTOYAC BAYOU NEAR CHIRENO, TX
(Flood-hydrograph Partial-record Station)

LOCATION.--lat 31°30'15", long 94°18'15", Nacogdoches-San Augustine County Line, Hydrologic Unit 12020005, near right bank at downstream side of bridge on State Highway 21, 2.2 mi upstream from Amaladeros Creek, 2.8 mi east of Chireno, 5.4 mi downstream from Arenoso Creek, and 41 mi upstream from mouth.

DRAINAGE AREA.--503 mi².

PERIOD OF RECORD.--January 1924 to September 1925, July 1939 to November 1954, and October 1955 to Sept. 30, 1985. Monthly discharge only for some periods, published in WSP 1312 and 1732. October 1985 to September 1989 (annual maximum). October 1989 to current year (peaks above base discharge and annual maximum).

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Data collection platform (DCP) and water-stage recorder. Datum of gage is 169.58 ft above National Geodetic Vertical Datum of 1929. Jan. 24, 1924, to Aug. 29, 1925, and Sept. 6, 1957, to Oct. 27, 1958, nonrecording gage at same site and datum.

REMARKS.--Flow is affected at times by discharge from the flood-detention pools of twelve floodwater-retarding structures with a combined detention capacity of 15,870 acre-ft. These structures control runoff from 46.7 mi² above this station. Satellite telemeter (DCP) at station.

AVERAGE DISCHARGE.--46 years (water years 1939-85) 457 ft³/s (12.34 in/yr), 331,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,900 ft³/s Nov. 24, 1940 (gage height, 25.97 ft); minimum, 0.8 ft³/s Aug. 26, 27, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1865, 29.9 ft June 29, 1902, from information by local residents. Flood in July 1933 reached a stage of 25.2 ft from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 25	1200	3,670	17.65	Feb. 26	2200	6,080	18.71
Jan. 31	0200	2,760	17.04	Mar. 6	1400	8,200	19.49
Feb. 15	0700	2,750	17.03				

08039100 AYISH BAYOU NEAR SAN AUGUSTINE, TX
(Flood-hydrograph Partial-record Station)

LOCATION.--Lat 31°23'46", Long 94°09'03", San Augustine County, Hydrologic Unit 12020005, near center of span at downstream side of bridge on State Highway 103, 3.0 mi upstream from Turkey Creek, and 9.5 mi south of San Augustine.

DRAINAGE AREA.--89.0 mi².

PERIOD OF RECORD.--February 1959 to September 1985. October 1985 to September 1989 (annual maximum), October 1989 to current year (peaks above base discharge and annual maximum).

REVISED RECORDS.--WSP 1922: 1959(M).

GAGE.--Data collection platform (DCP) and water-stage recorder. Datum of gage is 190.22 ft above National Geodetic Vertical Datum of 1929. Prior to June 2, 1959, nonrecording gage at same site and datum.

REMARKS.--Satellite gage-height and rainfall telemeter (DCP) at station.

AVERAGE DISCHARGE.--26 years (water years 1960-85), 83.7 ft³/s, 12.77 in/yr, 60,640 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,200 ft³/s Sept. 14, 1978 (gage height, 18.02 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Between October 1957 and February 1959, the maximum discharge was 15.900 ft³/s Sept. 21 or 22, 1958 (gage height, 17.5 ft), from floodmarks.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 1,600 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 15	1300	1,680	12.13	Feb. 25	2300	2,970	13.05
Mar. 5	0700	2,520	12.78				

08039300 SAM RAYBURN RESERVOIR NEAR JASPER, TX

LOCATION.--Lat 31°03'38", long 94°06'21", Jasper County, Hydrologic Unit 12020005, in the powerhouse-intake structure of Sam Rayburn Dam on the Angelina River, 10 mi northwest of Jasper, and 25.2 mi upstream from mouth.

DRAINAGE AREA.--3,449 mi².

PERIOD OF RECORD.--January 1965 to current year.
Water-quality records.--Chemical analyses: October 1964 to September 1984. Biochemical analyses: November 1967 to September 1984.

GAGE.--Stevens-type AP recording transmitter. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Apr. 20, 1965, nonrecording gage at same site and datum.

REMARKS.--The reservoir is formed by a rolled earthfill dam 19,430 ft long, including spillway and dikes. The dam was completed and deliberate impoundment began Mar. 29, 1965. The spillway is an uncontrolled broad-crested weir 2,200 ft wide, on right bank 7,000 ft to right of outlet works, and is designed to discharge 125,300 ft³/s at maximum flood design. The flood-control outlet works consists of two 10.0- by 20.0-foot rectangular concrete-lined conduits controlled by two 10.0- by 20.0-foot tractor-type service gates and one 10.0- by 20.0-foot tractor-type emergency gate. Water for turbines is admitted through four 18.0- by 26.0-foot penstocks and controlled by two wheeled-leaf-type headgates. The reservoir is operated for flood control and power generation. The area-capacity tables are based on topographic maps prepared by the U.S. Army Corps of Engineers and detailed sedimentation ranges established in 1961 and dated February 1965. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08038000. Gage-height telemeter at station. Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	190.0	-
Design flood	183.0	5,610,000
Crest of spillway	176.0	4,442,400
Top of flood-control pool	173.0	3,997,600
Top of conservation pool (power pool)	164.0	2,852,600
Top of power head and sediment pool	149.0	1,452,000
Lowest gated outlet (invert)	105.0	21,940

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,310,000 acre-ft Mar. 10, 1992 (elevation, 175.13 ft); minimum daily contents since conservation storage was reached in 1968, 1,797,000 acre-ft Nov. 15, 1977 (elevation, 153.35 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,310,000 acre-ft Mar. 10 (elevation, 175.13 ft); minimum daily, 2,283,000 acre-ft Sept. 30 (elevation, 158.64 ft).

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

158.0	2,221,000	168.0	3,329,000	174.0	3,857,000
161.0	2,525,000	170.0	3,586,000	175.0	4,290,000
164.0	2,853,000	172.0	3,857,000	176.0	4,442,000
166.0	3,085,000				

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2836000	2704000	2762000	3084000	3278000	4035000	3784000	3047000	2914000	2764000	2612000	2424000
2	2829000	2694000	2773000	3102000	3281000	4052000	3758000	3032000	2927000	2760000	2607000	2412000
3	2824000	2688000	2779000	3117000	3286000	4072000	3724000	3014000	2927000	2760000	2597000	2423000
4	2820000	2678000	2776000	3126000	3341000	4164000	3694000	2997000	2914000	2754000	2594000	2415000
5	2820000	2672000	2779000	3138000	3418000	4225000	3667000	2980000	2905000	2749000	2586000	2409000
6	2810000	2671000	2783000	3143000	3450000	4253000	3646000	2969000	2905000	2743000	2583000	2405000
7	2802000	2682000	2783000	3140000	3474000	4268000	3615000	2958000	2891000	2737000	2579000	2402000
8	2797000	2678000	2787000	3140000	3497000	4274000	3589000	2951000	2891000	2733000	2572000	2398000
9	2794000	2677000	2802000	3123000	3516000	4283000	3568000	2935000	2891000	2726000	2558000	2391000
10	2786000	2677000	2805000	3115000	3526000	4277000	3540000	2928000	2887000	2721000	2551000	2389000
11	2779000	2677000	2810000	3098000	3546000	4258000	3516000	2914000	2882000	2711000	2554000	2385000
12	2776000	2677000	2813000	3140000	3573000	4243000	3474000	2914000	2882000	2705000	2562000	2380000
13	2772000	2677000	2820000	3169000	3623000	4219000	3450000	2910000	2881000	2700000	2551000	2371000
14	2768000	2672000	2824000	3144000	3655000	4203000	3423000	2905000	2868000	2694000	2547000	2371000
15	2765000	2672000	2824000	3150000	3686000	4185000	3395000	2905000	2864000	2688000	2544000	2365000
16	2754000	2667000	2824000	3127000	3703000	4160000	3366000	2890000	2859000	2678000	2533000	2360000
17	2746000	2689000	2824000	3121000	3709000	4139000	3341000	2889000	2851000	2671000	2527000	2357000
18	2746000	2693000	2832000	3174000	3713000	4116000	3307000	2887000	2850000	2671000	2522000	2350000
19	2742000	2710000	2832000	3187000	3705000	4103000	3319000	2887000	2839000	2671000	2516000	2344000
20	2737000	2716000	2836000	3191000	3686000	4072000	3308000	2882000	2839000	2666000	2511000	2337000
21	2733000	2721000	2866000	3193000	3672000	4043000	3281000	2881000	2831000	2660000	2501000	2334000
22	2726000	2726000	2891000	3200000	3713000	4038000	3256000	2881000	2821000	2655000	2495000	2331000
23	2721000	2737000	2927000	3207000	3744000	3996000	3231000	2868000	2813000	2651000	2486000	2328000
23	2715000	2733000	2930000	3200000	3764000	3962000	3208000	2868000	2809000	2644000	2481000	2320000
25	2715000	2733000	2937000	3200000	3868000	3948000	3189000	2868000	2798000	2644000	2481000	2311000
26	2711000	2733000	2957000	3207000	3915000	3915000	3150000	2881000	2794000	2640000	2481000	2311000
27	2704000	2737000	2977000	3231000	3956000	3896000	3125000	2881000	2787000	2633000	2465000	2302000
28	2699000	2737000	3000000	3252000	3982000	3882000	3092000	2905000	2779000	2629000	2455000	2301000
29	2705000	2742000	3024000	3261000	4009000	3868000	3092000	2910000	2779000	2621000	2443000	2292000
30	2700000	2746000	3047000	3270000	---	3839000	3071000	2910000	2772000	2615000	2438000	2283000
31	2710000	---	3060000	3273000	---	3811000	---	2914000	---	2609000	2429000	---
MAX	2836000	2746000	3060000	3273000	4009000	4283000	3784000	3047000	2927000	2764000	2612000	2424000
MIN	2699000	2667000	2762000	3084000	3278000	3811000	3071000	2868000	2772000	2609000	2429000	2283000
(†)	162.72	163.05	165.79	167.55	173.08	171.67	165.88	164.54	163.28	161.79	160.08	158.63
(ϕ)	-129000	+36000	+314000	+213000	736000	-198000	-740000	-157000	-142000	-163000	-180000	-146000

CAL YR 1991 MAX 3873000 MIN 2437000 (ϕ) +629000
WTR YR 1992 MAX 4283000 MIN 2283000 (ϕ) -556000

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

08040000 B.A. STEINHAGEN LAKE AT TOWN BLUFF, TX

LOCATION.--Lat 30°47'43", long 94°10'48", Tyler County, Hydrologic Unit 12020003, near right bank 70 ft upstream from outlet structure of Town Bluff Dam on Neches River, 0.4 mi north of Town Bluff, and at mile 113.7.

DRAINAGE AREA.--7,573 mi².

PERIOD OF RECORD.--April 1951 to current year. Prior to October 1967, published as Dam B Reservoir at Town Bluff.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 25, 1954, at site 490 ft upstream at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam with concrete spillway sections. The total length of dam is 6,698 ft, including a concrete spillway and non-overflow section. Deliberate impoundment of water began Apr. 16, 1951, and the dam was completed in June 1951. The uncontrolled spillway is 6,100 ft long. A 326-foot-long gated service spillway with six 40.0- by 35.0-foot tainter gates is located near right end of dam. The capacity of the spillways at maximum flood design is 218,300 ft³/s. The capacity table is based on a survey made in 1945. Water is used for industrial, municipal and irrigation supplies. Gage-height telemeter at station. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam (nonoverflow)	95.0	-
Design flood	93.0	306,400
Crest of uncontrolled spillway (top of tainter gates)	85.0	124,700
Top of conservation pool	83.0	94,200
Bottom of tainter gates (sill)	50.0	0

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 128,400 acre-ft May 22, 1953 (elevation, 85.21 ft); no storage Sept. 18 to Oct. 13, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 101,900 acre-ft Mar. 1 (elevation, 83.54 ft); minimum daily, 71,070 acre-ft Sept. 30 (elevation, 81.13 ft).

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

81.0	69,680	83.0	94,250
82.0	81,280	84.0	108,700

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86980	84910	90100	94400	85170	101900	84520	84130	81920	86200	86460	86980
2	87240	86460	91010	90880	83870	101000	83610	80120	83090	85950	86200	88540
3	87240	85690	89840	86720	82960	95550	82050	79190	86720	85690	85430	90360
4	87370	87760	86460	82050	94540	95980	80350	83350	87240	84650	84650	90620
5	88020	88020	84000	79770	100200	95700	79190	87110	84910	83870	83870	90100
6	87500	88280	84650	76060	92690	97580	79190	85430	80810	83220	82570	88670
7	87370	88800	85690	75710	85690	98440	79190	79880	79300	82050	81790	87500
8	86980	88540	86080	82180	80810	97140	83610	79420	75820	81920	81040	86980
9	86720	88150	91660	86460	78490	93470	86720	80120	76170	80930	81400	87240
10	86460	87890	90620	87370	77100	88670	86980	81040	76400	80120	81280	87630
11	86200	87370	85170	88150	76060	82700	85820	81920	78030	79650	82570	87500
12	86200	86850	81530	93210	74430	80350	84130	82570	78960	78840	84520	87760
13	85690	86460	81280	90100	71650	82700	82050	83480	80120	78030	85560	87760
14	85820	85950	81530	82050	71650	84130	80810	83740	80350	78140	84650	88020
15	85430	85690	80810	77680	74550	80580	78960	85690	79650	79300	83090	87890
16	84910	85170	81280	79650	76750	78380	77560	85560	78490	80580	81040	88020
17	84390	89320	82570	82830	78260	76170	75940	84650	77100	82830	79650	87760
18	84130	92560	84130	90750	76870	75710	74900	83220	77100	84650	78030	86980
19	83870	95980	84910	83870	73040	76290	74080	82050	76870	85690	76750	85430
20	83610	92430	86200	80700	73620	75820	79190	81660	78720	86600	76750	84520
21	83350	88670	88930	80120	76870	76170	84910	81040	79070	86980	76870	83610
22	83090	87370	92950	84650	85820	76400	86080	80460	79300	86460	76640	83350
23	82570	86340	89840	85690	79420	75480	84390	79880	76400	87240	76520	81530
24	82700	84650	84130	85690	74550	75480	82310	79070	76870	88020	76640	79650
25	82570	85950	84130	82050	89840	75710	82310	78140	82440	88020	76290	78260
26	82180	88150	86340	78720	90880	75480	82960	79420	83870	87370	76400	76870
27	81920	88150	86080	82700	85170	74900	83220	81040	85040	87110	80120	75010
28	82700	87500	85430	86200	87240	77330	82830	86340	86340	86720	80700	73270
29	83480	89320	86720	86460	94970	81280	84260	87760	87370	86460	82310	72810
30	84390	89060	91010	86200	---	84000	84650	85690	87240	86200	83480	71070
31	85820	---	95700	85820	---	84650	---	83870	---	85690	84130	---
MAX	88020	95980	95700	94400	100200	101900	86980	87760	87370	88020	86460	90620
MIN	81920	84650	80810	75710	71650	74900	74080	78140	75820	78030	76290	71070
(†)	82.35	82.60	83.10	82.35	83.05	82.26	82.26	82.20	82.46	82.34	82.22	82.12
(ϕ)	-1630	+3240	+6640	-9880	+9150	-10320	0	-780	+3370	-1550	-1560	-13060

CAL YR 1991 MAX 97160 MIN 71560 (ϕ) +14910
WTR YR 1992 MAX 101900 MIN 71070 (ϕ) -16380

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

08040600 NECHES RIVER NEAR TOWN BLUFF, TX

LOCATION.--Lat 30°47'27", long 94°09'03", Jasper-Tyler County line, Hydrologic Unit 12020003, on left bank 1.8 mi downstream from Town Bluff Dam, 2.0 mi northeast of Town Bluff, 1.0 mi upstream from Walnut Run, 6.5 mi downstream from Wolf Creek, and at mile 114.9.

DRAINAGE AREA.--7,574 mi^2.

PERIOD OF RECORD.--March 1951 to current year. Prior to Oct. 27, 1989, published as Neches River at Town Bluff.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Dec. 4, 1954 to Oct. 27, 1989, water-stage recorder at site 1.5 mi upstream at same datum. Prior to May 21, 1953, water-stage recorder, and May 21, 1953, to Dec. 3, 1954, nonrecording gage at former site at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by B. A. Steinhagen Lake (station 08040000) 1.8 mi upstream and by Sam Rayburn Reservoir (station 08039300) 37.9 mi upstream. There are some diversions upstream from station. Prior to October 1989, published as 08040500 Neches River at Town Bluff, Tx. Gage-height telemeter at station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--13 years (water years 1952-64) prior to regulation by Sam Rayburn Reservoir, 4,406 ft^3/s (3,192,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1952-64).--Maximum discharge, 90,900 ft^3/s May 21, 22, 1953 (elevation, 82.85 ft) at former site; no flow at times due to regulation of B. A. Steinhagen Lake.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1884 reached a stage about 86.8 ft (discharge, about 120,000 ft^3/s) and is the highest since that date, from information by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3550	2790	3540	16400	16900	20900	22200	15900	9550	3540	3270	2810
2	2790	2740	4050	16900	16900	23600	22100	15000	9700	3440	3290	3300
3	2780	2670	5490	17300	16800	25400	22100	13800	10400	3380	3330	3150
4	2780	2680	5900	17300	17400	25700	22000	12200	11600	3410	3300	3320
5	2660	2680	5610	17200	20800	28600	21900	12100	11600	3430	3300	3320
6	2790	2660	4130	17100	21400	30200	22000	12000	11500	3440	3390	3330
7	2810	2680	3380	17000	19100	30500	21600	10600	10400	3410	3410	3350
8	2800	2720	3360	17000	17900	31600	20200	7890	9210	3310	3430	3290
9	2820	2780	4600	17300	17000	33800	19000	6780	7730	3370	3370	3120
10	2800	2780	7790	17400	16800	33700	18900	6490	5470	3420	3370	2970
11	2780	2760	7780	17300	16600	32800	18900	6480	3750	3270	3310	3120
12	2770	2720	6770	17800	16600	31900	18800	6500	3750	3340	3360	3070
13	2770	2550	5090	18100	16500	31000	18700	6440	3780	3400	3360	3110
14	2770	2530	4220	17500	16700	30200	18500	6380	3780	3380	3360	3040
15	2760	2480	4240	16800	17000	30000	18400	5970	3870	3250	3370	3110
16	2740	2480	3860	16200	17000	29300	18300	4300	3980	3310	3330	3110
17	2730	2350	3420	16700	17300	28000	18300	3770	3950	3330	3350	2980
18	2730	2640	3440	17400	17700	27200	18200	3870	3870	3320	3350	3160
19	2730	2640	3640	18200	17800	26300	18200	3670	3900	3360	3280	3190
20	2670	4330	4320	17300	17900	24700	18200	3610	3910	3370	3370	3200
21	2670	4570	5650	16700	17900	23500	18500	3600	3910	3320	3390	3050
22	2680	3110	7560	16100	18200	22900	18800	3690	3900	3280	3390	2830
23	2690	2570	9980	15900	18200	22400	18800	3660	3700	3330	3390	3180
24	2690	2590	11900	16000	15900	21800	18700	3780	3200	3240	3460	3180
25	2680	2590	12200	16400	16000	21700	18300	3700	3320	3130	3570	3190
26	2670	2570	12300	16600	18100	21700	18000	3420	3360	3220	3550	3130
27	2660	3440	13100	17000	18600	21600	17900	3050	3360	3270	3060	3230
28	2680	3590	14600	17500	18500	21700	17600	3790	3360	3260	3430	3220
29	2680	3050	15100	17200	19000	22100	17300	7350	3420	3280	3340	3160
30	2670	3370	15200	17000	---	22200	16800	9200	3470	3300	3310	3170
31	2630	---	15700	17000	---	22200	---	9520	---	3310	3300	---
TOTAL	85430	86110	227920	527600	512500	819200	577200	218510	170700	103420	104090	94390
MEAN	2756	2870	7352	17020	17670	26430	19240	7049	5690	3336	3358	3146
MAX	3550	4570	15700	18200	21400	33800	22200	15900	11600	3540	3570	3350
MIN	2630	2350	3360	15900	15900	20900	16800	3050	3200	3130	3060	2810
AC-FT	169500	170800	452100	1046000	1017000	1625000	1145000	433400	338600	205100	206500	187200

08040600 NECHES RIVER NEAR TOWN BLUFF, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1992#, BY WATER YEAR (WY)

MEAN	2158	2550	4040	5864	7294	8192	7797	8189	7369	4698	3129	2631
MAX	7168	10570	14580	19400	20800	26430	20220	22560	17000	22870	8252	6652
(WY)	1974	1974	1974	1974	1974	1992	1969	1969	1979	1989	1979	1973
MIN	186	94.0	131	600	252	1178	1231	1003	1281	896	338	313
(WY)	1965	1965	1965	1965	1981	1971	1981	1971	1971	1967	1971	1971

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1965 - 1992#	
ANNUAL TOTAL	3743770		3527070			
ANNUAL MEAN	10260		9637		5314	
HIGHEST ANNUAL MEAN					9787	1991
LOWEST ANNUAL MEAN					961	1971
HIGHEST DAILY MEAN	20800	Jan 24	33800	Mar 9	46600	Jul 3 1989
LOWEST DAILY MEAN	2170	Jan 1	2350	Nov 17	2.0	Dec 12 1965
ANNUAL SEVEN-DAY MINIMUM	2520	Nov 13	2520	Nov 13	2.4	Dec 11 1965
INSTANTANEOUS PEAK FLOW			34000	Mar 9	49200	Jul 2 1989
INSTANTANEOUS PEAK STAGE			75.73	Mar 9	78.49	Jul 2 1989
INSTANTANEOUS LOW FLOW					.00	*
ANNUAL RUNOFF (AC-FT)	7426000		6996000		3850000	
10 PERCENT EXCEEDS	17600		21600		14800	
50 PERCENT EXCEEDS	9630		3870		2990	
90 PERCENT EXCEEDS	2740		2750		900	

\# Period of regulated streamflow.
* No flow at times due to upstream regulation by B. A. Steinhagen Lake.

08041000 NECHES RIVER AT EVADALE, TX
(National stream-quality accounting network)

LOCATION.--Lat 30°21'20", long 94°05'35", Jasper-Hardin County line, Hydrologic Unit 12020003, near right bank on downstream side of bridge on U.S. Highway 96 at Evadale, 0.8 mi upstream from Mill Creek, 16 mi upstream from Village Creek, and at mile 55.6.

DRAINAGE AREA.--7,951 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1904 to December 1906, April 1921 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 718: 1929. WSP 1342: 1905-07, 1924. WSP 1732: Drainage area at former site.

GAGE.--Water-stage recorder. Datum of gage is 8.25 ft above National Geodetic Vertical Datum of 1929. July 1, 1904, to Dec. 31, 1906, nonrecording gage on Gulf, Colorado, and Santa Fe Railway Co. bridge at site 1.2 mi downstream at datum 5.50 ft lower; Apr. 1, 1921, to Dec. 7, 1948, nonrecording gages at site 1.2 mi downstream at present datum; Dec. 8, 1948, to Nov. 8, 1963, water-stage recorder at site 1.2 mi downstream at present datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by B. A. Steinhagen Lake (station 08040000) 58.1 mi upstream, and by Sam Rayburn Reservoir (station 08039300) 95.7 mi upstream. There are some diversions upstream for municipal use. Gage-height telemeter at station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--45 years (water years 1905-06, 1922-64) 6,308 ft³/s (4,570,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1905-06, 1922-64).--Maximum discharge, 92,100 ft³/s May 11, 1944 (gage height, 23.58 ft, from floodmark), at site then in use; minimum daily, 63 ft³/s Nov. 26-28, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1884 reached a stage of 26.2 ft, at former site (discharge, about 125,000 ft³/s), and flood in August 1915 reached a stage of 24.5 ft, at former site (discharge, about 102,000 ft³/s). These are the highest floods since at least 1884. Stages furnished by Gulf, Colorado, and Santa Fe Railway Co.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2900	3270	3390	16300	19400	20400	23600	19500	9320	3990	3360	3120
2	3420	3330	3690	16700	19100	20400	23400	18700	9980	4400	3400	2880
3	3180	3340	4050	17300	19000	21000	23300	17700	10300	4230	3410	2850
4	2980	3230	4930	17900	20100	23200	23200	16600	10200	3930	3460	2980
5	2960	3160	5650	18500	21700	28400	23300	15300	10600	3800	3440	3020
6	2910	3150	5870	18800	22600	30800	24500	14000	11400	3730	3390	3080
7	2920	3160	5250	18800	23700	31700	24200	13200	11800	3670	3370	3080
8	3000	3210	4210	19100	24300	32800	23900	12800	11700	3590	3370	3090
9	3040	3220	3830	19100	23600	33700	23400	11500	10900	3480	3380	3070
10	3080	3270	4340	18900	21700	34300	22600	9360	9680	3430	3350	2930
11	3110	3300	6130	18800	20200	35700	21500	8020	8080	3470	3480	2770
12	3120	3270	7490	19600	19400	37000	20700	7420	5900	3430	3610	2830
13	3150	3220	8560	19800	18900	37000	20400	7210	4720	3400	3640	2840
14	3190	3070	8150	20200	18700	36300	20200	7100	4410	3430	3660	2850
15	3210	2970	6570	20400	18500	35300	20000	6990	4330	3470	3570	2830
16	3200	2930	5450	20100	18500	34000	19800	6830	4320	3420	3460	2830
17	3180	3000	4850	19400	18700	33100	19700	6000	4340	3370	3380	2850
18	3180	3390	4280	20000	18800	32700	19700	5110	4330	3430	3330	2800
19	3190	3700	4000	20600	18800	31900	19600	4740	4270	3460	3280	2840
20	3190	3890	3940	20900	18900	30500	19500	4550	4220	3510	3220	2940
21	3160	4440	4290	21300	19200	28800	19400	4400	4220	3520	3240	2970
22	3140	5180	5160	21000	19900	27400	19300	4240	4220	3460	3260	2940
23	3130	4530	6440	20100	20700	25900	19400	4270	4200	3460	3250	2780
24	3140	3520	7860	19000	21200	24800	19700	4260	4110	3440	3250	2860
25	3130	3080	9320	18200	21600	24200	20700	4290	3740	3430	3270	3020
26	3140	2930	11200	17900	20300	23500	20200	4280	3530	3420	3350	3040
27	3140	2870	12700	18500	19300	23100	19700	4200	3530	3290	3380	3020
28	3140	3260	13400	19100	19700	23200	19300	3970	3550	3320	3120	3050
29	3150	3650	14000	19400	20200	24000	19800	4370	3530	3320	3140	3070
30	3300	3570	14800	19700	---	23800	20300	5950	3590	3330	3180	3020
31	3290	---	15800	19600	---	23700	---	7730	---	3340	3130	---
TOTAL	96970	102110	219600	595000	586700	892600	634300	264590	193020	109970	104130	88250
MEAN	3128	3404	7084	19190	20230	28790	21140	8535	6434	3547	3359	2942
MAX	3420	5180	15800	21300	24300	37000	24500	19500	11800	4400	3660	3120
MIN	2900	2870	3390	16300	18500	20400	19300	3970	3530	3290	3120	2770
AC-FT	192300	202500	435600	1180000	1164000	1770000	1258000	524800	382900	218100	206500	175000

08041000 NECHES RIVER AT EVADALE, TX--Continued
(National stream-quality accounting network)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1992#, BY WATER YEAR (WY)

MEAN	2407	2853	4624	6589	8154	9114	8822	8920	8231	5402	3444	2868
MAX	8065	11800	15240	21710	21680	28790	21180	24120	19920	25680	9644	7090
(WY)	1974	1974	1974	1974	1974	1992	1969	1969	1991	1989	1979	1979
MIN	268	188	301	628	614	1352	1432	1220	1397	1118	396	398
(WY)	1965	1965	1965	1965	1981	1971	1981	1981	1971	1967	1971	1971

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1965 - 1992#	
ANNUAL TOTAL	4181890		3887240			
ANNUAL MEAN	11460		10620		5939	
HIGHEST ANNUAL MEAN					10960	1991
LOWEST ANNUAL MEAN					1128	1971
HIGHEST DAILY MEAN	24300	May 31	37000	Mar 12	47400	Jul 6 1989
LOWEST DAILY MEAN	2830	Sep 25	2770	Sep 11	82	Aug 14 1971
ANNUAL SEVEN-DAY MINIMUM	2950	Sep 20	2830	Sep 11	126	Nov 18 1965
INSTANTANEOUS PEAK FLOW			37500	Mar 12	47900	Jul 6 1989
INSTANTANEOUS PEAK STAGE			19.33	Mar 12	20.79	Jul 6 1989
ANNUAL RUNOFF (AC-FT)	8295000		7710000		4302000	
10 PERCENT EXCEEDS	20600		23200		16200	
50 PERCENT EXCEEDS	10000		4380		3310	
90 PERCENT EXCEEDS	3160		3060		1080	

Period of regulated streamflow.

08041000 NECHES RIVER AT EVADALE, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: September 1939 to current year. Pesticide analyses: February 1968 to July 1981. Sediment analyses: October 1960 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1947 to current year.
WATER TEMPERATURE: October 1947 to current year.

INSTRUMENTATION.--From October 1954 to September 1963, water temperature was continuously recorded at this station.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 422 microsiemens Jan. 25, 1957; minimum daily, 23 microsiemens Sept. 19, 1963.
WATER TEMPERATURE (1947-85, 1987 to current year): Maximum daily, 34.0°C June 29, 1953; minimum daily, 3.0°C Jan. 30, 31, 1948, Jan. 31, 1949, and Jan 24, 1963.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 178 microsiemens Aug. 11; minimum daily, 76 microsiemens Mar. 8.
WATER TEMPERATURE: Maximum daily, 31.0°C several days in July and Aug.; minimum daily, 9.0°C several days in Jan. and Mar. 1992.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
DEC												
03...	1118	3970	141	6.9	14.0	20	10.5	101	1.1	60	52	31
JAN												
22...	1145	21100	110	6.6	8.0	20	12.8	108	0.5	290	48	25
MAR												
11...	1117	38100	80	6.5	15.0	34	7.9	78	0.9	4100	680	19
APR												
27...	1330	21100	121	6.9	19.0	23	7.8	83	1.5	56	84	27
JUN												
16...	1114	4320	128	7.0	29.0	32	6.3	82	1.5	28	56	32
JUL												
27...	1405	3430	119	6.9	29.0	20	6.6	86	0.9	28	30	28

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
DEC											
03...	16	7.6	2.8	14	1	3.5	0	18	15	22	18
JAN											
22...	12	6.3	2.2	10	0.9	2.3	0	15	12	15	15
MAR											
11...	5	4.7	1.7	7.5	0.8	2.0	0	17	14	8.7	9.0
APR											
27...	10	6.7	2.6	11	0.9	2.5	0	21	17	19	15
JUN											
16...	15	8.0	2.8	12	0.9	2.4	0	20	16	17	18
JUL											
27...	11	6.9	2.7	11	0.9	2.3	0	21	17	16	14

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
DEC											
03...	<0.10	12	117	90	0.059	0.020	<0.010	0.079	0.087	0.020	0.020
JAN											
22...	<0.10	9.8	81	68	--	0.020	0.010	<0.050	<0.050	0.030	0.020
MAR											
11...	0.20	6.9	70	50	--	0.030	<0.010	<0.050	<0.050	0.060	0.040
APR											
27...	<0.10	8.0	89	76	0.057	0.030	<0.010	0.087	0.090	0.030	0.030
JUN											
16...	<0.10	11	86	82	--	0.040	0.010	<0.050	<0.050	0.050	0.050
JUL											
27...	<0.10	10	83	74	--	0.030	<0.010	<0.050	<0.050	0.050	0.050

08041000 NECHES RIVER AT EVADALE, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
DEC 03...	0.38	0.40	0.060	0.030	0.010	0.020	0.03	50	536	59	70
JAN 22...	0.47	0.50	0.030	0.010	0.010	0.030	0.03	26	1480	85	--
MAR 11...	0.54	0.60	0.070	0.020	<0.010	0.040	--	24	2470	87	70
APR 27...	0.37	0.40	0.050	0.030	<0.010	0.030	--	25	1420	93	--
JUN 16...	0.55	0.60	0.050	0.010	0.020	0.040	0.06	57	665	79	110
JUL 27...	0.35	0.40	0.040	<0.010	0.010	0.020	0.03	47	435	85	20

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)
DEC 03...	40	<3	180	<4	15	<10	2	<1	<1.0	76	<6
JAN 22...	--	--	--	--	--	--	--	--	--	--	--
MAR 11...	36	<3	240	<4	46	<10	1	<1	<1.0	47	<6
APR 27...	--	--	--	--	--	--	--	--	--	--	--
JUN 16...	46	<3	290	6	33	<10	3	<1	<1.0	84	<6
JUL 27...	38	<3	68	5	9	<10	1	<1	<1.0	78	<6

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	96970	127	81	21100	16	4170	19	4980	28
NOV.	1991	102110	133	84	23000	17	4610	20	5470	29
DEC.	1991	219600	137	85	50700	17	10300	20	12100	30
JAN.	1992	595000	115	74	120000	14	22900	17	27900	26
FEB.	1992	586700	117	75	119000	14	22900	18	27800	26
MAR.	1992	892600	107	70	168000	13	31700	16	39000	24
APR.	1992	634300	127	81	138000	16	27200	19	32600	28
MAY	1992	264590	131	83	59000	16	11800	20	14000	29
JUNE	1992	193020	144	89	46300	18	9570	21	11100	31
JULY	1992	109970	130	82	24500	16	4870	20	5800	29
AUG.	1992	104130	131	83	23300	17	4650	20	5510	29
SEPT	1992	88250	133	84	20000	17	4010	20	4740	29
TOTAL		3887240	**	**	812000	**	159000	**	191000	**
WTD.AVG.		10620	121	77	**	15	**	18	**	27

08041000 NECHES RIVER AT EVADALE, TX--Continued
(National stream-quality accounting network)

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY EQUIVALENT MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	121	144	119	136	113	126	125	134	143	131	130
2	123	128	145	111	135	98	134	134	124	126	129	e135
3	121	118	144	107	123	114	128	130	139	117	126	e125
4	123	120	176	110	118	87	130	122	129	120	128	130
5	122	122	147	106	118	83	126	122	130	127	128	e120
6	122	116	174	102	110	86	129	121	153	138	128	130
7	122	133	146	104	102	79	129	122	165	136	132	e140
8	124	126	142	107	94	76	127	123	156	137	131	130
9	122	131	140	108	93	77	126	124	138	137	130	e135
10	123	126	128	113	90	84	125	127	144	137	164	130
11	123	136	129	119	100	84	125	131	169	137	178	e120
12	125	136	130	127	96	87	130	123	167	131	120	e125
13	132	137	129	121	100	87	126	136	167	164	129	130
14	137	137	129	125	102	94	130	131	152	132	126	e140
15	131	139	126	121	128	105	129	139	130	132	125	130
16	124	143	136	118	137	100	127	144	131	128	135	e125
17	122	138	131	108	137	127	132	136	131	137	125	140
18	122	145	136	109	125	120	130	137	135	134	125	e135
19	123	135	133	123	126	119	129	140	139	132	132	e150
20	132	157	139	114	131	119	126	130	148	137	132	140
21	136	135	149	113	131	130	124	140	147	127	132	160
22	131	130	156	108	136	165	126	131	145	126	130	140
23	123	131	164	109	138	124	123	134	145	125	128	130
24	122	132	152	112	128	124	121	141	135	115	130	e120
25	122	132	137	114	118	125	121	128	134	124	128	e135
26	159	131	137	135	108	126	130	129	138	120	129	130
27	139	133	133	115	121	129	125	130	141	120	127	140
28	123	136	124	129	109	129	125	132	133	120	126	130
29	140	133	124	121	110	126	121	145	150	124	127	130
30	123	139	123	120	---	134	121	166	144	135	128	140
31	122	---	130	117	---	127	---	165	---	128	125	---
MEAN	127	133	140	115	117	109	127	133	143	131	131	133
MAX	159	157	176	135	138	165	134	166	169	164	178	160
MIN	121	116	123	102	90	76	121	121	124	115	120	120

WTR YR 1992 MEAN 128 MAX 178 MIN 76

e Estimated

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	20.0	12.0	11.0	---	9.0	14.0	20.0	27.0	30.0	30.0	28.0
2	23.0	19.0	12.0	11.0	---	9.0	14.0	21.0	27.0	30.0	31.0	28.0
3	23.0	19.0	12.0	11.0	---	9.0	14.0	21.0	27.0	30.0	31.0	28.0
4	23.0	19.0	12.0	11.0	---	9.0	14.0	21.0	27.0	30.0	31.0	28.0
5	23.0	18.0	12.0	11.0	---	9.0	16.0	23.0	27.0	30.0	31.0	28.0
6	21.0	17.0	12.0	11.0	---	9.0	16.0	23.0	27.0	31.0	31.0	28.0
7	21.0	16.0	12.0	11.0	---	9.0	16.0	23.0	27.0	31.0	31.0	28.0
8	21.0	16.0	12.0	11.0	---	9.0	16.0	23.0	28.0	31.0	31.0	28.0
9	21.0	16.0	12.0	11.0	---	9.0	16.0	23.0	28.0	31.0	31.0	28.0
10	21.0	15.0	12.0	11.0	---	9.0	16.0	24.0	28.0	31.0	31.0	28.0
11	21.0	14.0	12.0	11.0	---	9.0	16.0	24.0	28.0	31.0	31.0	27.0
12	21.0	14.0	12.0	10.0	---	9.0	18.0	24.0	28.0	31.0	31.0	27.0
13	21.0	14.0	12.0	10.0	---	9.0	18.0	25.0	28.0	31.0	31.0	28.0
14	22.0	14.0	11.0	10.0	---	9.0	18.0	25.0	30.0	30.0	31.0	28.0
15	22.0	14.0	11.0	10.0	---	9.0	18.0	24.0	30.0	31.0	30.0	28.0
16	22.0	14.0	11.0	10.0	---	9.0	18.0	24.0	30.0	31.0	31.0	28.0
17	22.0	14.0	12.0	9.0	---	9.0	19.0	25.0	30.0	31.0	30.0	28.0
18	22.0	14.0	11.0	9.0	---	11.0	19.0	25.0	30.0	31.0	30.0	28.0
19	22.0	14.0	11.0	9.0	---	11.0	19.0	25.0	30.0	31.0	30.0	28.0
20	22.0	13.0	11.0	9.0	---	12.0	19.0	25.0	30.0	31.0	30.0	28.0
21	22.0	13.0	11.0	9.0	---	12.0	19.0	25.0	30.0	31.0	30.0	27.0
22	22.0	13.0	11.0	9.0	---	12.0	19.0	25.0	30.0	31.0	29.0	27.0
23	22.0	13.0	11.0	9.0	---	12.0	19.0	25.0	30.0	31.0	29.0	27.0
24	22.0	13.0	11.0	9.0	---	12.0	19.0	25.0	30.0	31.0	29.0	27.0
25	22.0	13.0	11.0	9.0	---	12.0	19.0	26.0	30.0	31.0	29.0	27.0
26	22.0	13.0	11.0	9.0	---	13.0	20.0	26.0	30.0	31.0	29.0	26.0
27	23.0	13.0	11.0	9.0	---	13.0	20.0	26.0	30.0	31.0	29.0	26.0
28	23.0	13.0	11.0	9.0	---	13.0	20.0	26.0	30.0	31.0	29.0	25.0
29	23.0	13.0	11.0	9.0	---	13.0	20.0	26.0	30.0	31.0	29.0	25.0
30	23.0	13.0	11.0	9.0	---	13.0	20.0	26.0	30.0	31.0	29.0	25.0
31	23.0	---	11.0	9.0	---	13.0	---	26.0	---	31.0	29.0	---
MEAN	22.0	15.0	11.5	10.0	---	10.5	17.5	24.0	29.0	31.0	30.0	27.5
MAX	23.0	20.0	12.0	11.0	---	13.0	20.0	26.0	30.0	31.0	31.0	28.0
MIN	21.0	13.0	11.0	9.0	---	9.0	14.0	20.0	27.0	30.0	29.0	25.0

WTR YR 1992 MEAN 20.5 MAX 31.0 MIN 9.0

08041500 VILLAGE CREEK NEAR KOUNTZE, TX

LOCATION.--Lat 30°23'52", long 94°15'48", Hardin County, Hydrologic Unit 12020006, at downstream side of bridge on Farm Road 418, 1.6 mi upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 3.1 mi upstream from Cypress Creek, 3.4 mi northeast of Kountze, and 4.3 mi downstream from Beech Creek.

DRAINAGE AREA.--860 mi².

PERIOD OF RECORD.--May 1924 to September 1927, October 1927 to November 1929 (discharge measurements only), April 1939 to current year.
Water-quality records: November 1967 to September 1985.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 25.12 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 30, 1939, nonrecording gage at site 1.6 mi downstream at different datum. Apr. 30, 1939, to Sept. 30, 1966, water-stage recorder at site 2,000 ft downstream at present datum.

REMARKS.--No estimated daily discharges. Records good. There are small diversions above station. Gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1884, about 34 ft in August 1915 at site 2,000 ft downstream at present datum; stage was determined on basis of information by engineers of Gulf, Colorado, and Santa Fe Railway Co. for site 1.6 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	277	619	525	1680	3490	4860	2760	780	1520	352	207	128
2	274	602	603	1460	2850	3490	2310	895	1770	463	254	127
3	263	582	819	1180	2260	2520	1610	823	2070	762	263	128
4	250	526	1040	1040	2440	2140	1090	619	2000	815	393	131
5	251	386	1130	978	5020	6990	912	506	1770	522	481	146
6	254	306	1040	921	9240	12100	1230	477	1520	398	379	228
7	225	277	832	891	10300	12600	1860	513	1300	312	295	348
8	207	361	683	930	9810	12200	2180	478	979	258	233	329
9	195	465	672	1410	6940	7150	2270	405	710	225	206	299
10	187	464	990	1820	4540	5030	1870	358	586	203	188	302
11	182	410	1440	1760	3250	3690	1250	335	500	187	188	217
12	178	346	1940	1810	2400	2730	959	324	433	176	236	165
13	176	301	2680	2690	1940	2100	839	316	386	167	481	149
14	171	276	3130	3290	1840	1650	759	315	366	161	697	140
15	168	259	2510	3480	1870	1410	696	307	354	156	683	142
16	162	247	1650	3440	1780	1260	648	296	351	170	525	155
17	158	432	1090	3160	1730	1150	646	284	330	230	370	149
18	155	1800	866	2910	1700	1070	638	304	307	243	269	138
19	151	3000	847	4380	1630	1190	650	335	276	243	220	132
20	148	3330	972	6380	1460	1560	625	405	251	371	194	128
21	147	3320	1170	6440	1240	1860	646	505	249	497	178	128
22	147	2990	1780	6400	1540	1810	777	506	312	567	167	126
23	147	2570	2680	5360	3650	1420	795	469	368	548	159	119
24	147	1970	3530	3930	4100	1100	770	419	276	654	154	115
25	148	1190	4730	2970	4330	977	893	503	239	601	148	112
26	151	767	5470	2350	6560	895	886	516	233	575	166	110
27	164	632	4260	2130	9170	838	807	418	276	488	265	109
28	166	575	3300	2630	9690	812	690	380	656	396	226	107
29	173	546	2670	3310	7600	1280	565	461	554	329	160	105
30	266	527	2280	3710	---	2130	678	755	420	270	141	104
31	498	---	1950	3820	---	2640	---	1170	---	231	133	---
TOTAL	6186	30076	59279	88660	124370	102652	33309	15177	21362	11570	8659	4816
MEAN	200	1003	1912	2860	4289	3311	1110	490	712	373	279	161
MAX	498	3330	5470	6440	10300	12600	2760	1170	2070	815	697	348
MIN	147	247	525	891	1240	812	565	284	233	156	133	104
AC-FT	12270	59660	117600	175900	246700	203600	66070	30100	42370	22950	17180	9550
CFSM	.23	1.17	2.22	3.33	4.99	3.85	1.29	.57	.83	.43	.32	.19
IN.	.27	1.30	2.56	3.84	5.38	4.44	1.44	.66	.92	.50	.37	.21

08041500 VILLAGE CREEK NEAR KOUNTZE, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1992, BY WATER YEAR (WY)

MEAN	320	732	1061	1466	1456	1161	1166	1205	855	514	260	314
MAX	4140	6430	5835	5693	4420	3311	6733	6932	6668	4963	1580	2111
(WY)	1950	1941	1941	1974	1966	1992	1979	1953	1950	1989	1975	1961
MIN	22.8	34.9	115	113	169	206	104	89.5	69.5	31.1	28.8	26.5
(WY)	1968	1968	1955	1957	1968	1940	1971	1963	1956	1971	1956	1956

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1925 - 1992	
ANNUAL TOTAL	578486		506116			
ANNUAL MEAN	1585		1383		876	
HIGHEST ANNUAL MEAN					2248	1950
LOWEST ANNUAL MEAN					190	1971
HIGHEST DAILY MEAN	9470	Feb 24	12600	Mar 7	62200	Nov 26 1940
LOWEST DAILY MEAN	147	Oct 21	104	Sep 30	16	Oct 1 1956
ANNUAL SEVEN-DAY MINIMUM	148	Oct 19	109	Sep 24	18	Sep 28 1956
INSTANTANEOUS PEAK FLOW			13900	Mar 7	67200	Nov 26 1940
INSTANTANEOUS PEAK STAGE			19.34	Mar 7	a/27.60	Nov 26 1940
INSTANTANEOUS LOW FLOW			103	Sep 30	16	Oct 1 1956
ANNUAL RUNOFF (AC-FT)	1147000		1004000		635000	
ANNUAL RUNOFF (CFSM)	1.84		1.61		1.02	
ANNUAL RUNOFF (INCHES)	25.02		21.89		13.85	
10 PERCENT EXCEEDS	3/90		3450		2120	
50 PERCENT EXCEEDS	1080		601		325	
90 PERCENT EXCEEDS	251		156		77	

a/ Flood of May 27, 1929, reached a stage of about 32 ft at site 2,000 ft downstream at present datum; stage was determined on basis of information furnished by Gulf, Colorado, and Santa Fe Railway Engineers at site 1.6 miles downstream.

08041700 PINE ISLAND BAYOU NEAR SOUR LAKE, TX

LOCATION.--Lat 30°06'21", long 94°20'04", Jefferson-Hardin County line, Hydrologic Unit 12020007, on right bank at downstream side of bridge on county road and 5.1 mi southeast of Sour Lake.

DRAINAGE AREA.--336 mi².

PERIOD OF RECORD.--October 1967 to current year.
Water-quality records.--Chemical analyses: February 1968 to June 1989. Specific conductance: February 1968 to September 1989. Water temperature: February 1968 to September 1989.

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

REMARKS.--No estimated daily discharges. Records good. Low flow for period March through September is affected by small diversions and return flow from irrigated fields. Gage height telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s :

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 8	1300	6,080	28.67	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	160	31	1490	1630	2860	766	29	73	203	37	44
2	20	118	30	1280	1460	2380	618	24	239	142	100	54
3	18	68	36	1090	1320	1970	522	22	535	93	93	59
4	16	37	37	851	2000	1780	404	18	524	116	85	77
5	15	22	35	569	2850	2290	274	24	403	152	82	72
6	13	16	31	354	3390	3270	720	43	326	130	67	54
7	12	14	29	259	3450	5110	964	43	387	95	51	45
8	12	16	26	464	3390	5940	1090	32	386	70	44	38
9	11	15	32	958	3330	5400	1110	23	271	60	41	33
10	10	16	107	1010	3020	4420	1030	18	158	53	46	30
11	10	20	338	996	2590	3650	960	20	101	46	57	31
12	10	17	439	1040	2210	3000	855	20	84	46	100	41
13	9.7	14	1120	1120	1920	2390	621	17	67	46	103	38
14	9.4	11	1370	1240	1620	1900	336	18	56	44	105	34
15	10	8.8	1160	1430	1220	1430	186	19	45	43	72	33
16	15	7.5	977	1550	817	951	133	24	44	61	46	32
17	17	23	743	1520	568	566	95	37	43	79	35	28
18	15	188	516	2000	471	332	74	124	41	104	31	30
19	14	427	408	2660	414	237	54	107	39	110	29	30
20	10	689	365	2940	353	188	46	83	33	206	31	35
21	8.5	823	342	3040	292	149	41	64	37	468	42	27
22	8.1	793	371	3090	288	123	34	51	131	336	32	23
23	8.0	599	603	3040	568	107	36	53	171	196	30	27
24	7.6	340	872	2730	1100	92	34	39	131	138	37	20
25	6.8	175	1080	2350	1920	77	62	36	94	186	42	14
26	7.3	106	1240	2030	2550	68	45	37	70	194	53	9.6
27	9.0	73	1530	1960	2860	71	29	50	73	173	41	8.3
28	9.1	56	1700	1980	2960	128	31	47	135	116	32	7.9
29	9.4	45	1830	1960	3100	838	29	63	120	67	31	10
30	61	37	1840	1920	---	1000	40	80	191	56	33	12
31	155	---	1710	1800	---	927	---	69	---	37	42	---
TOTAL	558.9	4934.3	20948	50721	53661	53644	11239	1334	5008	3866	1670	996.8
MEAN	18.0	164	676	1636	1850	1730	375	43.0	167	125	53.9	33.2
MAX	155	823	1840	3090	3450	5940	1110	124	535	468	105	77
MIN	6.8	7.5	26	259	288	68	29	17	33	37	29	7.9
AC-FT	1110	9790	41550	100600	106400	106400	22290	2650	9930	7670	3310	1980

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992, BY WATER YEAR (WY)

MEAN	233	421	595	718	647	508	647	590	678	438	194	224
MAX	1164	2095	2158	2206	1850	1730	4972	3589	2795	3291	1660	1487
(WY)	1974	1987	1987	1974	1992	1992	1979	1989	1981	1989	1983	1979
MIN	2.90	2.48	12.4	4.75	13.5	89.1	21.4	29.1	37.8	33.4	12.3	10.1
(WY)	1970	1989	1990	1971	1989	1978	1987	1978	1984	1980	1977	1984

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1968 - 1992	
ANNUAL TOTAL	273997.2		208581.0			
ANNUAL MEAN	751		570		490	
HIGHEST ANNUAL MEAN					1167	1979
LOWEST ANNUAL MEAN					133	1970
HIGHEST DAILY MEAN	4170	Apr 9	5940	Mar 8	24600	Apr 22 1979
LOWEST DAILY MEAN	6.8	Oct 25	6.8	Oct 25	.00	Oct 21 1979
ANNUAL SEVEN-DAY MINIMUM	7.9	Oct 21	7.9	Oct 21	.62	Sep 14 1984
INSTANTANEOUS PEAK FLOW			6080	Mar 8	25000	Apr 22 1979
INSTANTANEOUS PEAK STAGE			28.67	Mar 8	34.29	Apr 22 1979
INSTANTANEOUS LOW FLOW					.00	Oct 21 1979
ANNUAL RUNOFF (AC-FT)	543500		413700		354800	
10 PERCENT EXCEEDS	2400		1960		1360	
50 PERCENT EXCEEDS	206		83		88	
90 PERCENT EXCEEDS	18		16		8.8	

08042000 TAYLOR BAYOU NEAR LABELLE, TX

LOCATION.--Lat 29°52'30", long 94°09'34", Jefferson County, Hydrologic Unit 12040201, near center of stream at downstream side of bridge on county road, 0.7 mi south of LaBelle, 6.0 mi upstream from Hillebrandt Bayou, 7.2 mi upstream from State Highway 73, and 11.2 mi upstream from saltwater gates and barge locks. Distances are measured along rectified channel.

DRAINAGE AREA.--262 mi².

PERIOD OF RECORD.--April 1954 to September 1984 (complete records for storms of 1.0 inch or more runoff, except for period Sept. 10-22, 1961). October 1984 to current year (gage heights only).

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4.63 ft below National Geodetic Vertical Datum of 1929, originally determined by several comparisons of water surface with auxiliary water-stage recorder 7.2 mi downstream during times of no flow and ideal weather conditions. Prior to October 1984, auxiliary water-stage recorder 7.2 mi downstream.

REMARKS.--Records fair. Prior to October 1984, records were computed using fall as a factor. Low flow is regulated by drainage from ricefields and operation of saltwater gates and barge locks. An unknown amount of water is diverted above and below gage for irrigation of ricefields. Estimates for period of missing record (Dec. 9 to Jan. 15) were not made.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,590 ft³/s Sept. 22, 1963, and Apr. 23, 1979; maximum gage height, 11.78 ft Sept. 20, 1963 (backwater from Hillebrandt Bayou); minimum discharge not determined (affected by tides and pumping); minimum gage height, 2.31 ft July 17, 1954. Maximum stage since at least 1941, that of Sept. 20, 1963, and Apr. 23, 1979. Flood of Sept. 13, 1961 (Hurricane Carla), reached a stage of 11.51 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1941 reached a stage of 11.3 ft, from information by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum (recorded) gage height, 8.4 ft Feb. 5 from 1100 to 1400 hours; minimum (recorded) gage height, 4.5 ft Aug. 27.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	6.5	6.0	---	5.9	5.6	5.9	6.1	6.5	6.2	5.8	5.8
2	6.0	5.5	6.0	---	6.0	5.6	5.8	6.1	7.4	6.1	5.8	5.9
3	6.1	5.6	6.0	---	6.7	5.8	5.8	6.0	7.4	6.1	5.8	6.1
4	6.1	5.5	5.4	---	8.3	6.2	5.8	6.1	7.1	6.0	5.8	6.1
5	6.1	5.6	5.6	---	8.4	6.5	6.4	6.2	6.4	6.0	5.8	5.9
6	5.8	5.7	5.8	---	8.2	6.7	7.2	6.2	6.3	5.6	5.8	6.0
7	5.9	5.8	5.8	---	7.9	6.7	7.2	5.8	6.5	5.6	5.6	6.1
8	6.0	5.9	5.6	---	6.7	6.6	6.4	5.8	6.5	5.6	5.6	6.1
9	6.0	5.6	---	---	6.5	6.6	6.2	5.7	6.2	5.4	5.8	6.1
10	6.0	5.6	---	---	6.4	6.6	6.2	5.7	6.1	5.4	5.8	6.2
11	5.9	5.7	---	---	6.4	5.5	6.1	5.8	5.8	5.4	6.0	6.1
12	5.7	5.4	---	---	6.4	5.8	6.1	5.8	6.0	5.4	5.9	6.1
13	5.6	5.4	---	---	6.2	5.8	5.9	5.8	6.1	5.5	6.0	6.0
14	5.6	5.6	---	---	6.1	5.8	5.8	5.6	6.1	5.6	5.8	6.2
15	5.6	5.7	---	5.9	6.2	5.8	5.9	5.6	5.8	5.8	5.8	6.2
16	5.6	5.8	---	6.0	6.2	5.8	6.0	5.7	5.5	5.9	5.8	6.3
17	5.7	6.3	---	5.8	6.4	5.9	6.1	5.8	5.6	6.0	5.8	6.3
18	5.7	6.5	---	7.8	6.4	6.1	6.2	6.1	5.7	6.0	5.9	6.2
19	5.8	6.5	---	8.1	6.2	6.1	6.2	6.1	5.7	6.0	5.9	6.0
20	5.8	6.5	---	8.0	6.0	5.5	6.3	6.1	5.6	6.1	5.8	6.0
21	5.8	6.2	---	7.5	6.2	5.6	6.2	6.1	5.6	6.2	5.8	6.0
22	5.9	5.8	---	7.0	6.4	5.8	5.8	6.1	6.0	6.3	5.8	6.1
23	5.9	5.9	---	6.7	6.4	5.8	5.9	6.0	6.0	6.4	5.9	6.0
24	6.0	5.2	---	5.8	6.4	5.6	5.9	5.9	5.9	6.3	6.0	6.0
25	6.0	5.4	---	6.0	6.5	5.7	5.8	5.7	5.9	6.2	6.0	6.0
26	6.1	5.6	---	6.2	6.0	5.7	5.7	5.7	5.9	6.1	5.9	6.1
27	6.0	5.7	---	7.0	5.8	5.7	5.7	5.7	5.7	6.1	5.0	6.1
28	6.1	5.8	---	7.0	5.8	6.6	5.5	5.9	6.2	6.0	5.3	6.1
29	6.1	5.9	---	6.6	5.7	7.1	5.9	5.9	6.3	5.7	5.4	6.0
30	6.6	6.0	---	6.4	---	7.0	6.1	5.8	6.2	5.8	5.6	5.9
31	6.6	---	---	6.1	---	5.8	---	5.8	---	5.8	5.7	---
MAX	6.6	6.5	---	---	8.4	7.1	7.2	6.2	7.4	6.4	6.0	6.3

08042500 HILLEBRANDT BAYOU NEAR LOVELL LAKE, TX

LOCATION.--Lat 29°55'44", long 94°06'35", Jefferson County, Hydrologic Unit 12040201, near center of stream at downstream side of bridge on county road, 1.3 mi southeast of Lovell Lake, and 4.4 mi upstream (along rectified channel) from Taylor Bayou.

DRAINAGE AREA.--128 mi².

PERIOD OF RECORD.--April 1954 to September 1984 (complete records for storms of 1.0 inch or more runoff, except for the period Sept. 11-18, 1961). October 1984 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is 4.63 ft below National Geodetic Vertical Datum of 1929, originally determined by comparisons of water surface with Taylor Bayou near LaBelle, an auxiliary gage 5.6 mi downstream, during times of no flow and ideal weather conditions. Prior to Aug. 28. 1963, auxiliary water-stage recorder on Taylor Bayou, 1.2 mi downstream from Hillebrandt Bayou, nonrecording gages on Taylor Bayou 2.3 and 5.2 mi downstream from Hillebrandt Bayou; Aug. 28, 1963, to Sept. 30, 1984, auxiliary water-stage recorder 3.0 mi downstream. Gage was destroyed on Aug. 24, 1991 and re-installed on Mar. 4, 1992. No gage-height record for the period Aug. 24, 1991 to Mar. 4, 1992.

REMARKS.--Records fair. Prior to October 1984, records were computed using fall as a factor. Low flow regulated by drainage from ricefields and operation of saltwater gates and barge locks. An unknown amount of water is diverted above and below gage for rice irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s Sept. 18, 1963; maximum gage height, 12.34 ft Sept. 19, 1963; minimum discharge not determined (affected by tides and pumping); minimum gage height, 2.33 ft July 17, 1954. Maximum stage since 1941, 12.34 ft Sept. 19, 1963.

EXTREMES FOR CURRENT YEAR (Mar. 4 to Sept. 30).--Maximum gage height, 7.2 ft June 2, at 1600 hours to 2400 hours; minimum gage height, 4.7 ft Aug. 27.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	6.0	6.3	6.7	6.5	6.0	6.0
2	---	---	---	---	---	---	6.0	6.3	7.2	6.4	6.0	6.2
3	---	---	---	---	---	---	6.0	6.3	7.1	6.3	6.0	6.3
4	---	---	---	---	---	---	6.0	6.3	6.5	6.2	6.1	6.4
5	---	---	---	---	---	6.6	6.6	6.4	6.3	6.2	6.0	6.2
6	---	---	---	---	---	6.8	7.1	6.4	6.5	5.9	6.0	6.3
7	---	---	---	---	---	6.8	7.0	5.9	6.5	5.9	5.8	6.3
8	---	---	---	---	---	6.7	6.3	5.9	6.6	5.8	5.9	6.4
9	---	---	---	---	---	6.7	6.4	5.9	6.4	5.7	6.0	6.4
10	---	---	---	---	---	6.7	6.4	5.9	6.3	5.7	6.1	6.4
11	---	---	---	---	---	5.6	6.3	5.9	6.0	5.7	6.2	6.3
12	---	---	---	---	---	5.9	6.3	6.0	6.1	5.7	6.1	6.3
13	---	---	---	---	---	5.9	6.0	6.0	6.3	5.8	6.2	6.2
14	---	---	---	---	---	6.0	5.9	5.9	6.4	5.9	6.0	6.4
15	---	---	---	---	---	6.0	6.1	5.9	6.0	6.0	6.0	6.5
16	---	---	---	---	---	5.9	6.2	5.8	5.7	6.2	6.0	6.5
17	---	---	---	---	---	6.1	6.2	5.9	5.8	6.2	6.1	6.5
18	---	---	---	---	---	6.3	6.3	6.3	5.9	6.2	6.1	6.4
19	---	---	---	---	---	6.3	6.4	6.3	5.9	6.2	6.1	6.3
20	---	---	---	---	---	5.7	6.5	6.3	5.8	6.5	6.0	6.3
21	---	---	---	---	---	5.8	6.3	6.3	5.8	6.4	6.0	6.3
22	---	---	---	---	---	5.9	6.0	6.3	6.2	6.5	6.0	6.3
23	---	---	---	---	---	5.8	6.0	6.3	6.2	6.7	6.2	6.2
24	---	---	---	---	---	5.8	6.0	6.2	6.2	6.5	6.2	6.2
25	---	---	---	---	---	5.9	5.9	6.0	6.1	6.5	6.3	6.2
26	---	---	---	---	---	5.9	5.9	5.9	6.1	6.3	5.9	6.3
27	---	---	---	---	---	5.8	5.9	5.9	6.0	6.3	5.2	6.3
28	---	---	---	---	---	6.8	5.8	6.0	6.5	6.2	5.5	6.3
29	---	---	---	---	---	6.9	5.9	6.1	6.6	5.9	5.7	6.2
30	---	---	---	---	---	6.5	6.3	6.1	6.4	6.1	5.8	6.1
31	---	---	---	---	---	5.9	---	6.0	---	6.0	5.9	---
MAX	---	---	---	---	---	---	7.1	6.4	7.2	6.7	6.3	6.5

08042800 WEST FORK TRINITY RIVER NEAR JACKSBORO, TX

LOCATION.--Lat 33°17'36", long 98°04'43", Jack County, Hydrologic Unit 12030101, on left abutment at downstream side of bridge on State Highway 59, 4 mi downstream from Big Cleveland Creek, 7 mi upstream from Carroll Creek, 7 mi northeast of Jacksboro, and at mile 660.

DRAINAGE AREA.--683 mi².

PERIOD OF RECORD.--March 1956 to current year.
Water-quality records.--Sediment records: October 1976 to September 1978.

GAGE.--Water-stage recorder. Datum of gage is 869.28 ft above National Geodetic Vertical Datum of 1929, from State Department of Highways and Public Transportation. Sept. 20, 1960, to May 30, 1961, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges which are poor. At end of year, flow from 70.9 mi² upstream from this station was partly controlled by 21 floodwater-retarding structures with a combined detention capacity of 19,780 acre-ft. Gage-height telemeter at station via data-collection platform installed April 1987.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 29	2130	3,880	20.18	June 4	0400	5,590	21.31
Dec. 22	unknown	8,960	23.40	June 9	1830	8,200	23.17

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1300	19	122	180	154	21	5.5	366	673	4.0	.07
2	.69	538	62	109	115	99	19	5.4	616	531	81	.09
3	.33	47	83	89	99	76	19	5.0	2170	105	35	.08
4	.18	21	84	69	515	129	17	4.1	5210	337	6.3	.07
5	.08	11	51	61	827	276	17	3.7	4230	611	7.9	.05
6	.03	7.5	32	48	810	321	16	3.3	3280	666	12	.06
7	.02	4.9	23	38	741	205	15	2.8	2600	606	7.0	.09
8	.00	3.8	17	34	414	111	14	2.5	2290	318	4.7	.07
9	.00	3.1	15	27	140	233	14	2.5	5820	47	3.0	.06
10	.00	2.8	12	23	89	586	13	2.5	5670	19	2.0	4.7
11	.00	3.3	40	20	71	662	13	2.4	2820	12	1.6	1.9
12	.00	5.2	418	20	64	303	13	2.6	1700	8.9	1.2	11
13	.00	7.7	581	47	60	114	12	2.5	1190	7.0	.95	3.1
14	.00	14	530	320	56	75	11	2.5	458	5.8	.78	1.3
15	.00	18	207	536	52	58	10	2.3	237	4.9	.64	.64
16	.00	63	76	382	47	46	10	2.5	486	4.4	.60	.40
17	.00	31	46	183	42	40	11	3.0	286	4.3	.58	.26
18	.00	19	34	136	38	40	12	116	70	3.6	.62	.22
19	.00	12	e338	194	34	157	11	348	42	3.6	.73	.22
20	.00	8.6	e1570	256	31	98	9.9	245	32	3.5	.62	.27
21	.00	6.2	e5700	307	29	72	9.1	254	30	4.5	.51	.40
22	.00	6.5	e7910	425	28	50	8.4	315	28	19	.48	.21
23	.00	8.5	e5410	532	28	40	7.9	576	19	8.1	.44	.13
24	.00	9.3	e3570	462	32	33	7.5	671	16	4.8	.44	.09
25	.00	7.8	2100	264	533	29	7.4	423	29	3.2	.44	.07
26	181	7.0	1440	144	1060	26	6.7	218	122	2.5	.44	.05
27	877	7.2	709	366	1070	24	6.4	140	57	2.1	.34	.04
28	1430	7.3	224	685	998	24	5.5	252	73	1.6	.21	.03
29	2700	7.5	181	737	578	24	5.8	828	357	1.3	.09	.03
30	3030	7.9	157	583	---	25	5.8	996	606	1.3	.05	.03
31	1740	---	138	327	---	23	---	851	---	1.5	.03	---
TOTAL	9960.43	2196.1	31777	7546	8781	4153	348.4	6288.1	40910	4020.9	174.69	25.73
MEAN	321	73.2	1025	243	303	134	11.6	203	1364	130	5.64	.86
MAX	3030	1300	7910	737	1070	662	21	996	5820	673	81	11
MIN	.00	2.8	12	20	28	23	5.5	2.3	16	1.3	.03	.03
AC-FT	19760	4360	63030	14970	17420	8240	691	12470	81140	7980	346	51

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1992, BY WATER YEAR (WY)

MEAN	138	57.6	57.3	39.7	43.6	96.0	230	440	231	34.1	18.1	63.2
MAX	2363	498	1025	369	303	697	3186	3127	1689	251	134	416
(WY)	1982	1958	1992	1985	1992	1990	1957	1989	1989	1975	1989	1962
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1978	1978	1959	1959	1959	1967	1971	1984	1984	1963	1972	1982

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1957 - 1992	
ANNUAL TOTAL	54141.70		116181.35			
ANNUAL MEAN	148		317		121	
HIGHEST ANNUAL MEAN					564	1957
LOWEST ANNUAL MEAN					.072	1984
HIGHEST DAILY MEAN	7910	Dec 22	7910	Dec 22	29200	Apr 27 1957
LOWEST DAILY MEAN	.00	Jul 17	.00	Oct 8	.00	Oct 1 1956
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 17	.00	Oct 8	.00	Oct 1 1956
INSTANTANEOUS PEAK FLOW			8960	Dec 22	35100	Apr 27 1957
INSTANTANEOUS PEAK STAGE			23.40	Dec 22	32.10	Apr 27 1957
INSTANTANEOUS LOW FLOW			.00	Oct 8	.00	at times
ANNUAL RUNOFF (AC-FT)	107400		230400		87640	
10 PERCENT EXCEEDS	222		677		141	
50 PERCENT EXCEEDS	3.8		20		.87	
90 PERCENT EXCEEDS	.13		.09		.00	

08043000 BRIDGEPORT RESERVOIR ABOVE BRIDGEPORT, TX

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

DRAINAGE AREA.--1,111 mi².

PERIOD OF RECORD.--April 1932 to current year. Prior to October 1950, monthend figures only.
Water-quality records.--Chemical analyses: October 1969 to September 1984.

REVISED RECORDS.--WSP 1922: Drainage Area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Jan. 12, 1988, nonrecording gages at various sites in vicinity of present gage at present datum.

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

	Elevation (feet)	Capacity (acre-feet)
Top of dam	874.0	-
Crest of spillway	866.0	889,700
Top of gates	842.0	456,900
Top of conservation pool	836.0	374,800
Crest of spillway	820.0	202,200
Lowest gated outlet (invert, at spillway)	810.0	124,300
Lowest gated outlet (invert)	751.4	0

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

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 419,500 acre-ft Dec. 24 at 0800 hours (elevation, 839.35 ft); minimum 334,300 acre-ft Oct. 25 (elevation, 832.75 ft).

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

832.0	325,300	835.0	362,100	838.0	401,200
833.0	337,300	836.0	374,800	839.0	414,700
834.0	349,500	837.0	387,900	840.0	428,500

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	347400	382900	376000	374300	374000	377300	373400	374000	377400	379200	371000	365500
2	347300	380400	376400	374500	373500	375300	373000	373900	380100	379100	371700	365500
3	346800	377700	376600	374700	374300	375200	373500	373800	379900	379000	371700	365500
4	346200	376200	376700	374700	376000	377400	374000	374000	383000	378200	371900	365400
5	345600	375800	376900	374700	375800	377300	373600	373600	386700	378000	371700	365000
6	345100	375800	376600	374400	375400	376100	374000	373000	390300	378000	371600	364900
7	344500	375800	376500	374300	375100	374500	374300	372800	390500	377900	371200	364900
8	344100	375600	376200	374200	373900	374700	374800	372500	390500	377400	371200	364700
9	343900	375300	375800	374000	373400	375400	374800	372200	390900	376500	371000	364500
10	343900	375300	375400	373900	373600	374300	374700	372200	391900	375800	370800	365000
11	343300	375400	377300	374200	373800	373900	375100	372400	398500	375300	370200	365400
12	343000	375400	378800	374500	373800	373500	374700	372600	396000	375100	369700	365400
13	342400	375300	379900	374800	373600	373600	374800	372200	391500	374700	369600	365200
14	341700	375400	379100	374900	373500	374000	375100	372200	386100	374400	368900	365100
15	340800	375600	378000	375200	373900	374000	374900	372100	382400	374400	368400	365100
16	340300	376400	376500	374700	373600	374400	374900	371600	379100	373800	368000	364900
17	339900	376700	375200	374700	373900	375100	375200	371900	377000	373800	367800	364600
18	339000	376700	375300	375100	374300	374900	374900	372600	376100	373300	367500	364600
19	337800	377000	382900	374900	374200	374200	374900	374300	375500	373100	368000	364200
20	336800	376700	400300	374800	373900	373900	374700	375100	374800	373000	368000	365000
21	336000	374900	408900	375300	373900	373900	374700	377500	374700	372900	368100	365200
22	335700	374500	408600	375600	373900	373600	375200	379500	374700	372900	367900	364600
23	334900	374200	417700	375100	373400	373600	375200	380300	374900	372900	367600	364000
24	334500	374000	415800	374500	375100	373500	375200	380000	375300	372800	367400	363600
25	346300	373800	409800	374200	381600	374200	374800	379200	375100	372500	367400	363400
26	354800	373800	402800	374400	382100	374700	374800	377500	375300	372200	366900	363200
27	367500	373900	394500	376200	382100	374200	374400	375700	375200	371900	366600	363000
28	371700	374200	385300	376700	381800	374000	374300	377300	377500	371600	366400	362700
29	376500	374300	378700	376700	380100	373900	374500	377300	378300	371200	366300	362400
30	379200	373600	375300	376200	---	373500	374200	377500	379000	371900	365900	361800
31	383000	---	374200	375100	---	373500	---	377800	---	371600	365100	---
MAX	383000	382900	417700	376700	382100	377400	375200	380300	398500	379200	371900	365500
MIN	334500	373600	374200	373900	373400	373500	373000	371600	374700	371200	365100	361800
(†)	836.63	835.91	835.95	836.02	836.41	835.90	835.95	836.23	836.32	835.75	835.24	834.98
(ϕ)	+35200	-9400	+600	+900	+5000	-6600	+700	+3600	+1200	-7400	-6500	-3300

CAL YR 1991 MAX 417700 MIN 328500 (ϕ) +45700
WTR YR 1992 MAX 417700 MIN 334500 (ϕ) +14000

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

08044000 BIG SANDY CREEK NEAR BRIDGEPORT, TX

LOCATION.--Lat 33°13'54", long 97°41'40", Wise County, Hydrologic Unit 12030101, at downstream side of bridge on U.S. Highway 380, 1.9 mi upstream from Greathouse Branch, 4.0 mi east of Bridgeport, and 4.4 mi upstream from mouth.

DRAINAGE AREA.--333 mi².

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

REVISED RECORDS.--WSP 1148: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 724.44 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1984, at datum 3.00 ft higher.

REMARKS.--Records good, except those for estimated daily discharges, which are fair. Since May 1, 1956, runoff from 100 mi² above this station is affected at times by storage in Lake Amon G. Carter, 30 mi upstream, with a capacity of 15,240 acre-ft at elevation 920.0 ft (spillway crest). During the year, the city of Bowie diverted water from Lake Amon G. Carter for municipal use and discharged sewage effluent into tributaries to Big Sandy Creek upstream from this station. Flow was also affected at times by discharge from the flood-detention pools of 19 floodwater-retarding structures with a combined capacity of 11,430 acre-ft. These structures control runoff from an 46.0 mi² area upstream from this station and below Lake Amon G. Carter. Gage-height telemeter at station.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	237	21	248	221	228	46	56	625	213	28	3.6
2	1.5	88	133	228	200	205	44	31	603	183	15	5.1
3	1.4	47	201	212	189	193	42	24	801	151	28	9.7
4	.90	35	109	195	193	625	40	22	726	99	11	6.5
5	.61	30	53	185	178	612	38	21	524	78	8.9	7.0
6	.54	27	40	173	161	338	42	15	515	67	8.1	5.6
7	.50	25	34	164	149	271	41	12	725	58	e7.5	113
8	.41	21	31	153	138	257	38	11	661	52	e7.0	49
9	.19	20	39	142	132	438	38	11	909	45	e6.6	12
10	.15	19	35	132	121	265	35	11	1230	37	e6.2	8.6
11	.35	18	65	126	117	222	36	10	890	33	e6.0	106
12	.46	17	570	125	117	204	38	10	546	29	e5.7	45
13	.20	17	322	182	117	186	35	8.7	431	25	e5.5	15
14	.37	17	126	441	112	149	38	7.6	362	23	e5.3	9.3
15	.09	18	73	308	106	81	35	6.6	324	21	e5.3	7.3
16	.07	20	56	219	100	70	31	6.3	297	19	e5.2	6.5
17	.07	49	48	192	95	71	31	7.2	267	19	e5.1	5.9
18	.27	39	44	249	88	106	33	86	245	20	e5.0	5.5
19	.13	27	406	296	80	81	32	524	230	19	e4.9	5.2
20	.38	24	4200	279	75	65	28	541	248	18	e4.8	4.9
21	.18	23	6280	272	71	60	26	202	264	17	e4.7	40
22	.31	20	3210	450	75	59	25	425	212	22	e4.6	90
23	.36	18	2610	355	180	53	24	689	202	22	e4.5	19
24	.32	16	1330	243	212	51	20	1290	337	16	e4.5	8.9
25	.49	15	700	208	929	78	18	952	304	13	4.4	7.0
26	743	15	558	193	1010	83	18	464	261	11	4.2	6.4
27	230	16	473	564	479	60	18	363	199	10	4.2	5.7
28	599	16	396	565	298	57	17	399	345	9.7	4.1	5.3
29	601	16	327	345	253	61	130	831	479	9.4	4.1	5.1
30	171	15	291	270	---	50	139	1180	324	8.8	3.9	5.1
31	316	---	265	239	---	45	---	770	---	49	3.7	---
TOTAL	2671.65	965	23046	7953	6196	5324	1176	8986.4	14086	1396.9	226.0	623.2
MEAN	86.2	32.2	743	257	214	172	39.2	290	470	45.1	7.29	20.8
MAX	743	237	6280	565	1010	625	139	1290	1230	213	28	113
MIN	.07	15	21	125	71	45	17	6.3	199	8.8	3.7	3.6
AC-FT	5300	1910	45710	15770	12290	10560	2330	17820	27940	2770	448	1240

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1992, BY WATER YEAR (WY)

MEAN	113	39.9	42.6	31.2	48.1	89.3	132	202	173	36.0	12.8	27.5
MAX	1829	388	743	316	292	887	1569	1284	1922	426	230	491
(WY)	1982	1941	1992	1946	1946	1945	1942	1990	1941	1950	1973	1962
MIN	.000	.000	.000	.000	.000	.000	.000	.002	.000	.000	.000	.000
(WY)	1939	1939	1939	1940	1939	1940	1956	1980	1953	1964	1938	1938

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1937 - 1992	
ANNUAL TOTAL	35775.75		72650.15			
ANNUAL MEAN	98.0		198		79.0	
HIGHEST ANNUAL MEAN					336	1942
LOWEST ANNUAL MEAN					2.12	1956
HIGHEST DAILY MEAN	6280	Dec 21	6280	Dec 21	23800	Oct 13 1981
LOWEST DAILY MEAN	.00	Aug 4	.07	Oct 16	.00	May 29 1937
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 4	.17	Oct 15	.00	Jun 20 1937
INSTANTANEOUS PEAK FLOW			8690	Dec 21	53000	Jun 10 1941
INSTANTANEOUS PEAK STAGE			13.24	Dec 21	15.69	Jun 10 1941
INSTANTANEOUS LOW FLOW			.02	Oct 22	.00	*
ANNUAL RUNOFF (AC-FT)	70960		144100		57250	
10 PERCENT EXCEEDS	120		518		86	
50 PERCENT EXCEEDS	16		47		5.6	
90 PERCENT EXCEEDS	.13		4.7		.00	

* No flow at time most years.

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 at downstream side of highway embankment, 10 ft right of right abutment of bridge on Farm Road 730, 0.6 mi northeast of Boyd, 3.5 mi downstream from Boggy Creek, and at mile 602.

DRAINAGE AREA.--1,725 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 660.57 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 14, 1954, water-stage recorder at site 2.2 mi downstream at datum 5.48 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are fair. During year, sustained flows at this station were the result of water released for downstream supply from Bridgeport Reservoir (drainage area, 1,111 mi²), 25 mi upstream from station. In addition, flow from an 100 mi² area 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. These structures control runoff from 91.2 mi² in the Big Sandy and Salt Creek drainage basins above this station. Several observations of water temperature were made during the year. Gage-height telemeter at station.

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 April 1942 reached a stage of 20.6 ft, present site and datum, from information by State Department of Highways and Public Transportation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	2570	30	1580	1380	1640	e40	165	1610	677	77	12
2	82	1820	75	970	1310	1680	e22	97	1540	725	147	13
3	89	1880	304	703	1060	1490	e20	70	1550	705	822	13
4	92	1680	248	631	849	1390	e19	57	1720	672	311	16
5	94	1220	118	630	981	1540	e18	53	1790	630	85	14
6	96	673	68	605	1190	1390	e20	55	1790	601	36	13
7	97	317	174	584	1280	1420	e22	42	1890	582	28	13
8	96	196	367	567	1290	1430	e19	37	2050	569	23	102
9	97	122	597	545	1290	1290	e17	37	2230	560	21	38
10	98	82	430	452	1030	1340	e16	36	2390	465	19	64
11	148	63	434	287	655	1240	e15	36	2690	227	18	294
12	193	58	880	266	593	1190	e15	36	3000	112	17	160
13	194	51	1110	403	559	1140	e14	33	3080	47	16	76
14	195	49	974	708	540	845	e14	28	3020	37	15	43
15	198	49	824	943	517	710	e14	26	2930	32	16	32
16	198	65	963	874	498	679	e14	25	2630	29	15	26
17	197	263	1060	802	353	664	e14	48	2160	28	15	23
18	308	155	894	830	235	844	e17	52	1640	31	15	21
19	408	98	1000	1030	214	1060	e17	e274	1140	30	19	19
20	411	72	6160	1110	346	1080	e18	e470	794	31	20	19
21	412	170	10800	1100	441	943	e17	e351	668	25	18	24
22	358	340	10600	1130	386	e692	e17	505	451	29	16	100
23	278	178	9080	1260	527	e634	e16	701	240	28	15	81
24	279	40	8490	1280	692	e356	e14	1130	371	25	14	34
25	469	32	7980	1220	1740	e220	e13	1570	468	20	13	24
26	8380	31	6860	1130	2110	221	e12	1610	338	18	13	21
27	5540	30	6050	1300	1970	204	e12	1400	239	16	13	20
28	2110	30	5550	1550	1730	348	e15	1360	456	17	14	19
29	2250	33	5180	1500	1610	446	e170	1410	885	17	13	17
30	2240	31	4840	1400	---	429	238	1550	819	15	12	17
31	2410	---	3120	1400	---	250	---	1670	---	121	12	---
TOTAL	28029	12398	95260	28790	27376	28805	889	14934	46579	7121	1888	1368
MEAN	904	413	3073	929	944	929	29.6	482	1553	230	60.9	45.6
MAX	8380	2570	10800	1580	2110	1680	238	1670	3080	725	822	294
MIN	12	30	30	266	214	204	12	25	239	15	12	12
AC-FT	55600	24590	188900	57100	54300	57130	1760	29620	92390	14120	3740	2710

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1992, BY WATER YEAR (WY)

MEAN	317	180	191	112	103	195	280	737	511	214	216	188
MAX	4063	1248	3073	929	944	1366	4339	5908	5439	1330	1157	1643
(WY)	1982	1982	1992	1992	1992	1987	1990	1990	1989	1950	1950	1962
MIN	2.96	4.81	2.21	.75	.10	.26	.59	25.2	2.76	7.11	.025	.23
(WY)	1957	1984	1953	1956	1953	1955	1955	1959	1953	1979	1980	1956

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1948 - 1992	
ANNUAL TOTAL	164646.6		293437			
ANNUAL MEAN	451		802		271	
HIGHEST ANNUAL MEAN					1094	1982
LOWEST ANNUAL MEAN					58.6	1953
HIGHEST DAILY MEAN	10800	Dec 21	10800	Dec 21	38800	Oct 14 1981
LOWEST DAILY MEAN	3.7	Aug 28	12	Oct 1	.00	Aug 6 1948
ANNUAL SEVEN-DAY MINIMUM	4.0	Aug 23	13	Aug 26	.00	Sep 25 1952
INSTANTANEOUS PEAK FLOW			17500	Oct 26	60400	Oct 14 1981
INSTANTANEOUS PEAK STAGE			20.79	Oct 26	25.87	Oct 14 1981
INSTANTANEOUS LOW FLOW			5.7	Oct 1	.00	at times
ANNUAL RUNOFF (AC-FT)	326600		582000		196600	
10 PERCENT EXCEEDS	776		1750		480	
50 PERCENT EXCEEDS	50		278		60	
90 PERCENT EXCEEDS	11		16		3.3	

08045000 EAGLE MOUNTAIN RESERVOIR ABOVE FORT WORTH, TX

LOCATION.--Lat 32°52'39", long 97°28'29", Tarrant County, Hydrologic Unit 12030101, at right end of main section (left) 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.--February 1934 to current year. Prior to October 1950, month-end figures only.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 16, 1988, nonrecording gages at several sites within 1.0 mi of present site at present datum.

REMARKS.--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- by 22-foot-wide roller lift gates. The main section of the dam contains the outlet works that consist of two concrete conduits with two 48-inch diameter valves in each conduit. The reservoir is used for flood control and for part of the municipal water supply for the city of Fort Worth. Capacities are based on a survey made in 1968. For statement regarding regulation by Soil Conservation Service floodwater-retarding structures, see station 08044500. For storage above the reservoir, see REMARKS for West Fork Trinity River near Boyd (station 08044500). Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	682.0	-
Crest of spillway	676.0	545,900
Top of gates (new side-channel spillway)	659.0	283,200
Crest of (old service) spillway (top of conservation pool)	649.1	178,400
Crest of spillway (new side-channel spillway)	637.0	89,450
Lowest gated outlet (invert)	599.9	36

COOPERATION.--New capacity table, No. 4-C, furnished by Tarrant County Water Control and Improvement District No. 1, was put into use Oct. 1, 1988.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 201,500 acre-ft Dec. 21 at 0700 hours (elevation, 651.55 ft); minimum, 161,100 acre-ft Oct. 16 (elevation, 647.10 ft).

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

647.0	160,200	649.0	177,500	651.0	196,200
648.0	168,700	650.0	186,700	652.0	206,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	163800	177900	178200	179300	177900	176100	176600	178100	177200	177400	174900	169700
2	163800	177900	177900	178000	177400	176700	176500	178100	177400	178200	175100	169600
3	163700	178200	177900	178300	177700	178000	176900	178200	177000	178400	177300	169300
4	164000	177900	178000	178500	177500	178900	177400	178100	177300	178600	178000	168800
5	163400	178800	177900	178000	176500	179000	177400	177900	177700	178300	177700	168300
6	163100	177900	178000	177500	176000	177700	178300	177500	177300	178200	177300	168100
7	162900	178000	177900	177700	176100	176500	178500	177300	176800	178400	177100	167900
8	162900	178600	178000	177800	176900	176600	178300	177100	177300	178200	176700	167500
9	162700	179000	180900	177900	177400	178000	178200	176900	178200	178100	176200	167400
10	162600	179200	180400	178000	177800	177000	178000	176800	178300	178100	176100	168600
11	162500	179400	179300	178000	177900	177000	178000	176700	179100	178400	175800	168600
12	162300	179300	178600	177900	177800	177400	178200	176600	179800	178200	175500	168800
13	162100	179300	177900	177900	177800	177400	178000	176500	180200	177900	175300	168400
14	161800	179500	178400	177700	177600	177600	177700	176200	180600	177800	174800	168300
15	161600	178200	178700	177900	177200	177400	177800	176700	180600	177300	174400	168000
16	161400	178000	177900	178300	177000	177000	178000	176500	180400	177200	174100	167800
17	161600	178000	177800	179000	177100	178400	178000	176900	180200	177100	173600	167400
18	161600	178200	177900	179000	177500	177400	177400	177100	180000	177200	173600	167300
19	161700	178800	179300	178200	177800	177000	177800	177500	179800	177000	173800	167000
20	161900	178500	199100	178300	178100	177000	177400	177500	178300	176700	173600	166200
21	162100	178000	199300	178800	178200	177000	177400	177300	177400	176500	173300	166800
22	162100	178100	200400	178900	177100	177700	177500	177300	177000	177200	172900	166600
23	162400	178300	195800	178200	176900	177700	177400	176700	178300	176100	172400	166300
24	170400	178400	189900	177800	181200	178200	177400	176800	178700	175900	172200	166000
25	185100	178500	184000	177800	180800	178300	177400	177100	179200	175400	172000	165600
26	185500	178600	180000	178600	179300	178300	177400	177900	179200	175200	171800	165400
27	180100	178600	178600	179200	178100	177600	177500	178200	179800	175100	171300	165000
28	177900	178200	178800	177800	178000	177600	177900	177700	178600	174400	170900	164600
29	180200	178200	179100	178200	177100	178000	178100	176800	177200	174300	170200	164200
30	179000	178400	179300	178300	---	177200	178000	176200	177300	174500	170000	163900
31	178000	---	179600	178000	---	177000	---	176400	---	175000	169600	---
MAX	185500	179500	200400	179300	181200	179000	178500	178200	180600	178600	178000	169700
MIN	161400	177900	177800	177500	176000	176100	176500	176200	176800	174300	169600	163900
(†)	649.06	649.10	649.23	649.06	648.96	648.95	649.06	648.88	648.98	648.72	648.11	647.43
(ϕ)	+14100	+400	+1200	-1600	-900	-100	+1000	-1600	+900	-2300	-5400	-5700

CAL YR 1991 MAX 200400 MIN 161400 (ϕ) +5700
WTR YR 1992 MAX 200400 MIN 161400 (ϕ) 0

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

08045400 LAKE WORTH ABOVE FORT WORTH, TX

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

DRAINAGE AREA.--2,064 mi².

PERIOD OF RECORD.--October 1981 to current year.
Water-quality records.--Chemical analyses: January 1970 to September 1984.

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

REMARKS.--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 October 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. Area-capacity curves are based on a survey made in 1968. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	606.3	-
Crest of concrete spillway	594.0	37,070
Lowest gated outlet (invert)	584.25	12,290

COOPERATION.--Copies of the capacity table (prepared by the U.S. Army Corps of Engineers) and area-capacity curves (prepared by Freese, Nichols, and Endress, Consulting Engineers) were provided by Tarrant County Water Control and Improvement District No. 1.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 52,800 acre-ft Dec. 20 at 2300 hours (elevation, 597.98 ft); minimum, 31,540 acre-ft Oct. 10 (elevation, 592.32 ft).

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

592.0	30,540	595.0	40,670	597.0	48,590
593.0	33,690	596.0	44,520	598.0	52,890
594.0	37,070				

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32840	42060	37360	42330	40090	41060	38010	37000	40300	38650	36460	35180
2	32520	40860	37500	40980	40020	40600	37610	36970	40170	38220	36360	35140
3	32490	40090	37390	39630	40130	40490	37250	36930	40060	37930	36430	35080
4	31950	39700	37360	38980	40350	40820	37070	36930	40020	37900	36500	35040
5	31830	39730	37360	39050	39990	40790	37110	36900	40060	37860	36530	35010
6	31920	39230	37470	38940	39590	40790	37110	36800	40350	37830	36500	34970
7	31830	38470	37500	38650	39230	40710	37210	36730	40820	37750	36330	34940
8	31730	37860	37610	38440	38980	40630	37470	36730	40900	37790	36190	34870
9	31640	37290	38470	38260	39120	40270	37540	36660	41330	37720	36090	34810
10	31640	37000	38910	38110	39230	39950	37500	36700	41170	37470	36020	35550
11	31670	36800	39730	38110	39340	39730	37470	36730	41480	37110	35890	35480
12	31800	36560	39880	38190	38830	39480	37500	36730	41750	36930	35820	35450
13	31920	36630	39550	38110	38910	39480	37470	36730	42180	36770	35820	35410
14	32020	36800	39230	38220	38690	39370	37430	36830	42370	36660	35750	35380
15	32110	36900	38910	38290	38620	39190	37250	36870	42450	36530	35680	35380
16	32170	37680	38440	38330	38550	38760	37110	36930	42450	36560	35580	35380
17	32300	38150	38550	38510	38260	38690	37360	37070	42100	36500	35480	35380
18	32460	37720	38830	39190	37720	39090	37540	37070	41480	36530	35520	35410
19	32520	37500	41440	39450	37540	38690	37570	37290	40750	36460	35650	35380
20	32650	37250	52800	39190	37390	38620	37390	37540	40450	36460	35620	35890
21	32740	37250	50350	39230	37500	38580	37290	37790	40020	36430	35620	35680
22	32900	37390	50350	39270	38510	38040	37070	38260	39300	36360	35620	35620
23	33030	37000	49710	39450	38980	37830	37040	38400	38510	36290	35620	35520
24	33180	36930	49190	39520	39990	38150	36970	38760	38010	36120	35520	35480
25	33410	36800	48850	39480	42170	38010	36800	39230	37830	35990	35480	35450
26	37650	36700	47620	39990	42290	37970	36730	39050	37790	35920	35610	35480
27	43670	36660	45580	40670	42060	38150	36600	39010	38040	35790	35410	35450
28	44640	36770	44290	40710	41440	38010	36390	40270	40090	35850	35310	35380
29	43670	37110	43980	40200	41090	37970	36800	40270	40490	35850	35280	35350
30	41330	37320	44020	40090		38150	37000	40130	39270	35850	35180	35350
31	42060		43410	40200		38150		40130		36120	35080	
MAX	44640	42060	52800	42330	42290	41060	38010	40270	42450	38650	36530	35890
MIN	31640	36560	37360	38110	37390	37830	36390	36660	37790	35790	35080	34810
(†)	595.36	594.07	595.71	594.87	595.11	594.30	593.98	594.85	594.61	593.72	593.41	593.49
(ϕ)	+9350	-4740	+6090	-3210	+890	-2940	-1150	+3130	-860	-3150	-1040	+270

CAL YR 1991 MAX 52800 MIN 31640 (ϕ) +7220
WTR YR 1992 MAX 52800 MIN 31640 (ϕ) +2640

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

08045850 CLEAR FORK TRINITY RIVER NEAR WEATHERFORD, TX
(Flood-hydrograph Partial-record Station)

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

DRAINAGE AREA.--121 mi^2.

PERIOD OF RECORD.--July 1924 to September 1925 and November 1947 to September 1985. October 1985 to current year, (peaks above base discharge and annual maximum).

REVISED RECORDS.--WSP 1312. 1925(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 810.00 ft above National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bench mark).

AVERAGE DISCHARGE FOR PERIOD (water years 1981-85).-- 23.0 ft^3/s (16,660 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,080 ft^3/s Nov. 1, 1981 (gage height, 21.58 ft); minimum, no flow Sept. 12-15, 1984.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 27	0300	2,320	19.00	Feb. 7	1930	414	11.75
Dec. 12	1115	292	11.49	Feb. 26	0445	405	11.71
Dec. 21	0430	3,410	21.48	Mar. 17	1815	299	11.24

08046020 CLEAR FORK TRINITY RIVER ABOVE BENBROOK NEAR ALEDO, TX

LOCATION.--Lat 32°37'14", long 97°31'46", Tarrant County, Hydrologic Unit 12030102, on U.S. Highway 377, over center of channel at upstream side of upstream bridge, 0.25 mi southwest of FM 2376, 0.25 mi northeast of FM 1187, and 6.5 mi southwest of Benbrook.

DRAINAGE AREA.--258 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1989 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
DEC 06...	1340	76	595	8.2	13.0	15	8.4	11.0	107	0.4	260
MAR 12...	1108	239	630	8.1	12.0	15	14	11.0	105	0.1	280
MAY 26...	1455	146	582	8.2	20.0	40	100	8.6	96	1.6	240
JUN 15...	1248	77	644	8.3	28.0	7	14	8.4	111	1.5	260
AUG 04...	1030	32	558	8.1	26.0	25	71	7.0	89	2.7	190
SEP 01...	0948	6.0	789	8.0	24.0	7	12	6.4	78	2.7	280

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
DEC 06...	31	87	10	26	0.7	3.4	230	46	39	0.40	11
MAR 12...	54	94	11	28	0.7	2.5	230	45	40	0.40	11
MAY 26...	23	77	11	30	0.8	2.8	220	41	43	0.30	10
JUN 15...	44	83	14	36	1	3.4	220	46	53	0.50	9.9
AUG 04...	29	62	9.2	33	1	5.8	160	48	47	0.50	11
SEP 01...	39	89	14	50	1	5.2	240	62	69	0.80	12

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
DEC 06...	360	18	12	6	0.640	0.040	0.680	0.030	0.27	0.30	0.300
MAR 12...	367	20	13	7	0.450	0.030	0.480	0.050	0.25	0.30	0.090
MAY 26...	346	228	37	191	0.860	0.040	0.900	0.020	0.38	0.40	0.240
JUN 15...	378	52	16	36	0.650	0.010	0.660	0.020	0.48	0.50	0.310
AUG 04...	315	154	6	148	1.12	0.380	1.50	0.880	0.62	1.5	1.30
SEP 01...	447	16	<1	--	1.47	0.030	1.50	0.070	0.53	0.60	0.870

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
DEC 06...	0.260	4.2	2	79	<0.5	<1.0	<5	<3	<10	11	<10
MAR 12...	0.090	4.5	--	--	--	--	--	--	--	--	--
MAY 26...	0.150	7.8	2	76	<0.5	<1.0	<5	<3	<10	1300	<10
JUN 15...	0.260	5.3	--	--	--	--	--	--	--	--	--
AUG 04...	1.20	7.1	4	78	<0.5	<1.0	<5	<3	<10	19	<10
SEP 01...	0.900	6.2	--	--	--	--	--	--	--	--	--

08046020 CLEAR FORK TRINITY RIVER ABOVE BENBROOK NEAR ALEDO, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC										
06...	7	22	<0.1	<10	<10	<1	<1.0	490	<6	16
MAR										
12...	--	--	--	--	--	--	--	--	--	--
MAY										
26...	9	8	0.8	<10	<10	<1	<1.0	460	<6	7
JUN										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
04...	6	8	0.6	<10	<10	<1	<1.0	410	7	6
SEP										
01...	--	--	--	--	--	--	--	--	--	--

08046150 BEAR CREEK AT FM 1187 NEAR BENBROOK, TX

LOCATION.--Lat 32°35'38", long 97°30'47", Tarrant County, Hydrologic Unit 12030102, on FM 1187 bridge over center of channel at upstream side of bridge, 0.3 mi downstream from an unnamed tributary on left bank, 0.3 upstream from Benbrook Lake, and 6.4 mi south of Benbrook.

DRAINAGE AREA.--62.8 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1989 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS TOTAL (MG/L AS CACO3)
OCT											
11...	1130	1.0	381	8.2	22.0	3	2.1	9.4	110	1.3	180
DEC											
06...	0945	50	491	8.2	13.0	5	0.30	10.8	105	0.1	250
MAR											
12...	1338	120	476	8.1	14.0	10	0.90	10.2	101	0.2	260
MAY											
26...	1238	32	415	8.2	21.0	5	4.4	9.6	110	0.2	210
JUN											
15...	1045	16	435	8.1	28.5	<1	0.50	8.9	119	1.5	220
AUG											
05...	0930	2.0	399	7.7	28.5	5	1.1	7.0	93	0.7	190

DATE	HARDNESS NONCARB DISSOLVD FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
OCT											
11...	18	65	4.0	11	0.4	1.4	160	30	11	0.30	10
DEC											
06...	19	95	4.0	9.6	0.3	1.2	240	21	11	0.30	6.7
MAR											
12...	39	97	3.3	8.4	0.2	0.80	220	22	16	0.30	8.6
MAY											
26...	28	77	3.6	8.6	0.3	1.2	180	23	9.2	0.30	9.8
JUN											
15...	21	80	4.0	11	0.3	1.1	200	23	9.9	0.40	10
AUG											
05...	20	68	3.7	10	0.3	1.1	170	32	12	0.40	14

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L)	RESIDUE VOLATILE, SUSPENDED (MG/L)	RESIDUE FIXED NON FILTERABLE (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)
OCT											
11...	229	<1	24	--	--	<0.010	0.130	<0.010	<0.20	<0.010	<0.010
DEC											
06...	290	13	12	1	0.270	0.010	0.280	<0.010	<0.20	<0.010	0.010
MAR											
12...	287	<1	<1	--	--	<0.010	0.390	<0.010	<0.20	<0.010	<0.010
MAY											
26...	241	10	<1	--	--	<0.010	0.300	0.020	<0.20	0.060	<0.010
JUN											
15...	256	24	15	9	--	<0.010	0.150	<0.010	<0.20	<0.010	<0.010
AUG											
05...	241	12	<1	--	--	<0.010	0.140	0.020	<0.20	<0.010	<0.010

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
OCT										
11...	1.4	--	--	--	--	--	--	--	--	--
DEC										
06...	1.7	1	69	<0.5	<1.0	<5	<3	<10	6	<10
MAR										
12...	2.0	--	--	--	--	--	--	--	--	--
MAY										
26...	2.3	<1	52	<0.5	<1.0	<5	<3	<10	9	<10
JUN										
15...	1.5	--	--	--	--	--	--	--	--	--
AUG										
05...	1.6	1	60	<0.5	<1.0	<5	<3	<10	<3	<10

08046150 BEAR CREEK AT FM 1187 NEAR BENBROOK, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
11...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	8	4	<0.1	<10	<10	<1	<1.0	420	<6	8
MAR										
12...	--	--	--	--	--	--	--	--	--	--
MAY										
26...	10	3	0.2	<10	<10	<1	<1.0	380	<6	3
JUN										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
05...	9	<1	<0.1	<10	<10	<1	<1.0	420	<6	5

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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1952 to current year. Prior to October 1970, published as Benbrook Reservoir.

REVISED RECORDS.--WSP 1922: Drainage area.

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

REMARKS.--The lake is formed by a rolled earthfill dam 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 August 1950 to Sept. 28, 1952, the lake was operated as a detention basin only. The capacity table is based on a survey made in 1945. The lake was built for flood control, navigation, and low-flow regulation. Inflow is affected at times by the discharge from flood-detention pools of 12 floodwater-retarding structures with a combined detention capacity of 11,170 acre-ft. These structures control runoff from 37.6 mi². Gage-height telemeter at station. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	747.0	-
Crest of spillway	724.0	258,600
Crest of notch in spillway	710.0	164,800
Top of conservation storage	694.0	88,250
Crest of intake to wet wells (inverts)	656.0	6,550
Lowest gated outlet (invert)	622.0	12

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 212,200 acre-ft May 3, 1990 (elevation, 717.54 ft); minimum since lake first filled in 1957, 61,450 acre-ft Oct. 10, 1984 (elevation, 686.16 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 180,900 acre-ft Dec. 24-26 (elevation, 712.69 ft); minimum daily, 83,610 acre-ft Sept. 30 (elevation, 692.75 ft).

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

692.0	80,890	703.0	127,200	710.0	164,800
696.0	96,000	706.0	142,500	712.0	176,700
700.0	113,000	708.0	153,400	713.0	182,800

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88170	153400	90110	178100	96870	99760	88510	89230	88700	89190	87460	86080
2	88140	153800	90260	176100	95590	98570	88510	89120	89610	89040	87720	86040
3	88140	152800	90140	172200	95550	97520	88510	89080	89840	89000	87800	85970
4	88140	150500	89990	167300	97920	98120	88550	89040	89650	88970	87760	85970
5	87760	147200	89720	162300	97960	98000	88620	88850	89540	88810	87760	85850
6	87680	143800	89340	157500	97350	97030	88810	88780	89800	88740	87650	85820
7	87650	140300	88740	152600	96550	95910	88930	88740	89950	88620	87570	85740
8	87570	136400	88850	147500	95790	94640	89000	88700	90140	88510	87460	85630
9	87420	132000	89880	142400	94840	94880	89000	88700	90070	88360	87380	85480
10	87420	127600	90600	137400	93700	93770	89040	88620	89610	88210	87310	86040
11	87350	123200	91140	132400	92560	92880	89000	88550	89230	88100	87160	86110
12	87270	118800	92290	127500	91520	92100	89000	88590	89040	87760	87230	86110
13	87200	114400	92760	123400	90640	91330	88970	88590	88850	87610	87230	86040
14	87080	110000	92760	119700	90030	90450	88930	88550	88660	87500	87120	85970
15	86930	105600	92600	115900	89270	89540	88890	88510	88620	87420	87010	85930
16	86820	101400	92410	112100	88550	89230	88780	88780	88700	87270	86860	85710
17	86750	97840	92060	109000	88360	89380	89080	88930	88700	87270	86750	85520
18	86670	96190	92020	107300	88550	89950	89040	89120	88700	87230	86860	85260
19	86560	96350	97520	104700	88700	89610	89120	89540	88740	87160	87010	85080
20	86520	96230	147800	101900	88780	89190	89000	89690	88740	87050	87010	84860
21	86450	95830	168600	99270	88890	88930	88890	89950	89080	87010	86970	84780
22	86380	95230	175900	97520	89270	89230	88700	90110	89270	86900	86900	84740
23	86380	94680	179700	95910	89540	89540	88660	90070	89500	86820	86780	84630
24	86300	94090	180900	94480	92180	89690	88660	89950	89540	86750	86670	84560
25	86260	93500	180900	93580	98650	89540	88700	90490	89420	86640	86600	84490
26	87570	92910	180900	94360	101400	89380	88740	90370	89800	86520	86560	84380
27	109800	92410	180800	98570	102500	89190	88780	89690	89570	87230	86410	84300
28	122500	91830	180500	101000	101800	89040	89190	89540	89570	87310	86380	84160
29	137200	91330	180000	101100	100800	88810	89230	89310	89540	87270	86230	83860
30	141300	90640	179600	99590	---	88590	89270	88850	89380	87160	86110	83610
31	149400	---	178900	98080	---	88590	---	88440	---	87530	86040	---
MAX	149400	153800	180900	178100	102500	99760	89270	90490	90140	89190	87800	86110
MIN	86260	90640	88740	93580	88360	88590	88510	88440	88620	86520	86040	83610
(†)	707.28	694.63	712.36	696.52	697.18	694.09	694.27	694.05	694.30	693.81	693.41	692.75
(ϕ)	+61230	-58760	+88260	-80820	+2720	-12210	+680	-830	+940	-1850	-1490	-2430

CAL YR 1991 MAX 180900 MIN 79510 (ϕ) +99390
WTR YR 1992 MAX 180900 MIN 83610 (ϕ) -4560

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

08046500 BENBROOK LAKE NEAR BENBROOK, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1969 to September 1982. February 1990 to current year.

323858097265601 - BENBROOK LAKE SITE AC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	RESER-VOIR STORAGE (AC-FT)	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
JAN												
10...	1136	137000	1.00	308	7.9	10.5	0.80	8.6	77	K15	K15	140
10...	1141	--	10.0	306	7.9	10.0	--	8.6	76	--	--	--
10...	1146	--	20.0	309	7.9	10.0	--	8.6	76	--	--	--
10...	1151	--	30.0	307	7.9	10.0	--	8.6	76	--	--	--
10...	1156	--	40.0	305	7.8	10.0	--	8.6	76	--	--	--
10...	1202	--	50.0	306	7.8	10.0	--	8.6	76	--	--	--
10...	1209	--	60.0	308	7.7	10.0	--	8.5	76	--	--	--
10...	1213	--	70.0	308	7.2	10.0	--	8.5	76	--	--	140
MAY												
07...	1043	88700	1.00	430	8.1	21.5	1.40	7.5	86	K1	K1	170
07...	1047	--	10.0	429	8.1	21.5	--	7.5	86	--	--	--
07...	1051	--	20.0	428	8.1	21.0	--	7.1	81	--	--	--
07...	1055	--	30.0	432	7.9	21.0	--	6.1	70	--	--	--
07...	1058	--	40.0	433	7.8	21.0	--	5.6	64	--	--	--
07...	1103	--	50.0	450	7.4	18.5	--	0	0	--	--	--
07...	1107	--	57.0	456	7.3	18.0	--	0	0	--	--	190
AUG												
18...	1146	86900	1.00	362	8.0	27.5	--	4.4	57	<1	<1	130
18...	1151	--	10.0	363	7.9	27.5	--	4.0	52	--	--	--
18...	1155	--	20.0	365	7.6	27.5	--	3.1	40	--	--	--
18...	1200	--	30.0	367	7.4	27.5	--	1.4	18	--	--	130
18...	1204	--	40.0	382	7.3	27.0	--	0	0	--	--	--
18...	1209	--	50.0	435	7.0	26.0	--	0	0	--	--	--
18...	1214	--	55.0	462	6.9	25.5	--	0	0	--	--	170

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
JAN											
10...	16	49	4.5	10	0.4	3.9	120	16	14	<0.10	9.3
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	16	49	4.4	10	0.4	3.4	120	16	14	<0.10	9.0
MAY											
07...	0	58	5.8	15	0.5	2.6	170	29	24	0.30	6.6
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	0	66	5.9	15	0.5	2.9	190	26	23	0.30	11
AUG											
18...	16	40	6.9	19	0.7	2.8	110	29	27	0.30	7.5
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	42	6.9	19	0.7	2.9	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	0	57	7.4	19	0.6	3.2	190	15	26	0.30	13

08046500 BENBROOK LAKE NEAR BENBROOK, TX--Continued

323858097265601 - BENBROOK LAKE SITE AC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN											
10...	182	0.250	0.030	0.280	0.110	0.39	0.50	0.070	0.050	<10	<10
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	180	0.250	0.030	0.280	0.110	0.29	0.40	0.060	0.060	10	<10
MAY											
07...	244	0.130	0.020	0.150	0.010	0.19	0.20	0.020	<0.010	<3	5
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	0.210	0.050	0.260	0.260	0.24	0.50	0.100	0.100	<10	30
07...	--	0.290	0.060	0.350	0.090	0.21	0.30	0.060	0.060	<10	190
07...	266	--	--	--	--	--	--	--	--	23	470
AUG											
18...	200	--	<0.010	<0.050	0.020	0.48	0.50	0.030	0.010	4	9
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	<0.010	<0.050	0.110	0.39	0.50	0.040	0.010	--	--
18...	--	--	<0.010	<0.050	0.410	0.49	0.90	0.070	0.040	170	540
18...	--	--	--	--	--	--	--	--	--	--	--
18...	254	--	0.010	<0.050	3.20	1.3	4.5	0.540	0.370	370	570

323908097273401 - BENBROOK LAKE SITE AL

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
JAN							
10...	1229	1.00	308	7.9	10.5	8.5	76
10...	1231	10.0	305	7.9	10.0	8.5	76
10...	1234	20.0	308	7.9	10.0	8.5	76
10...	1237	30.0	306	7.9	10.0	8.5	76
10...	1240	40.0	309	7.9	10.0	8.5	76
10...	1243	55.0	306	7.9	10.0	8.4	75
MAY							
07...	1118	1.00	428	8.1	21.5	7.4	85
07...	1120	10.0	427	8.1	21.5	7.3	84
07...	1122	20.0	433	7.9	21.0	5.7	65
07...	1125	30.0	435	7.9	21.0	5.5	63
07...	1127	43.0	437	7.9	21.0	4.8	55
AUG							
18...	1224	1.00	358	8.7	27.5	4.8	62
18...	1227	10.0	359	8.0	27.5	4.3	56
18...	1230	20.0	362	7.6	27.5	2.5	32
18...	1233	30.0	361	7.5	27.5	2.1	27
18...	1236	44.0	408	7.2	27.0	0	0

08046500 BENBROOK LAKE NEAR BENBROOK, TX--Continued

323735097274701 - BENBROOK LAKE SITE BC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
JAN											
10...	1259	1.00	321	7.9	10.0	0.70	8.3	74	K11	33	150
10...	1304	10.0	321	7.9	10.0	--	8.2	73	--	--	--
10...	1307	20.0	322	7.9	10.0	--	8.2	73	--	--	--
10...	1311	30.0	330	7.9	10.0	--	8.2	73	--	--	--
10...	1314	40.0	330	7.9	10.0	--	8.2	73	--	--	--
10...	1318	54.0	329	7.9	10.0	--	8.2	73	--	--	150
MAY											
07...	1144	1.00	424	8.2	22.5	1.40	8.2	96	K1	K1	180
07...	1147	10.0	426	8.1	22.0	--	7.5	87	--	--	--
07...	1150	20.0	426	8.0	21.5	--	7.3	84	--	--	--
07...	1154	30.0	439	7.7	20.5	--	3.4	38	--	--	--
07...	1158	40.0	440	7.7	20.5	--	2.8	32	--	--	190
AUG											
18...	1247	1.00	355	7.9	27.5	--	3.7	48	K3	K1	130
18...	1251	10.0	354	7.8	27.5	--	3.3	43	--	--	--
18...	1254	20.0	354	7.7	27.5	--	3.2	42	--	--	--
18...	1258	30.0	353	7.7	27.5	--	2.9	38	--	--	--
18...	1302	38.0	353	7.7	27.0	--	2.8	36	--	--	120

DATE	HARDNESS NONCARB DISSOLVD FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
JAN											
10...	13	52	4.4	9.8	0.4	3.3	130	17	14	<0.10	9.1
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	14	54	4.5	10	0.4	3.4	140	17	14	<0.10	9.3
MAY											
07...	11	61	6.2	16	0.5	2.7	170	29	23	0.30	6.6
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	18	68	5.9	15	0.5	2.7	180	30	24	0.30	7.9
AUG											
18...	15	39	6.8	19	0.7	3.1	110	29	27	0.30	7.7
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	14	38	6.6	19	0.7	2.9	110	30	28	0.30	7.7

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN											
10...	191	0.270	0.020	0.290	0.090	0.31	0.40	0.060	0.060	<10	<10
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	196	0.260	0.030	0.290	0.080	0.32	0.40	0.070	0.060	<10	<10
MAY											
07...	245	0.073	0.020	0.093	0.010	0.19	0.20	<0.010	<0.010	<3	<1
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	259	--	--	--	--	--	--	--	--	5	20
AUG											
18...	198	--	<0.010	<0.050	0.050	0.55	0.60	0.040	0.010	<3	4
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	197	--	0.020	<0.050	0.130	0.47	0.60	0.070	0.040	4	45

08046500 BENBROOK LAKE NEAR BENBROOK, TX--Continued

32362809/275101 - BENBROOK LAKE SITE CR

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
10...	1335	1.00	318	7.9	10.0	--	8.0	72
10...	1337	10.0	317	7.9	10.0	--	7.8	70
10...	1339	20.0	317	7.9	10.0	--	7.8	70
10...	1342	31.0	317	7.9	10.0	--	7.7	69
MAY								
07...	1215	1.00	416	8.2	23.0	1.40	8.2	97
07...	1217	10.0	421	8.1	22.0	--	8.0	93
07...	1220	20.0	420	8.0	22.0	--	7.5	87
07...	1223	25.0	429	7.8	22.0	--	5.1	59
AUG								
18...	1312	1.00	347	8.1	27.5	--	4.5	58
18...	1316	10.0	345	7.9	27.0	--	3.9	50
18...	1320	20.0	347	7.8	27.0	--	3.7	48

323629097280901 - BENBROOK LAKE SITE CL

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
10...	1352	1.00	333	7.9	10.5	8.2	74
10...	1355	10.0	333	7.9	10.0	8.1	72
10...	1357	20.0	330	7.9	10.0	8.0	72
10...	1359	31.0	324	7.9	10.0	7.8	70
MAY							
07...	1236	1.00	418	8.2	22.5	8.3	98
07...	1240	10.0	421	8.1	22.5	7.8	92
07...	1244	23.0	426	7.7	22.0	4.8	56
AUG							
18...	1339	1.00	340	8.2	27.0	5.2	67
18...	1345	10.0	342	7.9	27.0	4.0	51
18...	1352	20.0	345	7.8	27.0	3.5	45

323652097291901 - BENBROOK LAKE SITE DC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
JAN											
10...	1417	1.00	339	7.9	10.5	0.60	8.1	73	K20	K29	160
10...	1423	10.0	346	7.9	10.5	--	7.8	71	--	--	--
10...	1429	20.0	387	7.8	10.5	--	7.4	67	--	--	--
10...	1435	30.0	417	7.8	10.5	--	7.4	67	--	--	--
10...	1443	37.0	425	7.8	10.5	--	7.2	65	--	--	180
MAY											
07...	1255	1.00	436	8.2	23.0	0.70	8.8	104	K2	K1	190
07...	1301	10.0	432	8.0	22.5	--	7.2	85	--	--	--
07...	1306	24.0	431	7.8	22.0	--	4.8	56	--	--	190
AUG											
18...	1402	1.00	336	8.4	27.5	--	6.5	84	<1	<1	120
18...	1406	10.0	337	8.2	27.0	--	5.3	68	--	--	--
18...	1410	15.0	338	8.2	27.0	--	5.1	66	--	--	--
18...	1415	24.0	340	8.0	27.0	--	4.5	58	--	--	120

08046500 BENBROOK LAKE NEAR BENBROOK, TX--Continued

323652097291901 - BENBROOK LAKE SITE DC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
JAN											
10...	18	55	4.8	11	0.4	3.7	140	19	16	<0.10	9.2
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	11	68	3.2	11	0.4	3.5	170	26	20	<0.10	10
MAY											
07...	22	65	6.4	17	0.5	2.7	170	31	26	0.30	6.1
07...	--	--	--	--	--	--	--	--	--	--	--
07...	21	66	5.9	18	0.6	2.7	170	29	24	0.30	6.7
AUG											
18...	19	36	6.9	19	0.8	2.8	99	30	26	0.30	7.7
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	18	37	6.8	19	0.8	2.8	100	30	27	0.30	7.6

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN											
10...	202	0.270	0.030	0.300	0.080	0.32	0.40	0.080	0.060	20	<10
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	245	0.260	0.030	0.290	0.050	0.45	0.50	0.110	0.090	<10	<10
MAY											
07...	255	--	0.020	<0.050	0.010	0.19	0.20	0.020	<0.010	13	<1
07...	--	--	--	--	--	--	--	--	--	--	--
07...	253	0.080	0.040	0.120	0.120	0.28	0.40	0.020	0.030	<3	3
AUG											
18...	188	--	<0.010	<0.050	0.020	0.78	0.80	0.070	0.020	3	<1
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	192	--	<0.010	<0.050	0.040	0.76	0.80	0.100	0.010	5	8

Benbrook Lake AC (323858097265601)

Phytoplankton Analyses October 1991 to September 1992

Date	1-10-92
Time	1137
TOTAL CELLS/mL	5,272,419
NUMBER OF SPECIES	14
DEPTH COLLECTED (ft.)	1.3

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	6,258
Cyclotella ocellata	1,565
Stephanodiscus astraea var. *minutula*	7,823
Order Pennales	
Asterionella formosa	5,689
Nitzschia acicularis	2,845
Synedra delicatissima	7,111
CHLOROPHYTA	
Chlamydomonas sp.	15,645
Chlorella ellipsoidea	15,645
Selenastrum minutum	15,645
CHRYSOPHYTA	
Unknown flagellate	172,097
CYANOPHYTA	
Aphanocapsa delicatissima	4,771,774
Chroococcus sp.	140,806
CRYPTOPHYTA	
Cryptomonas sp.	78,226
Rhodomonas minuta	31,290

Benbrook Lake DC (323652097291901)

Phytoplankton Analyses October 1991 to September 1992

Date	1-10-92
Time	1418
TOTAL CELLS/mL	3,144,677
NUMBER OF SPECIES	11
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Aulacoseira italica	8,534
Cyclotella meneghiniana	7,111
Order Pennales	
Nitzschia acicularis	15,645
CHLOROPHYTA	
Chlamydomonas sp.	15,645
Chlorococcum humicola	15,645
Selenastrum minutum	15,645
CHRYSOPHYTA	
Unknown flagellate	93,871
CYANOPHYTA	
Aphanocapsa delicatissima	2,816,129
Chroococcus sp.	62,581
CRYPTOPHYTA	
Chroomonas sp.	62,581
Cryptomonas erosa	31,290

Benbrook Lake AC (323858097265601)

Phytoplankton Analyses October 1991 to September 1992

Date	5-7-92
Time	1042
TOTAL CELLS/mL	201,860
NUMBER OF SPECIES	14
DEPTH COLLECTED (ft.)	2.3

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	9,881
Melosira varians	1,087
Stephanodiscus astraea	395
CHLOROPHYTA	
Ankistrodesmus falcatus	3,342
Gloeocystis gigas	1,337
Pediastrum duplex	2,674
Scenedesmus bijuga	1,337
CYANOPHYTA	
Aphanocapsa delicatissima	120,314
Aphanizomenon flos-aquae	16,710
Chroococcus dispersus	27,405
Chroococcus limneticus	5,347
EUGLENOPHYTA	
Euglena sp	1,337
Trachelomonas spp.	6,684
CRYPTOPHYTA	
Cryptomonas erosa	4,010

Benbrook Lake DC (323652097271901)

Phytoplankton Analyses October 1991 to September 1992

Date	5-7-92
Time	1254
TOTAL CELLS/mL	362,947
NUMBER OF SPECIES	19
DEPTH COLLECTED (ft.)	1.1

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	35,318
Melosira varians	1,509
Stephanodiscus astraea	604
Order Pennales	
Fragilaria crotonensis	4,297
Fragilaria vaucheriae	2,865
Navicula sp.	2,865
CHLOROPHYTA	
Ankistrodesmus falcatus	11,363
Chlamydomonas dinobryonii	2,674
Gloeocystis gigas	4,010
Pediastrum duplex	1,337
Scenedesmus quadricauda	3,342
Selenestrum westii	5,347
CYANOPHYTA	
Aphanocapsa delicatissima	193,839
Aphanizomenon flos-aquae	53,473
Chroococcus limneticus	21,389
Chroococcus minimus	2,674
CHRYSOPHYTA	
Dinobryon sociale	5,347
Mallamonas sp.	668
EUGLENOPHYTA	
Trachelomonas spp.	10,026

Benbrook Lake AC (323858097265601)

Phytoplankton Analyses October 1991 to September 1992

Date	8-18-92
Time	1148
TOTAL CELLS/mL	9,246,930
NUMBER OF SPECIES	18
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	10,740
Melosira varians	14,050
Order Pennales	
Fragilaria crotenensis	9,050
Fragilaria vaucherie	65,320
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	49,580
Ankistrodesmus spiralis	123,950
Chlamydomonas sp.	49,580
Scenedesmus quadricauda	24,790
CYANOPHYTA (Blue-green algae)	
Anabaena spiroides	495,810
Aphanizomenon flos-aquae	991,630
Aphanocapsa delicatissima	1,239,540
Chroococcus limneticus	198,330
Merismopedia chondroidea	396,650
Merismopedia tenuissima	1,983,260
Oscillatoria subrevis	3,470,700
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	24,790
Trachelomonas spp.	49,580
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas erosa	49,580

Benbrook Lake DC (323652097291901)

Phytoplankton Analyses October 1991 to September 1992

Date	8-18-92
Time	1404
TOTAL CELLS/mL	1100201
NUMBER OF SPECIES	22
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	757
Melosira varians	1,917
Order Pennales	
Fragilaria crotenensis	1,651
Fragilaria vaucherie	5,033
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	5,347
Ankistrodesmus spiralis	11,363
Chlamydomonas sp.	4,010
Cosmarium sp.	2,005
Peridinium duplex	668
Scenedesmus bijuga	668
Staurastrum sp.	668
CHRYSOPHYTA (Golden-brown algae)	
Dinobryon sociale	668
CYANOPHYTA (Blue-green algae)	
Anabaena spiroides	106,946
Aphanizomenon flos-aquae	86,893
Aphanocapsa delicatissima	133,682
Chroococcus limneticus	10,695
Merismopedia chondroidea	63,499
Merismopedia tenuissima	187,155
Oscillatoria subrevis	467,887
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	2,005
Trachelomonas spp.	3,342
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas erosa	3,342

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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Benbrook Lake (station 08046500), 1.5 mi upstream, since September 1952. There is a diversion 1.0 mi upstream for Pecan Valley Golf Course. Gage-height telemeter at station.

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.
Maximum stage since at least 1922, that of May 17, 1949.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	177	668	1330	1130	1120	226	117	244	181	26	5.0
2	31	1070	554	1580	1130	1120	221	157	32	105	25	5.3
3	31	1480	454	2480	1130	1120	202	157	219	53	25	4.4
4	32	1910	451	2830	1140	1130	181	152	373	53	23	4.6
5	33	2280	451	2840	1140	1120	181	152	268	53	22	5.7
6	34	2240	547	2830	1130	1120	184	86	111	53	22	5.7
7	34	2220	726	2810	1130	1110	182	42	107	53	21	5.6
8	32	2350	415	2800	1130	1110	178	42	154	53	21	14
9	32	2470	108	2790	1130	1120	178	41	339	53	21	44
10	33	2430	216	2770	1130	1120	178	42	448	49	17	100
11	33	2410	484	2750	1130	994	178	43	373	30	21	31
12	34	2390	539	2730	1130	898	178	43	241	28	21	4.2
13	33	2370	574	2320	1010	893	178	44	240	28	21	3.7
14	34	2370	621	2050	893	890	178	44	240	29	21	3.5
15	35	2350	616	2030	893	888	180	44	127	29	20	19
16	36	2350	611	2020	888	583	184	48	17	29	20	76
17	28	2120	608	1860	521	323	215	46	22	29	14	92
18	20	1270	608	1730	281	518	235	46	21	30	17	93
19	20	613	309	1710	279	730	244	46	21	31	27	93
20	19	628	341	1700	279	726	241	110	21	28	25	93
21	19	684	98	1700	278	628	236	234	25	29	23	51
22	19	713	592	1410	278	100	211	214	28	29	23	4.0
23	20	709	1060	1200	271	97	148	214	38	30	23	3.8
24	19	697	1220	1090	514	193	57	214	70	30	21	3.1
25	18	690	1220	965	299	432	57	225	114	30	17	3.3
26	49	688	1210	894	15	427	58	418	146	31	18	3.4
27	200	685	1210	371	427	423	59	612	181	31	17	3.5
28	149	672	1180	27	1130	426	61	614	186	36	14	31
29	132	672	1140	801	1120	427	74	608	181	23	18	95
30	29	672	1100	1450	---	395	68	605	181	23	18	97
31	40	---	1150	1320	---	226	---	601	---	33	14	---
TOTAL	1309	44380	21081	57188	22956	22407	4951	6061	4768	1322	636	997.8
MEAN	42.2	1479	680	1845	792	723	165	196	159	42.6	20.5	33.3
MAX	200	2470	1220	2840	1140	1130	244	614	448	181	27	100
MIN	18	177	98	27	15	97	57	41	17	23	14	3.1
AC-FT	2600	88030	41810	113400	45530	44440	9820	12020	9460	2620	1260	1980

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1992#, BY WATER YEAR (WY)

MEAN	20.6	92.8	45.5	78.4	76.7	105	90.6	219	232	64.1	21.7	17.5
MAX	184	1479	680	1845	792	748	881	2351	1804	1070	198	164
(WY)	1960	1992	1992	1992	1992	1970	1977	1990	1957	1989	1979	1962
MIN	.000	.053	.042	.000	.000	.13	.10	.000	.000	.029	.000	.000
(WY)	1953	1971	1954	1953	1953	1953	1959	1959	1953	1953	1953	1953

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1953 - 1992#	
ANNUAL TOTAL	81398.0		188056.8			
ANNUAL MEAN	223		514		88.5	
HIGHEST ANNUAL MEAN					514	1992
LOWEST ANNUAL MEAN					.27	1953
HIGHEST DAILY MEAN	2470	Nov 9	2840	Jan 5	6320	May 3 1990
LOWEST DAILY MEAN	1.3	Feb 19	3.1	Sep 24	.00	Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	1.7	Feb 14	5.2	Sep 1	.00	Oct 1 1952
INSTANTANEOUS PEAK FLOW			3030	Jan 3	67400	May 3 1990
INSTANTANEOUS PEAK STAGE			9.44	Jan 3	14.71	May 3 1990
INSTANTANEOUS LOW FLOW			.00	**	.00	*
ANNUAL RUNOFF (AC-FT)	161500		373000		64090	
10 PERCENT EXCEEDS	672		1420		146	
50 PERCENT EXCEEDS	29		181		5.1	
90 PERCENT EXCEEDS	3.1		20		.10	

\# Period of regulated streamflow.
** No flow at times.
* No flow at times most years.

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1980 to September 1982, and October 1989 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
JAN											
10...	1316	2770	313	8.0	11.5	22	10	10.2	95	1.1	140
MAY											
07...	1122	40	442	8.0	19.0	20	82	8.8	96	1.1	210
AUG											
18...	1045	26	413	7.9	25.0	7	0.90	6.1	75	1.6	160

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
JAN											
10...	9	48	4.3	10	0.4	4.1	130	18	14	<0.10	9.0
MAY											
07...	24	72	6.3	15	0.5	2.8	180	27	23	0.30	9.1
AUG											
18...	0	53	7.0	18	0.6	3.2	170	15	24	0.30	12

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
JAN											
10...	185	25	19	6	0.250	0.020	0.270	0.120	0.38	0.50	0.100
MAY											
07...	265	18	18	0	0.200	0.040	0.240	0.150	0.25	0.40	0.060
AUG											
18...	237	5	5	0	--	<0.010	<0.050	2.30	1.2	3.5	0.420

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
JAN											
10...	0.050	4.7	3	37	<0.5	<1.0	<5	<3	<10	21	<10
MAY											
07...	0.070	4.4	5	61	<0.5	<1.0	<5	<3	<10	<3	<10
AUG											
18...	0.320	6.2	6	93	<0.5	<1.0	<5	<3	<10	20	<10

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
JAN										
10...	7	<1	<0.1	<10	<10	<1	<1.0	220	<6	7
MAY										
07...	<4	280	0.2	<10	<10	<1	<1.0	360	<6	5
AUG										
18...	4	520	<0.1	<10	<10	<1	<1.0	380	<6	<3

08047100 CLEAR FORK TRINITY RIVER OUTFALL AT OAK HILL CIRCLE, FORT WORTH, TX

LOCATION.--Lat 32°42'56", long 97°22'39", Tarrant County, Hydrologic Unit 12030102, at North end of Oak Hill Circle, 0.75 mile east of Hulen Street, and 4.5 miles southwest of Fort Worth.

DRAINAGE AREA.--0.07 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: February 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
FEB 22-22	1213	0.55	4.6	0.18	68	108	8.4	7.8	16.0	34	5.3	1000
MAR 09-09	0040	0.73	3.2	0.29	75	106	8.7	8.2	17.5	40	7.4	K150
APR 05-06	2340	0.30	5.3	0.14	113	138	7.5	7.8	15.0	54	8.2	2500
APR 28-28	2130	0.43	1.5	0.15	119	101	8.6	8.7	22.0	72	8.1	>200000
JUN 06-06	0232	0.41	2.7	0.17	173	104	9.6	8.1	25.0	36	4.1	80000
JUN 21-21	0800	0.52	4.5	0.19	145	110	8.2	7.3	24.0	43	8.9	11000
AUG 12-12	1532	0.22	2.5	0.09	290	148	7.8	7.2	29.0	45	6.7	63000

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
FEB 22-22	18000	25	0	30	52	74	58	9.6	0.31	2.1	13	0.2
MAR 09-09	K46000	26	3	23	47	74	36	9.7	0.43	1.7	11	0.1
APR 05-06	17000	34	4	30	63	51	60	13	0.48	2.1	10	0.2
APR 28-28	>330000	36	0	38	56	219	70	14	0.31	1.4	7	0.1
JUN 06-06	250000	31	0	31	56	134	58	12	0.33	2.1	11	0.2
JUN 21-21	20000	32	6	26	54	44	73	12	0.53	2.3	12	0.2
AUG 12-12	93000	42	9	33	71	32	74	15	1.0	4.4	17	0.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)
FEB 22-22	4.1	5.3	1.9	0.050	0.280	0.110	0.70	0.200	0.170	<10.0	2	<10
MAR 09-09	3.5	4.0	2.3	0.040	0.370	0.480	1.7	0.690	0.540	<20.0	3	<10
APR 05-06	6.0	8.2	1.7	0.050	0.880	0.490	1.6	0.290	0.230	<10.0	2	<10
APR 28-28	3.9	5.4	3.8	0.060	0.510	0.170	0.70	0.170	0.130	<20.0	1	<10
JUN 06-06	4.9	5.5	2.3	0.050	0.710	0.320	0.80	0.180	0.180	<20.0	5	<10
JUN 21-21	4.8	4.4	3.4	0.050	0.630	0.200	1.0	0.230	0.170	<20.0	1	<10
AUG 12-12	5.0	11	5.4	0.070	0.810	0.200	0.80	0.290	0.220	<10.0	11	<10

08047100 CLEAR FORK TRINITY RIVER OUTFALL AT OAK HILL CIRCLE, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	THAL-LIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 22-22	<1	4	8	<0.010	6	<0.10	3	<2	<1	<5	40	10
MAR 09-09	<1	4	4	<0.010	5	<0.10	4	<2	<1	<10	30	12
APR 05-06	<1	3	11	<0.010	4	<0.10	1	<2	<1	<5	50	11
APR 28-28	<1	5	16	<0.010	11	<0.10	6	<2	<1	<5	70	16
JUN 06-06	<1	3	7	<0.010	4	<0.10	2	<2	<1	<5	40	12
JUN 21-21	<1	2	5	<0.010	2	<0.10	<1	<2	<1	<10	30	13
AUG 12-12	<1	<1	5	<0.010	4	<0.10	2	<1	<1	<10	50	12

DATE	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACRO-LEIN TOTAL (UG/L)	ACRYLO-NITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
FEB 22-22	<1	2	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
MAR 09-09	2	5	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
APR 05-06	<1	4	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
APR 28-28	<1	2	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
JUN 06-06	<1	3	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
JUN 21-21	<1	3	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
AUG 12-12	<1	5	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMO CHLORO-PROPANE WATER WHOLE TOT.REC (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)
FEB 22-22	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
MAR 09-09	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
APR 05-06	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
APR 28-28	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
JUN 06-06	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
JUN 21-21	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
AUG 12-12	0.2	<0.2	<1.0	0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	0.2	<0.2

DATE	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2 -DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)
FEB 22-22	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MAR 09-09	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
APR 05-06	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
APR 28-28	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
JUN 06-06	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
JUN 21-21	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AUG 12-12	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2		<0.2	<0.2

08047100 CLEAR FORK TRINITY RIVER OUTFALL AT OAK HILL CIRCLE, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)
FEB 22-22	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
MAR 09-09	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
APR 05-06	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
APR 28-28	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
JUN 06-06	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.4	<5.0	<0.20	<0.2	<0.2
JUN 21-21	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
AUG 12-12	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2

DATE	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,2,3-TRI-CHLORO BENZENE WAT, WH REC (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	PSEUDO-CUMENE WATER UNFLTRD REC (UG/L)	MESIT-YLENE WATER UNFLTRD REC (UG/L)
FEB 22-22	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
MAR 09-09	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
APR 05-06	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
APR 28-28	<0.2	<0.2	0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
JUN 06-06	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
JUN 21-21	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
AUG 12-12	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20

DATE	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)
FEB 22-22	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
MAR 09-09	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
APR 05-06	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
APR 28-28	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUN 06-06	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUN 21-21	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
AUG 12-12	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0

DATE	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6 -DIBENZ -ANTHRA -CENE TOTAL (UG/L)	3,3'-DI-CHLORO-BENZI-DINE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)
FEB 22-22	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
MAR 09-09	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
APR 05-06	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
APR 28-28	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
JUN 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
AUG 12-12	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0

08047100 CLEAR FORK TRINITY RIVER OUTFALL AT OAK HILL CIRCLE, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)
FEB 22-22	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
MAR 09-09	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
APR 05-06	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
APR 28-28	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
JUN 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
AUG 12-12	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0

DATE	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)
FEB 22-22	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
MAR 09-09	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
APR 05-06	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
APR 28-28	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
JUN 21-21	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
AUG 12-12	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0

DATE	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L)
FEB 22-22	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
MAR 09-09	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
APR 05-06	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
APR 28-28	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
JUN 06-06	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
JUN 21-21	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
AUG 12-12	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

DATE	CHLOR-DANE TRANS WATER WHOLE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN-I WATER WHOLE REC (UG/L)	ENDO-SULFAN BETA TOTAL (UG/L)	ENDO-SULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDE-HYDE TOTAL (UG/L)
FEB 22-22	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
MAR 09-09	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
APR 05-06	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
APR 28-28	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
JUN 06-06	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
JUN 21-21	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
AUG 12-12	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20

08047100 CLEAR FORK TRINITY RIVER OUTFALL AT OAK HILL CIRCLE, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)
FEB 22-22	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.90
MAR 09-09	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	2.3
APR 05-06	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	1.0
APR 28-28	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	1.3
JUN 06-06	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
JUN 21-21	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.10
AUG 12-12	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.10

08047500 CLEAR FORK TRINITY RIVER AT FORT WORTH, TX

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

DRAINAGE AREA.--518 mi².

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

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 532.91 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 3, 1970, various nonrecording and recording gages were located within 650 ft of present site at different datums.

REMARKS.--No estimated daily discharges. Records good. Since September 1952, flow largely regulated by Benbrook Lake (station 08046500) 10 mi upstream. The city of Fort Worth diverted water from pool at gage during the current year. The Benbrook Water and Sewage Authority diverted water from the river upstream from station during the current year for municipal use. Several observations of water temperature were made during the year. Gage-height telemeter at station.

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, 1925-52).--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 most years.
Maximum stage since at least 1900, that of May 17, 1949, present datum.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	356	560	1850	1360	1340	233	92	402	178	51	37
2	30	1110	664	1850	1340	1320	230	129	305	127	41	26
3	30	1530	386	2820	1390	1330	222	129	256	55	45	16
4	29	1910	367	3260	1610	1750	200	129	434	54	38	15
5	24	2370	360	3280	1400	1520	200	123	374	51	34	12
6	25	2370	417	3260	1360	1360	272	98	226	51	29	9.6
7	25	2360	631	3260	1350	1350	216	57	156	48	26	13
8	27	2490	499	3230	1340	1340	207	55	170	44	25	12
9	27	2680	253	3200	1330	1630	207	54	421	45	25	17
10	25	2680	189	3180	1320	1340	201	56	456	43	23	647
11	25	2680	496	3160	1320	1200	200	53	409	34	18	112
12	25	2680	648	3160	1350	1050	200	51	243	29	36	36
13	26	2680	550	2750	1210	1060	200	51	237	26	38	25
14	26	2640	582	2350	1020	1050	200	140	239	26	29	17
15	25	2620	575	2330	1020	1060	197	67	172	25	27	14
16	28	2690	563	2310	1010	761	193	227	35	26	25	39
17	27	2500	555	2190	659	380	357	215	35	29	23	57
18	18	1500	588	2210	294	553	230	192	35	33	70	57
19	16	597	1540	2040	288	799	283	173	34	33	190	58
20	15	519	8690	2000	288	790	222	163	32	31	47	60
21	15	542	1410	2040	288	756	207	320	263	31	39	400
22	14	603	1300	1740	431	176	194	336	57	30	37	32
23	15	600	1420	1400	399	164	164	244	152	28	35	22
24	15	582	1500	1280	1150	197	75	224	140	25	31	18
25	14	572	1500	1110	1580	457	72	447	121	23	27	16
26	867	569	1480	1230	279	456	72	417	137	23	21	15
27	3580	569	1480	1180	490	456	68	596	168	231	22	13
28	1850	569	1430	302	1340	477	88	880	587	141	20	11
29	1600	544	1370	886	1340	466	318	696	463	51	19	62
30	344	540	1320	1700	---	437	78	648	193	30	19	60
31	1010	---	1330	1590	---	247	---	663	---	309	19	---
TOTAL	9826	46652	34653	68148	29556	27272	5806	7725	6952	1910	1129	1928.6
MEAN	317	1555	1118	2198	1019	880	194	249	232	61.6	36.4	64.3
MAX	3580	2690	8690	3280	1610	1750	357	880	587	309	190	647
MIN	14	356	189	302	279	164	68	51	32	23	18	9.6
AC-FT	19490	92530	68730	135200	58620	54090	11520	15320	13790	3790	2240	3830

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1992#, BY WATER YEAR (WY)

MEAN	53.6	110	73.4	108	115	166	155	316	292	81.3	30.1	32.6
MAX	337	1555	1118	2198	1019	1081	1012	3020	2219	1300	247	245
(WY)	1982	1992	1992	1992	1992	1990	1977	1990	1989	1989	1979	1962
MIN	.000	.84	1.68	2.28	2.84	.91	3.12	3.41	.27	.75	.54	.28
(WY)	1953	1955	1979	1957	1953	1956	1954	1959	1953	1954	1954	1954

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1953 - 1992#		
ANNUAL TOTAL	112594.4		241557.6				
ANNUAL MEAN	308		660		128		
HIGHEST ANNUAL MEAN					660		1992
LOWEST ANNUAL MEAN					4.55		1954
HIGHEST DAILY MEAN	8690	Dec 20	8690	Dec 20	11000	Mar 11	1990
LOWEST DAILY MEAN	7.4	Mar 14	9.6	Sep 6	.00	Oct 1	1952
ANNUAL SEVEN-DAY MINIMUM	10	Mar 8	14	Sep 3	.00	Oct 1	1952
INSTANTANEOUS PEAK FLOW			18000	Dec 20	20900	May 2	1990
INSTANTANEOUS PEAK STAGE			16.05	Dec 20	16.80	May 2	1990
INSTANTANEOUS LOW FLOW					.00	*	
ANNUAL RUNOFF (AC-FT)	223300		479100		92440		
10 PERCENT EXCEEDS	727		1850		251		
50 PERCENT EXCEEDS	35		241		14		
90 PERCENT EXCEEDS	15		25		.70		

\# Period of regulated streamflow.
* No flow at times most years.

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.'s 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.--October 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 and biochemical analyses: October 1967 to September 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 Texas Reclamation Department datum. 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.

REMARKS.--No estimated daily discharges. Records good. Flow is largely regulated by Lake Worth (station 08045400) on the West Fork Trinity River and by Benbrook Lake (station 08046500) on the Clear Fork Trinity River. At times, flow is sustained by releases from the flood-detention pool of Benbrook Lake. The city of Fort Worth diverts water from river upstream from station and from Cedar Creek Reservoir (station 08063010) for municipal and industrial uses and returns sewage effluent to river downstream from station 08048543. There are many small diversions upstream from station. Gage-height telemeter at station. Maximum stage since at least 1866, that of May 17, 1949. Maximum stages have been affected by levee construction, levee breaks, and channel rectification.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	5300	768	7350	3150	4020	699	131	2190	1110	284	72
2	34	5320	1090	6010	3030	3890	629	204	2280	744	110	47
3	33	4630	673	5190	3030	3380	441	196	2020	536	105	29
4	32	4200	579	4580	3510	3700	303	190	2100	455	89	24
5	28	4570	543	4250	3410	4260	257	175	2020	424	68	21
6	28	4470	560	4290	2970	3770	334	159	2050	398	45	18
7	28	3790	802	4050	2600	3730	294	87	2210	380	40	17
8	28	3410	748	3890	2300	3450	301	80	2470	373	37	19
9	28	3300	779	3690	2180	3820	339	74	2950	358	36	19
10	27	3000	1030	3510	2200	3200	376	74	2860	309	33	866
11	28	2880	1600	3440	2280	2820	362	69	2960	186	28	154
12	29	2820	2400	3450	2260	2380	375	63	3080	106	47	42
13	31	2780	2340	3250	1980	2220	379	65	3460	68	66	35
14	32	2750	2120	2720	1630	2120	359	306	3740	58	41	29
15	31	2740	1930	2780	1600	2010	333	102	3850	47	37	23
16	32	2840	1690	2770	1550	1760	303	361	3830	42	38	31
17	33	3180	1380	2740	1330	1050	484	332	3740	44	37	52
18	30	2330	1420	2980	722	1290	351	345	3320	51	68	51
19	26	1010	3070	3170	518	1620	507	343	2520	57	280	50
20	24	835	17000	3170	419	1370	500	300	1840	45	72	50
21	24	713	19400	3050	373	1300	402	507	2020	40	50	612
22	23	770	17000	2920	564	879	326	765	1310	43	44	39
23	20	786	16800	2520	1170	542	251	796	872	37	41	29
24	18	664	16000	2510	1900	437	154	902	628	37	38	25
25	18	634	15300	2350	4960	730	131	1380	337	34	34	24
26	1880	609	14700	2330	4310	719	120	1500	395	34	31	26
27	8060	602	12500	3580	4360	727	107	1530	387	331	29	24
28	9600	586	9770	2850	5060	834	99	2390	1340	200	27	23
29	10700	583	8340	2750	4340	794	479	2640	3790	103	26	46
30	6600	633	8000	3520	---	787	120	2410	1850	42	27	55
31	5190	---	7870	3480	---	759	---	2340	---	532	27	---
TOTAL	42727	72735	188202	109140	69706	64368	10115	20816	68419	7224	1935	2552
MEAN	1378	2424	6071	3521	2404	2076	337	671	2281	233	62.4	85.1
MAX	10700	5320	19400	7350	5060	4260	699	2640	3850	1110	284	866
MIN	18	583	543	2330	373	437	99	63	337	34	26	17
AC-FT	84750	144300	373300	216500	138300	127700	20060	41290	135700	14330	3840	5060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1992, BY WATER YEAR (WY)

MEAN	297	274	265	246	331	438	612	1150	821	261	117	163
MAX	4548	3855	6071	3521	2412	3103	5595	12430	10240	3030	1447	2482
(WY)	1982	1982	1992	1992	1932	1945	1942	1990	1989	1941	1950	1962
MIN	.12	3.64	5.02	6.08	5.57	4.72	7.71	15.2	5.73	1.33	.000	.000
(WY)	1940	1956	1935	1930	1940	1940	1930	1959	1954	1956	1956	1930

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1921 - 1992	
ANNUAL TOTAL	339321		657939			
ANNUAL MEAN	930		1798		415	
HIGHEST ANNUAL MEAN					1823	1990
LOWEST ANNUAL MEAN					15.6	1956
HIGHEST DAILY MEAN	19400	Dec 21	19400	Dec 21	47300	Apr 25 1922
LOWEST DAILY MEAN	17	Apr 2	17	Sep 7	.00	Aug 2 1924
ANNUAL SEVEN-DAY MINIMUM	19	Jul 19	21	Sep 3	.00	Jul 24 1925
INSTANTANEOUS PEAK FLOW			28200	Dec 20	85000	Apr 25 1922
INSTANTANEOUS PEAK STAGE			8.60	Dec 20	25.91	May 17 1949
INSTANTANEOUS LOW FLOW			17	Oct 24	.00	*
ANNUAL RUNOFF (AC-FT)	673000		1305000		300400	
10 PERCENT EXCEEDS	2360		4030		1040	
50 PERCENT EXCEEDS	45		649		39	
90 PERCENT EXCEEDS	22		30		5.5	

* No flow for many days most years.

08048505 PYLON STREET OUTFALL AT MEACHAM ROAD, FORT WORTH, TX

LOCATION.--Lat 32°49'50", long 97°20'36", Tarrant County, Hydrologic Unit 12030102, on Pylon Street off Blue Mound Road, about 1.0 mile south of Interstate Highway 820, and 5.6 miles north of Fort Worth.

DRAINAGE AREA.--0.04 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: February 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
FEB 03-04	1150	0.25	20.5	0.14	637	539	8.6	7.5	10.5	36	10	320
FEB 22-22	1215	0.39	5.4	0.20	319	178	7.6	7.6	16.0	86	8.8	1600
MAR 03-04	2245	0.41	5.0	0.22	240	264	7.7	7.2	16.0	73	10	4100
APR 17-17	0530	0.29	3.5	0.13	85	258	8.0	7.3	18.0	55	8.7	>18000
MAY 14-14	1132	0.29	2.5	0.16	132	213	8.2	7.2	21.0	97	7.6	5400
JUN 06-06	0230	0.57	2.8	0.37	195	174	7.9	7.5	21.5	34	9.1	290000
SEP 21-21	0055	0.88	4.1	0.58	110	166	8.2	7.9	24.0	43	7.0	K17000

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
FEB 03-04	2600	160	22	140	296	23	318	59	2.6	41	35	1
FEB 22-22	8400	42	6	36	89	98	89	16	0.54	8.0	28	0.5
MAR 03-04	17000	63	11	52	145	25	135	23	1.3	23	43	1
APR 17-17	>33000	63	12	51	126	74	137	23	1.3	19	38	1
MAY 14-14	65000	51	15	36	100	27	116	19	0.90	11	30	0.7
JUN 06-06	150000	43	2	41	85	29	92	16	0.76	11	34	0.7
SEP 21-21	K10000	23	5	18	71	171	48	8.6	0.37	4.9	30	0.4

08048505 PYLON STREET OUTFALL AT MEACHAM ROAD, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)
FEB 03-04	3.5	57	50	0.050	1.10	0.020	0.50	0.100	0.060	<20.0	3	<10
FEB 22-22	2.1	16	8.2	0.070	0.610	0.070	0.80	0.320	0.200	<10.0	1	<10
MAR 03-04	2.0	21	27	0.050	0.710	0.090	0.80	0.660	0.060	<10.0	1	<10
APR 17-17	2.8	17	22	0.050	0.650	0.190	1.1	0.410	0.320	<10.0	2	<10
MAY 14-14	3.9	15	16	0.100	1.10	0.340	1.2	0.440	0.420	<10.0	2	<10
JUN 06-06	1.9	12	13	0.030	0.480	0.120	0.50	0.110	0.080	<20.0	<1	<10
SEP 21-21	1.4	4.8	6.9	0.030	0.310	0.110	0.70	0.200	0.140	<10.0	1	<10

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	THALLIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 03-04	<1	2	5	<0.010	3	<0.10	2	2	<1	<10	20	8.8
FEB 22-22	<1	7	18	<0.010	32	<0.10	7	<2	<1	<5	110	19
MAR 03-04	<1	4	8	<0.010	14	<0.10	3	<2	<1	<10	70	14
APR 17-17	<1	3	8	<0.010	10	<0.10	3	<2	<1	<5	120	18
MAY 14-14	<1	1	9	<0.010	12	<0.10	3	<2	<1	<10	110	24
JUN 06-06	<1	2	4	<0.010	6	<0.10	2	<2	<1	<5	40	8.0
SEP 21-21	<1	7	7	<0.010	26	<0.10	18	<2	<1	<10	80	17

DATE	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACROLEIN TOTAL (UG/L)	ACRYLONITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMOBENZENE WATER, WHOLE, TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L)	CARBON-TETRACHLORIDE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)
FEB 03-04	<1	3	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
FEB 22-22	1	5	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
MAR 03-04	<1	3	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
APR 17-17	<1	2	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
MAY 14-14	<1	11	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
JUN 06-06	<1	2	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
SEP 21-21	<1	3	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20

DATE	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	METHYLCHLORIDE TOTAL (UG/L)	O-CHLOROTOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMO CHLOROPROPANE WATER WHOLE TOT.REC (UG/L)	DIBROMOMETHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)
FEB 03-04	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
FEB 22-22	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
MAR 03-04	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
APR 17-17	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
MAY 14-14	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
JUN 06-06	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
SEP 21-21	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2

08048505 PYLON STREET OUTFALL AT MEACHAM ROAD, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	1,1-DI CHLORO-PROPENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PROPANE WAT, WH TOTAL (UG/L)
FEB 03-04	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
FEB 22-22	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MAR 03-04	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
APR 17-17	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MAY 14-14	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
JUN 06-06	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SEP 21-21	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)
FEB 03-04	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
FEB 22-22	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
MAR 03-04	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
APR 17-17	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	0.8	<5.0	<0.20	<0.2	<0.2
MAY 14-14	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	0.3	<5.0	<0.20	<0.2	<0.2
JUN 06-06	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.4	<5.0	<0.20	<0.2	<0.2
SEP 21-21	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2

DATE	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,2,3-TRI-CHLORO BENZENE WAT, WH REC (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	PSEUDO-CUMENE WATER UNFLTRD REC (UG/L)	MESIT-YLENE WATER UNFLTRD REC (UG/L)
FEB 03-04	<0.2	<0.2	0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
FEB 22-22	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
MAR 03-04	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
APR 17-17	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
MAY 14-14	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
JUN 06-06	<0.2	<0.2	0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
SEP 21-21	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20

DATE	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)
FEB 03-04	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
FEB 22-22	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
MAR 03-04	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
APR 17-17	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
MAY 14-14	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUN 06-06	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
SEP 21-21	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0

08048505 PYLON STREET OUTFALL AT MEACHAM ROAD, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6-DIBENZ-ANTHRA-CENE TOTAL (UG/L)	3,3'-DI-CHLORO-BENZI-DINE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)
FEB 03-04	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
FEB 22-22	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
MAR 03-04	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
APR 17-17	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
MAY 14-14	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0

DATE	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)
FEB 03-04	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
FEB 22-22	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
MAR 03-04	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
APR 17-17	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
MAY 14-14	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0

DATE	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)
FEB 03-04	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
FEB 22-22	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
MAR 03-04	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
APR 17-17	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
MAY 14-14	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0

DATE	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L)
FEB 03-04	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
FEB 22-22	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
MAR 03-04	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
APR 17-17	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
MAY 14-14	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
JUN 06-06	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
SEP 21-21	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

08048505 PYLON STREET OUTFALL AT MEACHAM ROAD, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CHLORDANE TRANS WATER WHOLE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN-I WATER WHOLE REC (UG/L)	ENDOSULFAN BETA TOTAL (UG/L)	ENDOSULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDEHYDE TOTAL (UG/L)
FEB 03-04	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
FEB 22-22	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
MAR 03-04	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
APR 17-17	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
MAY 14-14	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
JUN 06-06	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
SEP 21-21	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)
FEB 03-04	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01
FEB 22-22	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.04
MAR 03-04	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.04
APR 17-17	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
MAY 14-14	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
JUN 06-06	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
SEP 21-21	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10

08048510 WEST FORK TRINITY RIVER OUTFALL AT STATE HIGHWAY 121, FORT WORTH, TX

LOCATION.--Lat 32°46'04", long 97°18'40", Tarrant County, Hydrologic Unit 12030102, on left bank at upstream side of bridge on State Highway 121 and 1.6 miles northeast of Fort Worth.

DRAINAGE AREA.--0.07 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: February 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
MAR 09-09	0040	0.61	4.0	1.3	44	126	8.4	8.1	15.5	70	7.7	19000
MAR 24-24	1904	0.20	4.4	0.31	155	193	7.5	7.2	15.0	180	15	9700
MAY 14-14	1130	0.53	3.5	0.89	978	258	8.1	7.2	23.0	160	7.6	K810000
JUN 06-06	0230	0.51	3.5	0.73	155	105	8.3	7.6	20.5	64	10	68000
JUN 21-21	0930	0.40	3.0	0.42	112	148	7.7	7.1	23.0	110	16	9000
AUG 18-19	1450	0.32	10.2	0.26	7	255	7.3	6.9	24.0	140	7.2	440000

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
MAR 09-09	33000	32	7	25	47	119	55	12	0.41	2.3	13	0.2
MAR 24-24	100000	40	10	30	87	<1	128	15	0.72	2.8	12	0.2
MAY 14-14	270000	70	36	34	119	146	132	25	1.8	8.6	20	0.4
JUN 06-06	49000	26	1	25	51	85	48	10	0.37	1.6	11	0.1
JUN 21-21	23000	45	18	27	51	68	105	17	0.72	3.0	12	0.2
AUG 18-19	350000	87	26	61	126	74	151	32	1.8	8.0	16	0.4

08048510 WEST FORK TRINITY RIVER OUTFALL AT STATE HIGHWAY 121, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)
MAR 09-09	1.6	4.9	2.2	0.040	0.320	0.160	0.90	0.210	0.130	<10.0	1	<10
MAR 24-24	3.9	9.1	4.7	0.070	1.20	0.730	4.2	0.740	0.310	<10.0	1	<10
MAY 14-14	4.8	15	9.5	0.060	1.20	0.660	1.8	0.540	0.470	<10.0	1	<10
JUN 06-06	2.0	4.4	1.8	0.030	0.820	0.280	0.90	0.240	0.200	<10.0	<1	<10
JUN 21-21	3.0	7.4	3.4	0.060	0.740	0.350	1.5	0.290	0.250	<20.0	<1	<10
AUG 18-19	4.6	17	7.7	0.100	1.30	0.170	1.4	0.380	0.240	<10.0	3	<10

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	THALLIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR 09-09	<1	8	11	<0.010	74	<0.10	8	<2	<1	<10	150	19
MAR 24-24	1	8	--	<0.010	130	<0.10	9	<2	<1	<10	290	46
MAY 14-14	1	4	22	<0.010	100	0.10	8	<2	<1	<10	250	45
JUN 06-06	<1	2	11	<0.010	47	<0.10	3	<2	<1	<5	130	13
JUN 21-21	<1	2	15	<0.010	47	<0.10	5	<2	<1	<10	130	39
AUG 18-19	<1	<1	14	<0.010	31	<0.10	5	<1	<1	<10	260	48

DATE	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACROLEIN TOTAL (UG/L)	ACRYLONITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMOBENZENE WATER, WHOLE, TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L)	CARBONTETRACHLORIDE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)
MAR 09-09	1	4	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
MAR 24-24	2	15	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
MAY 14-14	<1	2	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
JUN 06-06	<1	3	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
JUN 21-21	2	7	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
AUG 18-19	2	6	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20

DATE	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	METHYLCHLORIDE TOTAL (UG/L)	O-CHLOROTOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMOCHLOROPROPANE WATER WHOLE TOT.REC (UG/L)	DIBROMOMETHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMOETHANE WATER WHOLE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)
MAR 09-09	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
MAR 24-24	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
MAY 14-14	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
JUN 06-06	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
JUN 21-21	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
AUG 18-19	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2

08048510 WEST FORK TRINITY RIVER OUTFALL AT STATE HIGHWAY 121, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2 -DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)
MAR 09-09	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MAR 24-24	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MAY 14-14	<0.2	<0.20	<0.20	<0.20	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
JUN 06-06	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
JUN 21-21	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AUG 18-19	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)
MAR 09-09	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
MAR 24-24	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	0.3	<5.0	<0.20	<0.2	<0.2
MAY 14-14	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20	<0.2	<0.2	<0.2	<0.20	<0.2	<0.2
JUN 06-06	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.4	<5.0	<0.20	<0.2	<0.2
JUN 21-21	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
AUG 18-19	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2

DATE	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,2,3-TRI-CHLORO BENZENE WAT, WH REC (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	PSEUDO-CUMENE WATER UNFLTRD REC (UG/L)	MESIT-YLENE WATER UNFLTRD REC (UG/L)
MAR 09-09	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
MAR 24-24	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
MAY 14-14	<0.2	<0.2	<0.2	<0.20	<0.20	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
JUN 06-06	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
JUN 21-21	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
AUG 18-19	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20

DATE	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)
MAR 09-09	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
MAR 24-24	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
MAY 14-14	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUN 06-06	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUN 21-21	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
AUG 18-19	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0

08048510 WEST FORK TRINITY RIVER OUTFALL AT STATE HIGHWAY 121, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	1,2,5,6-DIBENZANTHRACENE TOTAL (UG/L)	3,3'-DICHLOROBENZIDINE TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)
MAR 09-09	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
MAR 24-24	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
MAY 14-14	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
JUN 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
AUG 18-19	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0

DATE	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)
MAR 09-09	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
MAR 24-24	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
MAY 14-14	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	--	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
JUN 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	6.0	<5.0
AUG 18-19	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0

DATE	FLUORENE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	2-NITROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)
MAR 09-09	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
MAR 24-24	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
MAY 14-14	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
JUN 21-21	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
AUG 18-19	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0

DATE	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXACHLORIDE TOTAL (UG/L)	DELTA BENZENE HEXACHLORIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE CIS WATER WHOLE TOTAL (UG/L)
MAR 09-09	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
MAR 24-24	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
MAY 14-14	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
JUN 06-06	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
JUN 21-21	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
AUG 18-19	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

08048510 WEST FORK TRINITY RIVER OUTFALL AT STATE HIGHWAY 121, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CHLORDANE TRANS WATER WHOLE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN-I WATER WHOLE REC (UG/L)	ENDOSULFAN BETA TOTAL (UG/L)	ENDOSULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDEHYDE TOTAL (UG/L)
MAR 09-09	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
MAR 24-24	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
MAY 14-14	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
JUN 06-06	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
JUN 21-21	<0.10	0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
AUG 18-19	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)
MAR 09-09	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.30
MAR 24-24	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.30
MAY 14-14	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.20
JUN 06-06	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.30
JUN 21-21	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.20
AUG 18-19	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.40

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, at 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.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 478.70 ft above National Geodetic Vertical Datum of 1929, State Department of Highways and Public Transportation datum.

REMARKS.--No estimated daily discharges. Records good. Flow is largely regulated by Lake Worth (station 08045400) on the West Fork Trinity River and by Benbrook Lake (station 08046500) on the Clear Fork Trinity River. 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. Gage-height telemeter at station.

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 1991 TO SEPTEMBER 199
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	5420	965	7720	3620	4320	919	129	2850	1670	385	78
2	42	5310	1550	6300	3490	4170	805	232	3140	1150	225	85
3	38	4670	857	5600	3570	3690	569	232	2530	804	117	43
4	38	4300	747	5060	4220	4490	381	223	2580	675	73	34
5	37	4610	703	4670	3810	4690	306	201	2490	614	60	26
6	37	4510	722	4690	3450	4020	484	183	2630	572	49	23
7	36	3880	1010	4490	3080	4020	354	100	2660	533	36	20
8	36	3530	958	4320	2810	3730	363	84	2900	521	42	20
9	36	3430	1150	4130	2700	4490	421	78	3460	499	37	25
10	36	3180	1270	3960	2770	3480	468	77	3260	427	37	1680
11	34	3080	2030	3910	2830	3140	456	82	3340	240	34	553
12	33	3020	2790	3930	2830	2740	477	74	3430	127	56	83
13	32	3000	2570	3760	2470	2590	476	74	3830	77	121	47
14	31	2960	2340	3240	2140	2490	432	423	4090	65	57	36
15	31	2960	2130	3280	2090	2390	394	177	4090	54	42	28
16	31	3120	1830	3260	2040	2100	336	755	3910	47	41	25
17	31	3410	1550	3310	1760	1390	737	574	3880	50	35	54
18	31	2550	1730	3840	1080	1780	448	1030	3470	52	89	79
19	30	1400	4460	3740	809	2000	676	1100	2810	64	608	77
20	26	1030	21100	3670	685	1730	652	522	2290	54	124	77
21	25	884	21400	3650	616	1660	523	706	2610	77	66	1120
22	24	930	17200	3490	1070	1150	404	1110	1880	60	54	92
23	26	931	16900	3050	1700	746	273	1100	1280	45	47	43
24	27	807	16000	3020	2900	675	170	1240	1050	41	44	33
25	25	761	15300	2860	6730	1090	126	2050	473	38	40	33
26	2830	732	14700	3130	4840	957	110	2000	572	36	36	30
27	11200	724	12500	4960	4770	994	97	1970	527	643	32	24
28	10300	710	9770	3550	5350	1160	99	3200	2560	601	31	22
29	11600	709	8280	3450	4580	1040	1020	3100	7110	233	29	31
30	7020	777	7940	4070	---	1060	161	2870	2590	62	28	58
31	6030	---	7790	3960	---	967	---	2820	---	1250	30	---
TOTAL	49795	77335	200242	126070	84810	74949	13137	28516	84292	11381	2705	4579
MEAN	1606	2578	6459	4067	2924	2418	438	920	2810	367	87.3	153
MAX	11600	5420	21400	7720	6730	4690	1020	3200	7110	1670	608	1680
MIN	24	709	703	2860	616	675	97	74	473	36	28	20
AC-FT	98770	153400	397200	250100	168200	148700	26060	56560	167200	22570	5370	9080

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1992, BY WATER YEAR (WY)

MEAN	478	458	487	356	371	701	693	1931	1578	282	89.1	92.5
MAX	4881	3878	6459	4067	2924	2418	5668	12540	9448	1654	441	216
(WY)	1982	1982	1992	1992	1992	1992	1990	1990	1989	1982	1979	1980
MIN	9.82	23.8	13.7	30.2	36.4	43.9	35.3	60.6	22.4	5.67	9.21	9.27
(WY)	1978	1980	1978	1978	1981	1986	1983	1988	1978	1978	1985	1984

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1977 - 1992	
ANNUAL TOTAL	387891		757811			
ANNUAL MEAN	1063		2071		628	
HIGHEST ANNUAL MEAN					2071	1992
LOWEST ANNUAL MEAN					40.1	1978
HIGHEST DAILY MEAN	21400	Dec 21	21400	Dec 21	35200	May 3 1990
LOWEST DAILY MEAN	19	Jul 20	20	Sep 7	1.2	Jul 12 1978
ANNUAL SEVEN-DAY MINIMUM	21	Jul 19	26	Oct 19	2.3	Jul 8 1978
INSTANTANEOUS PEAK FLOW			36100	Dec 20	46600	May 2 1990
INSTANTANEOUS PEAK STAGE			36.16	Dec 20	38.02	May 2 1990
INSTANTANEOUS LOW FLOW					0.84	Jul 25 1977
ANNUAL RUNOFF (AC-FT)	769400		1503000		454700	
10 PERCENT EXCEEDS	2880		4500		1570	
50 PERCENT EXCEEDS	86		957		45	
90 PERCENT EXCEEDS	26		36		14	

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

WATER-QUALITY RECORDS

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

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

INSTRUMENTATION.--Since October 1976, a four-parameter water-quality monitor records temperature, DO, pH, and specific conductance continuously at this station. Since the 1990 water year, the satellite downlink was extended to include water-quality parameters such that unit-values can be accessed on a timely basis.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument, pump, or power failure. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request. Dissolved oxygen values bypassing saturation can be attributed to algae blooms in close proximity to the well intake.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,000 microsiemens Nov. 6, 1978; minimum, 90 microsiemens Sept. 10, 1992.
pH: Maximum, 9.8 units Aug. 8, Sept. 2. 1980; minimum, 6.6 units Aug. 15, 1987.
WATER TEMPERATURE: Maximum, 38.0°C July 14, 16, 1978, Aug. 20, 1991; minimum, 0.0°C Jan. 31, Feb. 1, 2, 1985.
DISSOLVED OXYGEN: Maximum, 22.1 mg/L Oct. 4, 1983; minimum, 0.0 mg/L on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 620 microsiemens Sept. 9; minimum, 90 microsiemens Sept. 10.
pH: Maximum, 8.8 units July 30, Aug. 3; minimum, 7.2 units Sept. 21, 22.
WATER TEMPERATURE: Maximum, 35.5°C Oct. 2-4; minimum, 2.5°C Dec. 2.
DISSOLVED OXYGEN: Maximum, 14.7 mg/L Aug. 4; minimum, 3.0 mg/L Sept. 21.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
NOV 19...	1250	1820	338	8.0	15.0	7.8	79	3.3	130	19
JAN 15...	1120	3270	342	8.2	9.0	11.3	97	1.0	150	17
APR 14...	1250	440	505	8.2	22.5	9.4	111	1.5	200	20
JUN 10...	1032	3270	476	8.3	27.0	7.8	101	1.5	170	26
AUG 25...	1145	40	408	8.0	28.0	8.0	104	2.7	140	43
SEP 03...	1455	33	469	8.2	28.5	9.3	123	3.6	180	32

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 19...	44	5.1	19	0.7	4.7	110	25	20	0.20	6.3
JAN 15...	51	4.8	12	0.4	4.1	130	21	18	0.20	9.0
APR 14...	68	7.2	22	0.7	3.8	180	40	32	0.30	4.6
JUN 10...	54	8.8	31	1	4.2	150	35	44	0.20	4.4
AUG 25...	49	5.4	23	0.8	3.5	100	39	30	0.30	7.6
SEP 03...	60	6.6	28	0.9	3.5	150	44	35	0.30	8.2

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
NOV 19...	191	0.310	0.050	0.360	0.130	1.1	1.2	0.280	0.100
JAN 15...	198	0.300	0.030	0.330	0.090	0.31	0.40	0.080	0.060
APR 14...	285	0.310	0.020	0.330	0.020	0.38	0.40	0.040	0.020
JUN 10...	269	0.048	0.010	0.058	0.020	0.58	0.60	0.050	0.020
AUG 25...	219	0.050	0.020	0.070	0.020	0.58	0.60	0.050	0.020
SEP 03...	273	--	<0.010	0.092	0.030	0.57	0.60	0.110	0.020

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

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	49795	313	177	23800	20	2720	24	3260	120
NOV.	1991	77335	339	191	39900	22	4620	27	5580	130
DEC.	1991	200242	308	174	94000	20	10700	24	12700	120
JAN.	1992	126070	339	191	65200	22	7530	27	9090	130
FEB.	1992	84810	391	221	50700	27	6070	33	7520	150
MAR.	1992	74949	433	245	49500	30	6100	38	7710	160
APR.	1992	13137	489	277	9820	35	1260	46	1620	170
MAY	1992	28516	437	248	19100	31	2360	39	2980	160
JUNE	1992	84292	455	258	58700	32	7350	41	9390	160
JULY	1992	11381	437	247	7600	31	945	39	1200	160
AUG.	1992	2705	399	225	1650	27	198	34	247	150
SEPT	1992	4579	368	208	2570	25	304	30	374	140
TOTAL		757811	**	**	422000	**	50100	**	61700	**
WTD.AVG.		2071	365	206	**	24	**	30	**	140

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	458	432	445	396	372	387	410	382	394	316	304	310
2	462	434	449	400	374	389	420	310	363	314	310	311
3	472	444	460	---	---	e350	400	366	382	320	314	317
4	476	456	465	---	---	e280	406	384	394	326	316	322
5	484	468	476	---	---	e340	408	402	405	328	326	326
6	492	482	487	340	336	339	410	398	404	326	320	323
7	496	486	493	340	332	336	398	378	387	322	320	321
8	504	488	495	334	322	328	406	284	380	324	320	322
9	506	476	493	324	312	319	386	314	359	324	320	322
10	498	482	491	316	310	314	398	380	393	324	322	323
11	504	480	492	310	308	309	416	368	398	330	324	327
12	504	476	491	314	310	312	386	374	380	332	326	328
13	492	466	481	314	310	311	386	380	384	346	326	334
14	490	472	481	314	308	311	384	380	383	344	340	341
15	504	476	489	316	308	310	388	384	385	342	340	341
16	494	474	486	328	308	314	402	386	390	348	342	344
17	510	482	497	354	314	332	392	388	391	358	348	352
18	510	478	497	360	326	333	410	390	397	358	346	353
19	510	482	496	376	336	363	386	310	343	356	352	353
20	512	488	500	396	372	388	---	---	e250	356	354	355
21	520	492	508	396	382	389	---	---	e200	364	356	358
22	524	486	506	382	378	380	---	---	e260	368	354	363
23	532	508	521	382	378	381	---	---	e332	368	360	364
24	536	504	518	384	374	379	344	338	341	362	360	361
25	562	512	532	376	372	374	340	332	337	364	360	361
26	528	146	298	378	374	376	336	320	330	380	308	360
27	352	98	211	382	376	378	320	312	315	368	310	341
28	366	282	327	380	370	375	318	312	315	368	364	366
29	360	290	320	378	370	374	326	318	323	430	366	380
30	390	362	380	382	372	376	324	312	319	374	360	372
31	402	352	372	---	---	---	314	308	311	370	368	369
MONTH	562	98	457	400	308	348	420	284	353	430	304	343

e Estimated

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

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	376	372	373	416	408	414	482	470	476	452	408	427
2	378	374	376	420	414	417	492	482	486	456	420	428
3	396	376	380	---	---	e411	512	486	496	518	460	497
4	388	378	382	---	---	e415	526	512	519	522	490	508
5	378	370	375	---	---	e415	536	524	529	508	480	497
6	388	374	380	---	---	e415	554	512	521	498	484	489
7	392	388	390	420	414	416	520	512	516	528	494	517
8	400	392	396	424	418	420	520	500	511	524	512	519
9	400	394	397	426	358	396	530	510	518	528	512	522
10	396	392	394	428	416	423	528	512	520	532	512	526
11	394	392	393	434	426	430	528	498	512	532	512	520
12	416	394	398	440	434	438	516	492	506	540	508	528
13	404	398	401	444	436	440	504	482	494	548	528	540
14	412	404	410	444	440	441	512	496	503	548	424	518
15	412	410	411	442	440	441	514	498	505	512	476	490
16	414	410	412	456	438	446	518	500	508	540	292	443
17	418	412	416	480	456	464	518	404	455	---	---	e420
18	444	414	423	482	458	472	480	440	457	---	---	e400
19	464	448	457	468	452	456	490	448	471	---	---	e390
20	476	466	469	460	454	457	486	476	481	---	---	e410
21	484	476	480	464	458	460	484	470	475	---	---	e422
22	496	400	466	472	462	465	504	486	493	450	398	436
23	436	396	413	486	472	475	518	502	509	458	394	440
24	416	312	381	506	394	495	528	510	520	462	452	458
25	376	296	334	510	438	498	532	508	521	460	314	421
26	394	360	385	490	472	476	538	508	525	430	400	417
27	424	388	396	482	462	475	532	508	521	454	426	449
28	428	400	406	492	462	473	544	400	527	456	314	396
29	414	400	411	476	468	473	472	226	416	454	408	444
30	---	---	---	476	456	468	462	456	460	458	454	456
31	---	---	---	474	458	468	---	---	---	468	458	461
MONTH	496	296	404	510	358	447	554	226	498	548	292	464

e Estimated

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	466	322	452	464	450	458	426	320	395	508	384	472
2	462	390	434	470	464	465	414	362	392	486	420	439
3	468	458	464	474	464	470	410	336	375	476	442	462
4	480	466	476	476	464	470	358	322	344	488	476	483
5	482	476	478	472	460	468	372	318	349	494	476	488
6	480	444	466	470	458	465	386	330	369	514	494	500
7	480	476	479	470	460	465	422	388	402	520	500	513
8	486	480	484	472	460	466	458	412	432	540	512	527
9	490	436	469	472	460	467	430	414	423	620	508	531
10	480	470	475	472	462	468	460	428	443	522	90	397
11	484	480	482	484	470	478	452	432	441	340	250	308
12	490	484	488	502	482	495	514	392	460	370	332	352
13	494	488	490	530	502	518	422	348	391	410	372	389
14	492	484	489	548	502	529	450	398	428	424	412	418
15	490	480	486	550	520	538	480	450	463	428	390	417
16	484	474	481	568	542	553	486	470	478	414	384	404
17	478	472	475	576	536	555	496	474	483	406	346	381
18	478	472	475	560	512	546	510	258	476	444	346	387
19	478	472	475	548	514	535	436	320	365	386	364	374
20	480	476	477	540	522	531	414	394	406	410	370	391
21	478	384	457	556	424	517	422	392	410	392	202	304
22	472	452	464	524	454	500	412	382	400	368	306	344
23	472	382	458	522	502	515	398	382	391	404	366	385
24	442	392	421	542	518	533	402	382	391	430	390	407
25	428	378	400	548	534	541	408	392	403	428	402	414
26	426	334	415	554	542	548	416	400	409	426	404	418
27	460	412	444	---	---	e420	436	412	424	430	404	414
28	470	130	347	---	---	e320	450	434	442	458	430	441
29	434	170	327	---	---	e328	460	440	450	468	436	455
30	448	434	439	360	328	340	470	458	463	424	374	385
31	---	---	---	366	142	289	488	468	471	---	---	---
MONTH	494	130	456	576	142	477	514	258	418	620	90	420
YEAR	620	90	424									

e Estimated

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

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

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	33.5	23.0	28.5	11.5	10.0	10.5	11.0	8.0	9.5	10.0	10.0	10.0
2	35.5	24.0	29.5	10.0	8.0	9.0	8.0	2.5	5.5	10.0	9.5	10.0
3	35.5	25.5	30.5	---	---	---	9.0	4.5	6.0	10.5	9.0	9.5
4	35.5	25.5	30.0	---	---	---	10.5	4.5	7.0	11.0	9.5	10.0
5	26.0	17.5	22.0	---	---	---	11.5	5.5	8.0	11.5	10.5	11.0
6	27.0	15.5	21.5	13.5	11.5	12.5	13.0	8.5	10.5	11.0	10.5	10.5
7	28.0	16.5	22.5	12.5	10.0	11.5	15.5	11.5	13.5	11.0	10.5	10.5
8	27.5	17.5	22.5	12.0	9.5	10.5	19.0	15.0	17.0	11.0	10.0	10.5
9	29.5	17.5	23.5	12.5	10.0	11.0	20.0	17.0	18.0	11.0	9.5	10.0
10	32.5	20.0	26.5	13.0	10.5	11.5	17.0	14.5	16.0	10.5	9.5	10.0
11	34.0	23.0	28.5	12.5	11.0	11.5	16.0	15.0	15.5	10.0	9.5	9.5
12	33.0	23.0	28.5	12.5	11.0	11.5	17.0	15.5	16.0	10.5	9.5	10.0
13	33.0	22.5	28.5	12.5	11.0	11.5	16.5	15.5	16.0	10.5	9.0	10.0
14	30.0	23.5	26.5	13.0	12.0	12.5	15.0	13.0	14.5	10.0	8.5	9.0
15	26.0	17.5	22.0	14.5	13.0	13.5	13.5	12.0	12.5	9.0	7.5	8.5
16	26.0	16.5	21.5	15.0	13.5	14.0	13.5	11.5	12.5	8.5	7.0	7.5
17	29.0	18.0	23.0	15.0	13.5	14.5	14.5	11.5	12.5	8.0	7.5	7.5
18	30.5	20.0	25.0	15.5	12.5	14.0	13.0	11.0	12.5	7.5	6.5	7.0
19	26.5	19.0	23.0	15.5	14.0	15.0	11.0	8.5	9.5	7.5	6.5	7.0
20	23.0	16.5	20.0	14.5	11.5	13.0	---	---	---	7.5	6.0	7.0
21	26.0	16.0	21.0	14.5	10.5	12.0	---	---	---	7.5	7.0	7.5
22	29.0	19.0	24.0	14.5	10.5	12.0	---	---	---	8.5	7.0	8.0
23	30.5	23.5	26.5	11.0	8.0	9.5	---	---	---	8.0	6.5	7.0
24	32.5	24.5	28.5	11.5	7.5	9.0	---	---	---	7.5	6.0	7.0
25	30.0	26.0	27.5	11.5	7.5	9.0	10.0	9.5	9.5	8.0	6.5	7.5
26	27.0	19.5	22.0	11.0	7.5	9.5	10.0	9.5	9.5	8.5	7.0	7.5
27	26.5	18.5	21.5	15.0	10.0	12.5	9.5	9.5	9.5	8.5	7.5	8.0
28	30.5	21.0	25.0	18.5	13.5	16.0	9.5	9.0	9.5	8.5	7.5	8.0
29	22.0	16.0	19.0	20.0	16.5	18.0	9.5	9.0	9.5	10.0	8.0	8.5
30	18.0	16.5	17.5	16.5	11.5	14.5	10.0	9.0	9.5	9.5	7.5	8.5
31	16.5	10.0	12.5	---	---	---	10.0	9.5	9.5	10.0	8.5	9.0
MONTH	35.5	10.0	24.0	20.0	7.5	12.0	20.0	2.5	11.5	11.5	6.0	9.0

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	10.0	8.5	9.5	14.0	12.0	13.0	18.0	15.5	16.5	27.5	20.0	23.5
2	10.0	9.5	9.5	15.0	13.5	14.0	15.5	13.5	15.0	27.0	21.0	24.0
3	9.5	9.0	9.5	---	---	---	18.0	12.5	15.0	26.0	22.5	24.0
4	10.0	9.5	9.5	---	---	---	20.5	13.0	16.0	28.5	22.0	25.0
5	9.5	8.5	9.0	16.0	14.0	15.0	18.0	14.5	16.0	30.0	21.5	25.5
6	10.0	8.5	9.5	16.5	14.5	15.5	17.5	15.5	16.5	27.0	21.0	24.0
7	10.0	8.5	9.5	16.5	15.0	16.0	22.0	14.5	18.0	26.0	18.5	22.5
8	10.0	8.5	9.5	16.0	15.5	16.0	22.5	17.0	19.0	26.0	19.0	22.5
9	10.0	9.0	9.5	17.0	15.5	16.0	24.5	18.5	21.0	24.0	19.5	22.5
10	10.0	9.0	9.5	15.0	12.5	13.5	24.0	19.5	21.5	25.5	20.0	22.5
11	11.0	10.5	10.5	14.0	12.0	13.5	25.5	19.5	22.0	28.0	22.0	25.0
12	12.5	11.0	11.5	15.0	12.5	14.0	23.0	21.0	22.0	31.0	24.0	27.5
13	11.5	11.0	11.0	14.5	13.0	14.0	25.0	20.5	22.0	31.5	25.0	28.5
14	13.5	11.5	12.5	16.0	13.5	15.0	25.5	20.5	22.5	28.5	24.0	26.0
15	13.5	12.0	12.5	16.5	14.5	15.5	24.0	20.5	22.0	30.5	23.5	27.0
16	13.0	12.0	12.5	16.0	14.5	15.5	23.5	20.0	21.5	27.5	21.5	24.0
17	13.5	12.0	12.5	16.5	15.5	16.0	21.0	19.0	20.5	---	---	---
18	15.5	12.0	13.5	18.0	15.5	17.0	22.5	19.0	20.5	---	---	---
19	15.5	12.0	13.5	17.0	15.0	16.0	20.0	18.5	19.5	---	---	---
20	15.5	12.5	13.5	17.0	15.0	16.0	19.5	17.0	18.5	---	---	---
21	16.5	12.5	14.0	16.0	15.0	15.5	21.5	16.5	18.5	---	---	---
22	15.5	13.5	14.5	15.5	13.5	15.0	24.0	17.5	20.0	25.5	22.5	24.0
23	15.0	14.0	14.5	17.5	12.5	14.5	26.0	17.5	21.5	26.0	22.5	24.0
24	14.0	12.5	14.0	16.5	12.5	14.5	26.5	20.5	23.0	25.0	23.5	24.5
25	12.5	10.0	11.5	18.0	13.5	15.5	24.5	19.0	21.5	23.5	20.0	22.5
26	13.0	11.5	12.0	20.0	14.5	17.0	26.5	18.0	22.0	23.0	21.5	22.0
27	13.5	11.5	12.5	19.5	16.5	17.5	26.0	19.0	23.0	22.5	21.5	21.5
28	13.5	11.5	12.5	18.5	16.5	17.5	25.5	18.5	22.5	21.5	19.5	20.5
29	14.0	12.0	13.0	20.0	16.0	18.0	24.5	16.0	21.0	20.0	19.0	19.5
30	---	---	---	20.5	16.0	18.0	24.5	19.5	21.5	20.5	19.0	20.0
31	---	---	---	19.5	15.5	17.5	---	---	---	20.0	19.5	19.5
MONTH	16.5	8.5	11.5	20.5	12.0	15.5	26.5	12.5	20.0	31.5	18.5	23.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.0	19.0	20.0	30.5	27.5	29.0	31.5	26.5	28.5	27.5	25.5	26.0
2	21.5	19.0	20.5	32.0	28.5	30.0	31.0	25.5	28.0	30.5	24.0	27.0
3	22.5	20.5	21.5	33.0	28.5	30.0	32.5	25.0	28.5	30.0	26.5	28.5
4	24.0	21.5	22.5	33.0	27.5	30.0	33.0	28.0	30.5	30.5	27.0	28.5
5	24.5	22.5	23.5	32.0	28.0	30.0	33.0	28.0	31.0	32.5	26.5	29.0
6	25.0	21.5	23.5	33.0	27.5	30.0	33.0	29.0	31.0	30.0	27.0	28.5
7	25.5	24.0	24.5	32.5	27.0	29.5	34.5	28.5	31.0	33.5	26.0	29.0
8	26.0	23.0	24.5	33.0	27.5	30.0	34.0	28.5	31.0	34.0	27.0	30.0
9	26.0	24.0	25.0	33.0	27.5	30.0	34.5	29.0	31.5	33.5	26.0	30.0
10	27.5	25.0	26.5	32.0	28.0	29.5	35.0	29.5	32.5	30.0	19.5	26.0
11	28.0	26.5	27.5	32.0	25.5	28.5	35.0	31.0	32.5	27.5	23.0	24.5
12	28.5	26.5	27.5	31.5	25.0	28.0	31.0	28.0	29.5	27.5	23.5	25.5
13	29.0	26.5	28.0	31.0	25.0	28.0	31.5	27.0	29.0	29.0	25.5	27.5
14	28.0	26.0	27.5	32.0	25.5	29.0	30.5	27.5	29.0	30.5	26.0	28.0
15	28.5	26.5	27.5	33.5	27.5	30.5	29.5	26.5	28.0	30.5	26.5	28.5
16	29.5	27.0	28.0	31.0	27.5	29.0	29.5	25.5	27.5	31.0	25.5	28.0
17	29.5	27.5	28.5	29.5	26.5	28.0	30.0	25.5	27.5	30.5	27.0	28.5
18	29.5	27.5	28.5	28.0	26.5	27.5	26.5	22.0	25.0	31.0	26.5	29.0
19	30.0	28.0	29.0	31.5	25.5	28.0	24.5	22.0	23.5	31.5	27.0	29.5
20	30.0	28.0	29.0	30.5	26.0	28.5	28.0	21.5	24.5	31.5	27.0	29.5
21	28.5	26.5	27.5	29.5	27.0	28.0	29.5	24.0	27.0	34.5	26.0	30.5
22	28.0	27.0	27.5	32.0	26.5	29.0	31.0	26.0	28.5	29.0	27.5	28.0
23	31.0	26.5	28.0	33.5	27.5	30.5	31.0	27.0	29.0	27.0	23.5	25.5
24	33.0	27.0	29.5	34.5	29.0	31.5	30.5	27.0	29.0	25.5	21.5	24.0
25	29.5	27.0	28.0	35.0	29.5	32.0	31.5	26.5	29.0	27.5	21.5	24.0
26	33.0	26.5	29.5	34.5	29.0	31.5	32.5	28.0	30.0	29.5	23.0	26.0
27	32.0	28.0	30.0	---	---	---	28.5	24.5	26.5	29.0	23.5	26.0
28	28.5	21.0	26.0	---	---	---	29.0	22.0	25.0	28.5	22.5	25.5
29	27.5	21.5	24.5	---	---	---	30.0	23.5	26.5	28.0	22.5	25.0
30	29.5	26.5	28.0	32.5	26.5	29.5	29.5	24.5	26.5	24.5	20.5	23.0
31	---	---	---	30.5	24.0	28.0	29.5	25.0	27.0	---	---	---
MONTH	33.0	19.0	26.5	35.0	24.0	29.5	35.0	21.5	28.5	34.5	19.5	27.5
YEAR	35.5	2.5	20.0									

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

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	12.9	6.6	9.4	9.8	9.5	9.6	10.8	10.3	10.5	---	---	---
2	12.3	6.3	9.0	9.8	9.1	9.5	11.0	10.3	10.6	---	---	---
3	11.5	5.9	8.3	---	---	---	10.9	10.4	10.7	---	---	---
4	10.8	5.9	8.1	---	---	---	11.0	10.7	10.8	---	---	---
5	11.4	6.8	8.8	---	---	---	11.0	10.6	10.8	---	---	---
6	12.3	7.3	9.4	10.6	10.0	10.4	11.3	10.5	10.8	---	---	---
7	12.0	7.1	9.3	10.6	10.1	10.4	11.1	10.4	10.7	---	---	---
8	11.6	6.9	8.9	10.8	10.6	10.7	11.0	9.6	10.4	---	---	---
9	12.1	6.6	8.9	10.9	10.6	10.8	10.6	9.6	10.1	---	---	---
10	11.5	6.1	8.4	10.7	10.5	10.6	11.2	10.0	10.6	---	---	---
11	11.8	5.7	8.3	10.6	10.3	10.5	10.7	10.2	10.5	---	---	---
12	11.9	5.5	8.3	10.7	10.3	10.5	10.7	10.2	10.5	---	---	---
13	12.2	5.6	8.3	10.5	10.2	10.4	11.1	10.5	10.8	---	---	---
14	11.9	5.3	8.2	10.7	10.3	10.5	11.5	10.8	11.2	11.4	10.8	11.0
15	12.9	6.6	9.4	10.9	10.5	10.7	11.3	10.3	10.9	12.4	11.5	11.9
16	13.5	6.7	9.6	11.0	10.5	10.8	10.8	10.3	10.5	13.0	12.1	12.6
17	12.8	6.7	9.1	11.0	10.5	10.8	---	---	---	12.6	12.3	12.4
18	12.9	6.3	9.0	11.1	10.0	10.8	---	---	---	12.7	12.2	12.5
19	13.0	5.9	8.9	10.0	9.4	9.7	---	---	---	12.9	12.2	12.6
20	14.1	6.2	9.5	9.9	9.6	9.8	---	---	---	12.9	12.3	12.5
21	13.8	6.5	9.7	9.9	9.7	9.8	---	---	---	12.6	12.1	12.3
22	12.8	6.2	8.9	10.1	9.6	9.8	---	---	---	12.3	11.9	12.1
23	11.7	5.1	7.7	10.5	10.0	10.3	---	---	---	12.6	12.0	12.3
24	11.8	5.0	7.8	10.3	10.1	10.2	---	---	---	12.7	12.1	12.4
25	11.3	5.3	7.7	10.4	9.9	10.1	---	---	---	12.7	12.1	12.3
26	8.3	6.3	7.3	10.2	9.7	10.0	---	---	---	12.5	11.6	12.1
27	8.5	6.3	7.3	10.4	9.5	9.9	---	---	---	12.1	11.7	11.9
28	8.6	5.7	7.3	10.1	9.1	9.5	---	---	---	12.1	11.8	12.0
29	9.2	8.3	8.8	9.9	9.0	9.4	---	---	---	12.1	11.6	11.9
30	9.0	8.9	9.0	10.6	9.4	10.1	---	---	---	12.1	11.5	11.9
31	9.9	8.9	9.5	---	---	---	---	---	---	12.2	11.3	11.7
MONTH	14.1	5.0	8.6	11.1	9.0	10.2	11.5	9.6	10.6	13.0	10.8	12.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.1	11.3	11.6	11.4	10.5	10.8	11.1	8.9	9.7	10.5	7.3	8.7
2	11.8	11.3	11.5	11.1	10.2	10.6	11.1	9.0	9.9	10.9	7.4	9.0
3	11.6	11.3	11.5	---	---	---	12.0	9.1	10.3	12.2	7.2	9.3
4	11.7	11.2	11.4	---	---	---	12.1	8.6	10.0	12.0	7.2	9.6
5	12.5	11.4	11.9	10.8	10.0	10.5	11.0	8.2	9.4	11.2	7.1	9.0
6	12.3	11.7	12.1	10.7	9.8	10.2	10.3	8.0	8.9	10.6	7.1	8.8
7	12.4	11.6	11.9	10.7	9.7	10.2	11.4	8.2	9.5	12.3	7.6	9.3
8	12.4	11.6	11.9	10.2	9.6	9.9	11.0	7.8	9.0	10.0	7.6	8.6
9	12.3	11.6	11.9	9.9	9.4	9.7	10.6	7.6	8.8	9.5	7.4	8.5
10	12.1	11.4	11.7	10.8	9.7	10.3	10.3	7.3	8.5	10.0	7.2	8.5
11	11.8	11.2	11.5	10.7	9.9	10.3	10.3	7.3	8.6	10.0	6.9	8.2
12	11.9	11.0	11.3	10.5	9.8	10.2	9.5	7.1	8.0	11.2	6.5	8.0
13	12.1	11.1	11.5	10.7	9.8	10.2	10.0	7.3	8.3	9.3	6.2	7.5
14	11.7	10.9	11.3	10.6	9.6	10.1	10.3	7.2	8.5	7.6	5.8	6.5
15	11.9	10.7	11.2	10.7	9.5	10.0	10.3	7.4	8.6	9.2	5.6	7.3
16	11.8	10.9	11.3	10.7	9.4	9.9	10.0	7.6	8.6	7.6	5.8	6.7
17	11.7	10.7	11.1	10.0	9.1	9.5	8.4	7.4	8.0	---	---	---
18	11.6	10.5	11.0	10.3	9.0	9.5	9.1	7.5	8.2	---	---	---
19	11.8	10.4	10.9	11.8	9.2	10.4	8.7	7.5	7.9	---	---	---
20	11.9	10.3	11.0	11.9	9.7	10.6	9.3	7.9	8.5	---	---	---
21	12.0	10.0	10.9	10.4	9.5	9.8	9.4	8.1	8.7	---	---	---
22	10.7	9.9	10.1	10.5	9.3	9.8	9.5	8.0	8.7	9.3	7.4	8.1
23	11.0	10.0	10.4	12.2	9.7	10.9	10.1	8.0	8.8	9.5	7.6	8.3
24	10.7	9.8	10.4	11.9	9.0	10.4	9.9	7.3	8.4	9.1	7.8	8.3
25	11.3	10.6	10.9	11.1	9.1	9.9	11.0	7.4	9.1	8.6	7.8	8.1
26	10.9	10.2	10.7	11.2	9.0	9.8	11.5	7.6	9.7	8.6	7.9	8.1
27	10.9	10.6	10.7	11.0	8.9	9.7	10.4	7.5	9.0	8.6	7.9	8.1
28	11.1	10.5	10.8	10.5	8.9	9.5	9.6	6.7	8.4	8.3	7.9	8.1
29	11.1	10.4	10.8	11.1	8.9	9.7	8.7	7.1	7.9	8.6	8.3	8.4
30	---	---	---	11.4	8.8	9.8	9.5	7.3	8.3	8.9	8.3	8.6
31	---	---	---	11.4	9.0	9.8	---	---	---	8.7	8.5	8.6
MONTH	12.5	9.8	11.2	12.2	8.8	10.1	12.1	6.7	8.8	12.3	5.6	8.3

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

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.8	8.0	8.5	7.8	6.5	7.1	9.5	5.9	7.1	7.0	4.7	6.1
2	8.7	8.1	8.4	8.1	6.2	7.1	8.6	5.9	7.0	11.2	4.5	7.4
3	9.0	7.9	8.5	8.5	6.1	7.0	12.6	5.7	8.1	10.7	5.3	7.4
4	8.9	7.8	8.3	8.6	6.1	7.2	14.7	5.9	9.6	10.8	5.9	8.0
5	8.6	7.8	8.1	8.6	5.9	7.1	12.5	4.7	8.1	11.6	6.7	8.8
6	8.9	7.8	8.2	8.7	5.8	7.1	12.1	5.7	8.1	9.6	6.1	7.8
7	8.6	7.6	8.1	8.7	5.7	7.1	10.9	5.7	7.9	11.1	6.3	8.2
8	8.7	7.8	8.2	8.8	5.8	7.1	11.1	5.4	8.0	10.6	5.9	8.0
9	8.4	7.5	7.9	8.7	5.8	7.0	11.9	6.1	8.5	9.8	5.7	7.7
10	8.6	7.3	7.9	9.2	5.8	7.2	11.6	6.1	8.5	8.0	5.9	6.8
11	8.4	7.2	7.8	9.4	6.0	7.6	10.2	6.2	8.0	6.5	6.1	6.3
12	8.5	7.3	7.8	9.4	6.2	7.6	10.0	6.0	7.4	7.0	5.8	6.4
13	8.3	7.2	7.7	12.9	6.2	9.5	10.0	5.4	7.3	8.7	6.0	7.1
14	8.3	7.3	7.8	13.3	10.8	12.2	9.8	5.4	7.5	11.7	6.6	8.5
15	8.4	7.2	7.8	13.2	6.9	10.4	10.2	6.5	8.1	13.8	4.9	9.3
16	8.4	7.2	7.7	9.3	5.5	7.4	8.8	6.4	7.4	12.0	7.9	9.8
17	8.4	7.3	7.8	10.4	5.7	7.9	9.9	6.5	8.0	9.6	6.2	8.1
18	8.4	7.3	7.8	9.9	6.1	7.9	8.6	6.4	7.3	9.1	5.5	7.1
19	8.4	7.3	7.8	12.5	5.8	8.8	8.2	6.1	7.3	10.0	5.1	7.2
20	8.3	7.2	7.7	11.5	5.7	8.2	9.9	6.4	8.0	9.0	4.9	6.9
21	7.7	7.2	7.4	10.6	5.2	7.4	10.3	6.6	8.4	6.5	3.0	4.2
22	8.1	7.2	7.6	10.0	5.6	7.8	10.3	6.5	8.4	6.7	3.7	5.0
23	8.6	6.8	7.7	10.0	4.9	7.3	9.6	6.1	7.9	8.4	5.1	6.5
24	9.5	6.6	7.9	9.4	5.2	7.1	9.7	5.8	7.7	11.6	5.2	8.2
25	9.2	6.3	7.3	9.3	5.0	6.8	10.4	5.8	7.9	9.6	7.2	8.4
26	10.4	6.4	7.9	9.0	4.9	6.9	9.8	5.8	7.8	9.8	7.1	8.2
27	10.7	6.0	7.9	---	---	---	10.0	5.6	7.7	9.5	6.8	8.1
28	8.3	6.1	7.4	---	---	---	10.6	3.3	8.2	9.4	6.4	8.0
29	8.0	7.3	7.8	---	---	---	10.6	6.6	8.5	8.7	6.6	7.6
30	8.2	6.8	7.4	13.4	4.7	8.5	10.1	6.4	8.2	9.3	6.1	7.7
31	---	---	---	9.2	6.6	7.5	9.3	6.2	7.7	---	---	---
MONTH	10.7	6.0	7.9	13.4	4.7	7.8	14.7	3.3	7.9	13.8	3.0	7.5
YEAR	14.7	3.0	9.1									

08048545 DRY BRANCH OUTFALL AT 33RD AVENUE, FORT WORTH, TX

LOCATION.--Lat 32°48'12", long 97°18'48", Tarrant County, Hydrologic Unit 12030102, on Railroad spur line, 0.25 mile south of 33rd Avenue, and 3.5 miles northeast of Fort Worth.

DRAINAGE AREA.--0.07 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: March 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE (uS/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (uS/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
MAR 24-24	1848	0.58	2.7	0.50	260	162	7.9	7.9	13.0	250	7.2	8300
SEP 01-01	1217	0.22	1.0	0.09	860	--	8.0	--	25.0	84	13	110000
SEP 10-10	1400	1.1	4.8	0.73	390	110	7.5	8.0	27.0	55	6.2	K70

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
MAR 24-24	17000	27	3	24	70	2490	46	10	0.48	4.2	24	0.4
SEP 01-01	210000	--	--	26	--	--	--	--	--	--	--	--
SEP 10-10	K33	29	2	27	63	294	45	11	0.49	3.5	19	0.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)
MAR 24-24	1.8	8.8	3.9	0.040	0.900	0.100	2.0	0.530	0.050	<10.0	4	10
SEP 01-01	--	--	--	0.050	0.510	0.080	0.80	0.160	0.060	<20.0	2	<10
SEP 10-10	1.6	4.3	3.3	0.050	0.370	0.110	0.70	0.190	0.040	<10.0	1	<10

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	THAL-LIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR 24-24	4	100	--	<0.010	270	<0.10	59	<2	<1	<10	1400	46
SEP 01-01	1	15	40	<0.010	45	<0.10	11	<2	<1	<5	710	27
SEP 10-10	<1	18	27	0.040	250	<0.10	7	<1	<1	<5	730	15

08048545 DRY BRANCH OUTFALL AT 33RD AVENUE, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACRO-LEIN TOTAL (UG/L)	ACRYLO-NITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
MAR 24-24	<1	5	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
SEP 01-01	3	3	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
SEP 10-10	2	6	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMO CHLORO-PROPANE WATER WHOLE TOT.REC (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)
MAR 24-24	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	1.9
SEP 01-01	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
SEP 10-10	0.5	<0.2	<1.0	0.5	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	0.7	0.3

DATE	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)
MAR 24-24	<0.2	<5.0	<5.0	<5.0	<0.2	0.6	<0.2	10	0.3	<0.2	<0.2	<0.2
SEP 01-01	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	1.4	<0.2	<0.2	<0.2	<0.2
SEP 10-10	<0.2	<5.0	<5.0	<5.0	<0.2	0.3	<0.2	6.6	<0.2	<0.2	<0.2	<0.2

DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)
MAR 24-24	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	3.3	<5.0	<0.20	<0.2	<0.2
SEP 01-01	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
SEP 10-10	<0.2	<0.2	1.5	<5.0	0.20	<0.20	<0.2	0.4	<5.0	0.30	<0.2	<0.2

08048545 DRY BRANCH OUTFALL AT 33RD AVENUE, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,2,3-TRI-CHLORO BENZENE WAT, WH REC (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	PSEUDO-CUMENE WATER UNFLTRD REC (UG/L)	MESIT-YLENE WATER UNFLTRD REC (UG/L)
MAR 24-24	<0.2	13	0.3	<0.20	<5.0	5.4	<0.2	7.6	<0.2	<0.2	<0.20	<0.20
SEP 01-01	<0.2	0.9	<0.2	<0.20	<5.0	0.8	<0.2	0.5	<0.2	<0.2	<0.20	<0.20
SEP 10-10	<0.2	2.3	0.7	<0.20	<5.0	0.5	0.2	1.3	<0.2	<0.2	1.3	0.30

DATE	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)
MAR 24-24	0.4	1.5	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	25.0	<5.0
SEP 01-01	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
SEP 10-10	0.7	10	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0

DATE	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6 -DIBENZ -ANTHRA -CENE TOTAL (UG/L)	3,3'-DI-CHLORO-BENZI-DINE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)
MAR 24-24	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
SEP 01-01	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
SEP 10-10	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0

08048545 DRY BRANCH OUTFALL AT 33RD AVENUE, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)
MAR 24-24	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	10.0	9.0
SEP 01-01	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	9.0	<5.0
SEP 10-10	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0

DATE	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)
MAR 24-24	<5.0	<5.0	<5.0	<5.0	27.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
SEP 01-01	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
SEP 10-10	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0

DATE	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L)
MAR 24-24	<5.0	<30.0	5.0	<5.0	6.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
SEP 01-01	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
SEP 10-10	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

DATE	CHLOR-DANE TRANS WATER WHOLE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN-I WATER WHOLE REC (UG/L)	ENDO-SULFAN BETA TOTAL (UG/L)	ENDO-SULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDE-HYDE TOTAL (UG/L)
MAR 24-24	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
SEP 01-01	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
SEP 10-10	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
MAR 24-24	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	0.8	<0.1	0.50
SEP 01-01	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	0.1	<0.1	<0.10
SEP 10-10	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10

08048700 EASTERN HILLS HIGH SCHOOL OUTFALL AT WEILER DRIVE, FORT WORTH, TX

LOCATION.--Lat 32°44'60", long 97°13'59", Tarrant County, Hydrologic Unit 12030102, on east side of Weiler Drive, on northern edge of Eastern Hills High School campus, and about 5.0 miles east of Fort Worth.

DRAINAGE AREA.--0.24 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: February 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
APR 17-17	0526	0.39	3.6	0.34	262	236	7.6	7.8	17.5	72	8.1	>100000
MAY 14-14	1039	0.70	2.8	0.31	202	187	7.8	7.7	24.5	93	8.0	K500000
SEP 21-21	0106	0.83	2.9	0.48	158	206	8.1	7.6	23.0	72	7.1	K20000

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
APR 17-17	>97000	69	25	44	115	190	111	22	3.4	8.1	20	0.4
MAY 14-14	K420000	54	20	34	87	203	72	19	1.5	3.4	11	0.2
SEP 21-21	K20000	40	14	26	90	485	68	13	1.8	4.9	20	0.3

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)
APR 17-17	2.7	27	9.6	0.040	0.620	0.270	1.2	0.230	0.110	<10.0	1	<10
MAY 14-14	3.1	13	4.7	0.070	0.990	0.390	1.3	0.170	0.130	<10.0	2	<10
SEP 21-21	2.3	15	6.7	0.030	0.420	0.190	0.70	0.190	0.180	<10.0	2	<10

08048700 EASTERN HILLS HIGH SCHOOL OUTFALL AT WEILER DRIVE, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	THALLIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
APR 17-17	<1	7	6	<0.010	31	<0.10	5	<2	<1	<1000	100	17
MAY 14-14	<1	5	13	<0.010	40	<0.10	6	<2	<1	<10	100	24
SEP 21-21	<1	11	7	<0.010	12	<0.10	5	<2	<1	<10	90	23

DATE	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACROLEIN TOTAL (UG/L)	ACRYLONITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMOBENZENE WATER, WHOLE, TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L)	CARBON-TETRACHLORIDE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)
APR 17-17	<1	3	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
MAY 14-14	<1	6	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
SEP 21-21	<1	5	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20

DATE	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	METHYLCHLORIDE TOTAL (UG/L)	O-CHLOROTOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMO CHLOROPROPANE WATER WHOLE TOT.REC (UG/L)	DIBROMOMETHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)
APR 17-17	<0.2	0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	5.9
MAY 14-14	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
SEP 21-21	<0.2	<0.2	<1.0	0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2

DATE	1,1-DICHLOROPROPENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DICHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DICHLORO-WATER UNFLTRD REC (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROETHANE TOTAL (UG/L)	CIS-1,2-DICHLOROETHENE WATER TOTAL (UG/L)	1,2-TRANSDICHLOROETHENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROPROPANE WAT. WH TOTAL (UG/L)	2,2-DICHLOROPROPANE WAT, WH TOTAL (UG/L)
APR 17-17	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MAY 14-14	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SEP 21-21	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	HEXACHLOROBUTADIENE TOTAL (UG/L)	ISOPROPYLBENZENE WATER WHOLE REC (UG/L)	P-ISOPROPYLTOLUENE WATER WHOLE REC (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)	NAPHTHALENE TOTAL (UG/L)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRACHLORO-WAT UNF REC (UG/L)
APR 17-17	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
MAY 14-14	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	0.8	<5.0	<0.20	<0.2	<0.2
SEP 21-21	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2

DATE	ETHANE, 1,1,2,2 TETRACHLORO-WAT UNF REC (UG/L)	TETRACHLOROETHYLENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,2,3-TRICHLORO BENZENE WAT, WH REC (UG/L)	BENZENE 1,2,4-TRICHLORO-WAT UNF REC (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	123-TRICHLOROPROPANE WATER WHOLE TOTAL (UG/L)	PSEUDOCUMENE WATER UNFLTRD REC (UG/L)	MESITYLENE WATER UNFLTRD REC (UG/L)
APR 17-17	<0.2	<0.2	0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
MAY 14-14	<0.2	<0.2	0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
SEP 21-21	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20

08048700 EASTERN HILLS HIGH SCHOOL OUTFALL AT WEILER DRIVE, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	VINYL CHLORIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ACENAPHTHYLENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZIDINE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)	BENZOGHI PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)
APR 17-17	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
MAY 14-14	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
SEP 21-21	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0

DATE	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	1,2,5,6-DIBENZANTHRACENE TOTAL (UG/L)	3,3'-DICHLOROBENZIDINE TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)
APR 17-17	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
MAY 14-14	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0

DATE	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	4,6-DINITRO-ORTHOCRESOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)
APR 17-17	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
MAY 14-14	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	13.0

DATE	FLUORENE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	2-NITROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)
APR 17-17	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
MAY 14-14	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0

DATE	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXACHLORIDE TOTAL (UG/L)	DELTA BENZENE HEXACHLORIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE CIS WATER WHOLE TOTAL (UG/L)
APR 17-17	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
MAY 14-14	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	0.10
SEP 21-21	<5.0	<30.0	10.0	<5.0	10.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

DATE	CHLORDANE TRANS WATER WHOLE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN-I WATER WHOLE REC (UG/L)	ENDOSULFAN BETA TOTAL (UG/L)	ENDOSULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDEHYDE TOTAL (UG/L)
APR 17-17	<0.10	<0.1	<0.10	<0.04	<0.10	0.040	<0.10	<0.04	<0.60	<0.060	<0.20
MAY 14-14	0.10	1.2	<0.10	<0.04	<0.10	0.060	<0.10	<0.04	<0.60	<0.060	<0.20
SEP 21-21	<0.10	0.2	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20

08048700 EASTERN HILLS HIGH SCHOOL OUTFALL AT WEILER DRIVE, FORT WORTH, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)
APR											
17-17	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.40
MAY											
14-14	0.20	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.10
SEP											
21-21	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	1.5

08048970 VILLAGE CREEK AT EVERMAN, TX

LOCATION.--Lat 32°36'12", long 97°15'53", Tarrant County, Hydrologic Unit 12030[illegible], at center of channel at 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.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 589.93 ft above National Geodetic Vertical Datum of 1929 (Tarrant County Public Works Department reference mark).

REMARKS.--Records fair including those for estimated daily discharges. Peak discharge from rating extended above 7,700 ft³/s on basis of area-velocity study. Gage-height telemeter at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	237	10	82	64	48	10	9.6	80	5.5	3.2	.06
2	.36	110	77	75	59	38	10	8.5	760	4.1	3.5	.11
3	.28	76	62	56	64	37	10	8.0	103	3.5	2.5	2.9
4	.35	62	24	49	577	323	10	8.8	63	3.2	1.6	3.0
5	e.35	55	15	e46	139	221	10	7.9	43	2.9	1.6	2.9
6	e.18	46	12	e42	77	74	11	7.1	42	2.6	1.4	2.9
7	.14	42	12	39	61	53	10	6.6	124	2.4	1.1	2.6
8	.14	32	11	e36	45	36	9.9	6.2	138	2.4	.76	2.4
9	1.1	28	298	e33	37	211	9.7	6.0	49	1.9	.31	2.0
10	.30	27	84	e32	30	75	9.5	5.7	21	1.8	.34	97
11	.07	25	75	e30	28	43	9.4	5.6	11	1.7	.37	63
12	.03	24	151	e29	39	32	9.4	5.4	9.2	1.5	1.2	4.4
13	.04	24	77	e28	41	25	9.4	5.2	8.5	1.2	4.2	3.0
14	.03	24	50	e27	32	21	9.1	5.3	8.0	.88	1.2	2.1
15	.03	23	35	e27	29	17	8.8	4.7	7.5	.98	.31	1.9
16	.03	21	28	e27	23	14	8.9	29	7.1	1.1	.18	1.6
17	.02	50	24	e70	19	13	9.0	19	6.8	1.1	.15	1.4
18	.02	46	26	e625	16	111	8.8	108	6.9	1.3	.37	1.1
19	.02	152	843	e103	12	52	9.0	513	7.1	2.6	16	1.2
20	.01	146	5990	e68	12	31	9.8	118	6.9	1.6	3.8	1.1
21	.01	55	2220	e57	11	23	8.8	30	34	1.4	1.1	1.6
22	.01	35	368	e222	27	21	8.5	35	28	1.5	.32	2.4
23	.01	23	245	e67	58	17	8.2	11	13	1.7	.15	1.8
24	.01	17	115	48	499	15	8.0	8.1	40	1.6	.10	1.0
25	.01	15	87	30	1330	14	7.9	342	8.3	1.3	.12	.77
26	104	14	86	115	182	12	7.8	337	119	1.4	.11	1.1
27	3450	12	94	1020	88	11	7.7	65	14	1.6	.40	1.2
28	1150	11	80	225	69	11	7.6	130	78	19	.45	1.5
29	1970	10	68	155	59	12	57	122	63	7.4	.07	1.4
30	403	10	61	93	---	11	18	45	9.0	2.2	.06	1.5
31	374	---	52	73	---	11	---	20	---	6.2	.07	---
TOTAL	7454.85	1452	11380	3629	3727	1633	331.2	2032.7	1908.3	89.56	47.04	210.94
MEAN	240	48.4	367	117	129	52.7	11.0	65.6	63.6	2.89	1.52	7.03
MAX	3450	237	5990	1020	1330	323	57	513	760	19	16	97
MIN	.01	10	10	27	11	11	7.6	4.7	6.8	.88	.06	.06
AC-FT	14790	2880	22570	7200	7390	3240	657	4030	3790	178	93	418

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

MEAN	81.3	20.2	123	50.2	62.3	35.0	101	165	31.7	3.90	9.42	7.10
MAX	240	48.4	367	117	129	52.7	233	339	63.6	6.65	21.7	14.1
(WY)	1992	1992	1992	1992	1992	1992	1990	1990	1992	1991	1991	1991
MIN	.68	1.81	.72	11.9	7.11	3.52	11.0	65.6	8.27	2.15	1.52	.19
(WY)	1990	1990	1991	1990	1991	1991	1992	1992	1991	1990	1992	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1990 - 1992	
ANNUAL TOTAL	27332.00		33895.59			
ANNUAL MEAN	74.9		92.6		57.6	
HIGHEST ANNUAL MEAN					92.6	1992
LOWEST ANNUAL MEAN					20.5	1991
HIGHEST DAILY MEAN	5990	Dec 20	5990	Dec 20	5990	Dec 20 1991
LOWEST DAILY MEAN	.00	Jul 10	.01	Oct 20	.00	Aug 18 1990
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 10	.01	Oct 19	.00	Aug 25 1990
INSTANTANEOUS PEAK FLOW			11400	Dec 20	11400	Dec 20 1991
INSTANTANEOUS PEAK STAGE			21.96	Dec 20	21.96	Dec 20 1991
INSTANTANEOUS LOW FLOW			.00	Oct 20	.00	at times
ANNUAL RUNOFF (AC-FT)	54210		67230		41760	
10 PERCENT EXCEEDS	94		120		77	
50 PERCENT EXCEEDS	4.5		12		4.0	
90 PERCENT EXCEEDS	.02		.35		.04	

08048970 VILLAGE CREEK AT EVERMAN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1989 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1989 to September 1990.
pH: October 1989 to September 1990.
WATER TEMPERATURE: October 1989 to September 1990.
DISSOLVED OXYGEN: October 1989 to September 1990.

INSTRUMENTATION.--From October 1989 to September 1990, a four-parameter water-quality monitor continuously recorded specific conductance, pH, water temperature, and dissolved oxygen at this station.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT 04...	1210	0.39	461	7.8	26.0	6.0	75	1.4	160	10	51	7.5
NOV 25...	1331	16	731	7.9	8.5	13.9	122	0.1	280	82	93	12
JAN 27...	1011	910	283	7.3	9.0	11.7	103	2.5	110	23	35	4.4
MAR 13...	1344	24	777	8.2	23.0	12.4	146	0.1	300	60	98	13
APR 30...	1400	15	802	7.9	19.5	10.4	114	0.5	250	74	77	13
JUN 18...	1535	7.1	886	8.0	31.0	6.3	87	4.0	310	89	95	18

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT 04...	29	1	4.3	150	50	29	0.50	2.9	263	--	<0.010	<0.050
NOV 25...	52	1	5.9	200	98	51	0.30	8.4	442	0.620	0.010	0.630
JAN 27...	15	0.6	4.9	83	15	19	0.10	9.0	152	0.300	0.050	0.350
MAR 13...	54	1	3.2	240	100	54	0.30	8.6	474	--	<0.010	0.630
APR 30...	66	2	2.9	170	120	72	0.40	8.1	463	0.180	0.020	0.200
JUN 18...	71	2	3.3	220	140	73	0.40	9.8	546	--	<0.010	0.180

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
OCT 04...	0.020	0.18	0.20	0.040	0.030	--	--	--	--	--	--	--
NOV 25...	0.020	0.38	0.40	0.080	0.050	<1	70	0.8	<1.0	<5	<3	<10
JAN 27...	0.090	0.71	0.80	0.210	0.170	--	--	--	--	--	--	--
MAR 13...	0.010	0.39	0.40	0.050	0.060	--	--	--	--	--	--	--
APR 30...	0.030	0.37	0.40	0.150	0.120	--	--	--	--	--	--	--
JUN 18...	0.060	1.0	1.1	0.050	0.010	1	59	<0.5	<1.0	<5	<3	<10

08048970 VILLAGE CREEK AT EVERMAN, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT												
04...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
25...	17	<10	14	27	<0.1	<10	<10	<1	<1.0	750	<6	4
JAN												
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
13...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
30...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
18...	7	10	24	10	<0.1	<10	<10	<1	<1.0	1000	<6	13

08049200 LAKE ARLINGTON AT ARLINGTON, TX

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

DRAINAGE AREA.--143 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 9, 1957, non-recording gage at same site and datum.

REMARKS.--The lake is formed by a rolled earthfill dam 6,482 ft long. The service spillway is a 10-foot-diameter uncontrolled circular drop inlet. The spillway is an 882-foot-wide cut through natural ground near the right end of dam. The dam was completed and storage began Mar. 31, 1957. Capacities are based on a 1980 survey. The dam was built by the city of Arlington to impound water for municipal and industrial uses. Water is diverted from Cedar Creek Reservoir (station 08063010) into Lake Arlington. Water is pumped from the lake to a generating plant of Texas Electric Service Co. Gage-height telemeter located at station. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	572.0	-
Crest of spillway	559.7	64,360
Crest of drop inlet (top of conservation pool)	550.0	39,930
Lowest gated outlet (invert)	505.0	40

COOPERATION.--Capacity table provided by Freese and Nichols, Inc., Consulting Engineers, for the city of Arlington.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 72,500 acre-ft May 17, 1989 (elevation, 562.42 ft); minimum since lake first filled in April 1957, 18,110 acre-ft Oct. 17, 1971 (elevation, 534.27 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 70,460 acre-ft Dec.21 at 0800 hours (elevation, 561.76 ft); minimum, 24,200 acre-ft Oct. 26 (elevation, 541.76 ft.)

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

540.0	21,620	552.0	44,460	558.0	59,600
544.0	28,030	554.0	49,230	560.0	65,220
548.0	35,720	556.0	54,270	562.0	71,190

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28490	42810	39100	40720	40970	40910	39250	36820	40840	41520	35210	30300
2	28300	41860	39460	40660	40770	40660	39140	36720	42380	40970	35050	30240
3	28120	41340	39500	40590	40680	40720	39060	36590	41750	40590	34910	30090
4	27870	40930	39460	40430	41950	41770	38970	36470	41250	40220	34710	29950
5	27750	40680	39420	40360	41650	41810	38840	36240	40860	39950	34510	29770
6	27580	40430	39330	40250	41270	41410	38780	36120	40790	39670	34330	29600
7	27410	40220	39290	40220	41020	41040	38720	35930	40790	39440	34080	29380
8	27180	40070	39270	40160	40750	40820	38670	35720	40930	39120	33800	29570
9	27030	39980	40290	40110	40540	41540	38610	35500	40790	38860	33500	29090
10	26870	39840	40320	40020	40430	41200	38460	35380	40520	38520	33210	29770
11	26700	39760	40500	40000	40320	40930	38350	35170	40290	38250	32920	30260
12	26490	39650	40630	40000	40430	40700	38370	34990	40070	37890	32920	30330
13	26250	39520	40540	39950	40410	40500	38310	34790	39910	37530	32860	30110
14	26040	39480	40360	39890	40360	40360	38180	34690	39720	37240	32590	30200
15	25890	39500	40220	39800	40290	40220	38060	34510	39550	36910	32650	30110
16	25690	39480	40090	39740	40200	40110	37950	34910	39290	36880	32510	30070
17	25510	39550	39950	39870	40040	40090	37950	35170	39040	36390	32260	29950
18	25310	39480	40020	41110	40020	40220	37890	36280	38800	36180	32120	29790
19	25110	39970	42740	41160	39930	40200	37840	38370	38550	35950	32450	29620
20	24960	40130	64930	40910	39870	40110	37740	38820	38310	35720	32510	29510
21	24830	40090	65690	40840	39800	40000	37630	38930	38610	35620	32370	29480
22	24670	40000	58440	41040	39950	39890	37490	38930	38570	35360	32280	29440
23	24540	39840	50850	40880	40070	39840	37340	38860	38630	35030	32120	29330
24	24450	39740	45380	40680	42000	39760	37160	38780	38760	34710	31930	29260
25	24340	39630	43220	40520	45360	39700	37010	40250	38740	34370	31790	29160
26	25340	39500	42270	41130	43510	39650	36800	41090	39230	34000	31640	29020
27	39440	39420	41720	43580	42400	39570	36590	40860	39160	34490	31450	28940
28	44510	39330	41310	42860	41720	39570	36510	41290	44050	34810	31220	28960
29	48000	39310	41020	42220	41250	39500	37010	41130	43740	34750	30960	28960
30	44770	39180	40790	41700	---	39420	36950	40860	42310	34530	30620	28940
31	44080	---	40630	41290	---	39330	---	40700	---	35360	30370	---
MAX	48000	42810	65690	43580	45360	41810	39250	41290	44050	41520	35210	30330
MIN	24340	39180	39100	39740	39800	39330	36510	34510	38310	34000	30370	28940
(↑)	551.83	549.65	550.31	550.60	550.58	549.72	548.59	550.34	551.05	547.82	545.27	544.50
(Φ)	+15450	-4900	+1450	+660	-40	-1920	-2380	+3750	+1610	-6950	-4990	-1430

CAL YR 1991 MAX 65690 MIN 24340 (Φ) +14760
WTR YR 1992 MAX 65690 MIN 24340 (Φ) +310

(↑) Elevation, in feet, at end of month.
(Φ) Change in contents, in acre-feet.

08049200 LAKE ARLINGTON AT ARLINGTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January 1964 to current year.

324304097113601 - LAKE ARLINGTON SITE AC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	RESER-VOIR STORAGE (AC-FT)	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
JAN											
08...	1248	40700	1.00	239	7.8	11.0	0.20	8.4	77	96	15
08...	1252	--	10.0	236	7.8	11.0	--	8.4	77	--	--
08...	1256	--	20.0	241	7.8	11.0	--	8.3	76	--	--
08...	1300	--	30.0	238	7.8	11.0	--	8.1	74	--	--
08...	1305	--	40.0	238	7.8	11.0	--	8.2	75	--	--
08...	1310	--	47.0	238	7.7	11.0	--	8.2	75	96	12
APR											
10...	1039	37000	1.00	396	8.6	20.5	1.00	10.4	118	150	22
10...	1046	--	10.0	399	8.6	20.0	--	10.2	115	--	--
10...	1053	--	20.0	397	8.5	19.5	--	9.7	108	--	--
10...	1100	--	30.0	401	7.4	17.0	--	5.4	57	--	--
10...	1107	--	43.0	401	7.1	16.5	--	1.2	13	140	14
JUL											
30...	1156	34500	1.00	354	8.4	31.5	1.20	6.4	90	120	21
30...	1158	--	10.0	351	8.4	31.5	--	6.2	87	--	--
30...	1202	--	20.0	356	8.3	31.0	--	6.0	83	--	--
30...	1206	--	30.0	381	7.3	27.5	--	0	0	--	--
30...	1210	--	40.0	412	7.1	25.5	--	0	0	140	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
JAN											
08...	33	3.2	11	0.5	4.6	81	20	11	<0.10	6.7	138
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	33	3.2	11	0.5	4.8	84	21	11	0.20	6.9	141
APR											
10...	50	5.7	22	0.8	4.2	130	44	26	0.20	9.3	237
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	47	5.5	22	0.8	4.0	130	45	26	0.20	5.2	230
JUL											
30...	39	5.8	23	0.9	4.2	100	41	26	0.20	3.6	203
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
30...	47	6.1	24	0.9	4.3	150	26	26	0.20	8.9	236

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN										
08...	0.420	0.050	0.470	0.130	0.47	0.60	0.150	0.150	30	<10
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	0.410	0.050	0.460	0.150	0.55	0.70	0.200	0.160	20	10
APR										
10...	0.770	0.080	0.850	0.090	0.31	0.40	0.080	0.080	10	340
10...	--	--	--	--	--	--	--	--	--	--
10...	0.370	0.030	0.400	0.030	0.47	0.50	0.030	<0.010	10	10
10...	--	--	--	--	--	--	--	--	--	--
10...	0.350	0.030	0.380	0.020	0.58	0.60	0.020	<0.010	4	2
JUL										
30...	--	<0.010	<0.050	0.020	0.38	0.40	0.010	<0.010	6	6
30...	--	--	--	--	--	--	--	--	--	--
30...	--	<0.010	<0.050	<0.010	--	0.50	0.010	<0.010	20	110
30...	--	<0.010	<0.050	0.450	0.25	0.70	0.110	0.090	310	1200
30...	--	0.010	<0.050	1.70	0.70	2.4	0.450	0.410	580	2400

08049200 LAKE ARLINGTON AT ARLINGTON, TX--Continued

324320097121101 - LAKE ARLINGTON SITE AL

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
08...	1321	1.00	239	7.8	11.0	8.3	76
08...	1323	10.0	239	7.8	11.0	8.3	76
08...	1325	20.0	239	7.8	11.0	8.1	74
08...	1328	30.0	239	7.8	11.0	7.8	71
08...	1331	35.0	239	7.8	11.0	7.7	70
APR							
10...	1116	1.00	396	8.6	20.5	10.1	115
10...	1119	10.0	397	8.5	20.0	9.8	110
10...	1122	20.0	397	8.6	20.0	9.9	112
10...	1125	30.0	399	7.9	17.0	5.8	61
10...	1129	34.0	399	7.9	17.0	5.7	60
JUL							
30...	1225	1.00	356	8.3	31.5	6.0	84
30...	1227	10.0	357	8.3	31.5	5.9	83
30...	1230	20.0	357	8.2	31.0	5.5	76
30...	1232	25.0	374	7.4	29.0	0	0
30...	1235	33.0	388	7.3	27.5	0	0

324253097121801 - LAKE ARLINGTON SITE BC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
08...	1344	1.00	246	7.9	11.0	0.20	8.3	76
08...	1346	10.0	244	7.8	11.0	--	8.3	76
08...	1348	20.0	250	7.8	11.0	--	8.3	76
08...	1351	30.0	253	7.8	11.0	--	8.2	75
08...	1355	41.0	253	7.8	11.0	--	6.7	61
APR								
10...	1143	1.00	396	8.6	20.5	1.20	9.6	109
10...	1146	10.0	396	8.4	20.0	--	9.4	106
10...	1148	20.0	400	8.2	18.5	--	8.3	91
10...	1151	30.0	396	7.8	17.0	--	4.9	52
10...	1154	36.0	399	7.9	17.0	--	3.7	39
JUL								
30...	1245	1.00	365	8.3	31.5	1.04	5.7	80
30...	1248	10.0	357	8.3	31.0	--	5.5	76
30...	1251	20.0	358	8.1	30.5	--	4.6	63
30...	1253	30.0	381	7.3	28.0	--	0	0
30...	1256	37.0	405	7.2	26.5	--	0	0

324301097123301 - LAKE ARLINGTON SITE BL

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
08...	1400	1.00	242	7.9	11.0	8.2	75
08...	1403	10.0	243	7.8	11.0	8.3	76
08...	1407	20.0	244	7.8	11.0	8.1	74
08...	1410	31.0	244	7.8	11.0	7.2	66
APR							
10...	1200	1.00	398	8.6	20.5	9.9	113
10...	1203	10.0	397	8.6	20.5	9.7	110
10...	1205	20.0	397	8.5	20.0	9.6	108
10...	1210	26.0	398	8.0	17.5	6.8	73
JUL							
30...	1300	1.00	356	8.4	31.5	6.1	86
30...	1302	10.0	355	8.3	31.5	5.8	81
30...	1304	20.0	356	8.2	31.0	5.2	72
30...	1306	28.0	378	7.4	29.0	0	0

08049200 LAKE ARLINGTON AT ARLINGTON, TX--Continued

324257097130301 - LAKE ARLINGTON SITE CC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
08...	1423	1.00	240	7.9	11.5	0.20	9.0	83
08...	1426	10.0	242	7.9	11.5	--	9.0	83
08...	1429	18.0	242	7.9	11.5	--	9.0	83
APR								
10...	1237	1.00	399	8.5	20.5	1.00	9.2	105
10...	1240	10.0	401	8.4	19.5	--	9.1	102
10...	1243	19.0	401	8.0	17.5	--	5.8	62
JUL								
30...	1322	1.00	355	8.2	35.5	1.10	5.6	84
30...	1324	10.0	355	8.2	35.0	--	5.6	83
30...	1326	18.0	355	8.2	34.5	--	5.5	81

324228097130301 - LAKE ARLINGTON SITE DC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN								
08...	1436	1.00	240	7.8	11.5	0.20	8.4	78
08...	1439	10.0	242	7.8	11.0	--	8.4	77
08...	1443	21.0	243	7.8	11.0	--	8.2	75
APR								
10...	1223	1.00	399	8.5	24.0	0.80	8.7	106
10...	1226	10.0	399	8.5	23.0	--	8.6	103
10...	1229	21.0	399	8.5	21.0	--	8.3	95
JUL								
30...	1302	1.00	359	8.1	33.0	0.70	4.9	70
30...	1305	10.0	356	8.0	31.0	--	4.1	57
30...	1309	17.0	366	7.4	31.0	--	0.8	11

324143097132201 - LAKE ARLINGTON SITE EC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
JAN										
08...	1455	1.00	292	7.9	11.5	8.2	76	120	17	40
08...	1500	10.0	300	7.9	11.5	8.2	76	--	--	--
08...	1505	20.0	306	7.8	11.5	8.1	75	--	--	--
08...	1510	26.0	350	7.8	11.5	7.9	73	120	7	42
APR										
10...	1254	1.00	404	8.5	19.5	9.7	108	150	29	52
10...	1258	10.0	411	8.3	19.0	8.9	98	--	--	--
10...	1302	20.0	410	7.8	17.5	5.4	58	--	--	--
10...	1307	24.0	414	7.8	17.5	4.7	50	150	27	52
JUL										
30...	1352	1.00	354	8.4	31.0	6.0	83	120	18	39
30...	1356	10.0	361	7.7	30.5	3.2	44	--	--	--
30...	1402	15.0	366	7.6	30.0	2.1	29	--	--	--
30...	1405	22.0	369	7.4	29.5	0	0	130	14	42

08049200 LAKE ARLINGTON AT ARLINGTON, TX--Continued

324143097132201 - LAKE ARLINGTON SITE EC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
JAN										
08...	4.1	14	0.6	4.7	100	29	15	<0.10	7.2	174
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	4.4	16	0.6	4.4	120	33	17	<0.10	7.5	194
APR										
10...	6.0	23	0.8	4.2	130	47	26	0.20	4.9	239
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	6.0	23	0.8	4.1	130	46	27	0.20	7.9	243
JUL										
30...	5.8	23	0.9	4.1	100	40	25	0.20	3.8	203
30...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
30...	5.8	23	0.9	4.0	120	38	25	0.20	5.0	213

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN										
08...	0.480	0.040	0.520	0.120	0.48	0.60	0.150	0.130	10	<10
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	0.540	0.040	0.580	0.160	0.54	0.70	0.150	0.130	10	30
APR										
10...	0.390	0.030	0.420	0.020	0.48	0.50	0.020	<0.010	4	2
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	0.530	0.060	0.590	0.150	0.35	0.50	0.040	0.040	10	29
JUL										
30...	--	<0.010	<0.050	0.010	0.29	0.30	<0.010	<0.010	<3	8
30...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
30...	--	0.010	<0.050	0.190	0.91	1.1	0.080	0.030	100	750

324133097130601 - LAKE ARLINGTON SITE EL

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
JAN							
08...	1519	1.00	276	7.9	11.5	8.0	74
08...	1523	10.0	296	7.8	11.5	8.0	74
08...	1526	20.0	290	7.8	11.0	7.9	72
APR							
10...	1313	1.00	407	8.5	19.5	9.6	107
10...	1316	10.0	410	8.5	19.5	9.4	105
10...	1319	18.0	412	8.4	19.0	8.6	95
JUL							
30...	1409	1.00	353	8.4	31.0	6.3	88
30...	1412	10.0	355	8.3	30.5	5.4	74
30...	1415	16.0	372	7.4	29.5	0	0

08049200 LAKE ARLINGTON AT ARLINGTON, TX--Continued

324041097134601 - LAKE ARLINGTON SITE FC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
JAN										
08...	1540	1.00	433	7.8	11.5	7.5	70	170	25	56
08...	1546	10.0	502	7.8	11.5	6.9	64	--	--	--
08...	1552	16.0	538	7.7	11.5	6.8	63	210	45	70
APR										
10...	1334	1.00	419	8.5	19.5	9.4	105	160	27	53
10...	1339	10.0	414	8.2	18.5	8.0	87	--	--	--
10...	1344	15.0	414	8.0	18.0	5.7	62	150	25	52
JUL										
30...	1426	1.00	356	8.4	31.0	6.1	85	120	18	39
30...	1432	12.0	350	7.4	29.0	2.6	35	120	16	40

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
JAN										
08...	6.4	24	0.8	4.4	140	48	24	0.20	8.3	256
08...	--	--	--	--	--	--	--	--	--	--
08...	8.3	33	1	4.1	160	67	34	0.30	9.4	325
APR										
10...	6.3	24	0.8	4.0	130	50	27	0.20	4.5	248
10...	--	--	--	--	--	--	--	--	--	--
10...	6.1	23	0.8	4.1	130	47	27	0.20	6.7	244
JUL										
30...	5.7	23	0.9	4.0	100	41	25	0.30	4.0	204
30...	5.5	23	0.9	3.7	110	38	23	0.20	5.3	203

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN										
08...	0.620	0.040	0.660	0.150	0.55	0.70	0.140	0.120	<10	80
08...	--	--	--	--	--	--	--	--	--	--
08...	0.690	0.040	0.730	0.170	0.53	0.70	0.130	0.100	<10	190
APR										
10...	0.370	0.030	0.400	0.020	0.38	0.40	0.010	<0.010	<3	1
10...	--	--	--	--	--	--	--	--	--	--
10...	0.500	0.050	0.550	0.110	0.29	0.40	0.020	0.050	5	13
JUL										
30...	--	<0.010	<0.050	<0.010	--	0.40	0.010	0.010	3	39
30...	--	0.020	<0.050	0.050	0.55	0.60	0.030	0.010	14	380

08049500 WEST FORK TRINITY RIVER AT GRAND PRAIRIE, TX

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

DRAINAGE AREA.--3,065 mi².

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 405.42 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 6, 1933, nonrecording gage at bridge on old channel 2,500 ft southeast of present site at datum 7.56 ft higher. Dec. 6, 1933, to May 24, 1956, water-stage recorder at site 440 ft downstream from site of nonrecording gage at datum 7.56 ft higher than present datum. May 25, 1956, to Apr. 18, 1957, nonrecording gage at site 1.5 mi downstream at different datum. Apr. 19 to Aug 13, 1957, nonrecording gage on bridge at present site and at datum 5.00 ft higher than present datum. Aug. 14, 1957, to Sept. 30, 1982, water-stage recorder at present site and at datum 5.00-ft higher than present datum.

REMARKS.--Records fair including those for estimated daily discharges. Flow is affected at times by three upstream reservoirs with a combined capacity of 248,600 acre-ft, of which 76,550 acre-ft is for flood control. During the current year, the city of Fort Worth discharged sewage effluent into the river upstream from this station. There are many diversions upstream from station for municipal, industrial, and other uses. The river channel at this station was relocated and rectified in 1956. Gage-height telemeter at station.

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 April 1922 reached a stage of 29.0 ft (former site and datum), from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	262	8720	930	7730	4170	4650	1120	e344	3370	3400	1020	219
2	256	6320	1920	7030	3880	4460	1070	e353	4310	2150	879	265
3	267	5320	1680	5910	3760	4170	912	e458	3240	1520	485	310
4	261	4600	1130	5260	4320	4660	692	e453	2870	1210	379	229
5	243	4680	1020	4750	4650	5850	615	428	2620	1020	310	203
6	228	4790	974	4690	4060	4800	710	399	2920	915	288	186
7	230	4410	1070	4630	3590	4370	705	367	2600	854	277	185
8	228	3700	1230	4440	3210	4410	616	309	2830	801	254	185
9	225	3630	2850	4260	2970	5530	614	313	3370	723	246	192
10	223	3410	1560	4080	2900	4430	657	313	3430	662	240	581
11	225	3280	1950	3970	2930	3740	654	320	3340	556	263	2900
12	216	3200	3290	4010	3050	3260	617	315	3300	417	308	503
13	215	3150	3040	4030	3070	2940	714	303	3500	328	514	287
14	210	3070	2640	3570	2480	2820	630	681	3790	301	367	216
15	213	3050	2360	3330	2330	2670	593	1040	3890	284	291	210
16	219	3080	2120	3350	2240	2550	578	814	3780	e273	237	214
17	217	3650	1800	3430	2170	1990	929	1750	3700	e263	258	196
18	219	3430	1740	4430	1600	1760	954	2650	3480	282	231	183
19	215	2260	4130	4600	1080	2320	714	3360	2970	294	940	206
20	220	1990	21900	4090	976	2060	966	2190	2490	e264	792	237
21	221	1330	30400	3820	897	1880	764	1020	2400	259	345	1520
22	225	1220	e23000	4270	966	1560	646	1520	2640	284	299	730
23	228	1200	e31900	3560	1830	1140	541	1380	1750	261	290	251
24	230	1140	24400	3360	2400	961	e489	1390	2070	238	248	188
25	233	1030	20500	3170	8090	1400	e351	2260	993	227	298	239
26	2600	1000	17200	3310	6270	1320	e337	2770	2270	221	247	181
27	e13200	943	14600	7070	4760	1210	e318	2390	1050	222	231	170
28	12800	872	11700	6090	5280	1310	e310	3630	3490	1910	215	169
29	e17000	841	9400	4450	5230	1350	2080	4420	9490	1150	209	173
30	e14900	832	7890	4430	---	1230	829	3560	8290	400	203	169
31	11300	---	7570	4500	---	1240	---	3240	---	2390	205	---
TOTAL	77529	90148	257894	139620	95159	88041	21725	44740	100243	24079	11369	11497
MEAN	2501	3005	8319	4504	3281	2840	724	1443	3341	777	367	383
MAX	17000	8720	31900	7730	8090	5850	2080	4420	9490	3400	1020	2900
MIN	210	832	930	3170	897	961	310	303	993	221	203	169
AC-FT	153800	178800	511500	276900	188700	174600	43090	88740	198800	47760	22550	22800

e Estimated

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 1992, BY WATER YEAR (WY)

MEAN	484	420	451	430	586	695	829	1626	1140	403	236	333
MAX	5779	4472	8319	4504	3281	4521	7245	14030	11990	3475	1478	3094
(WY)	1982	1982	1992	1992	1992	1945	1942	1990	1989	1941	1950	1962
MIN	13.6	18.9	25.0	21.7	26.7	22.5	42.6	48.5	48.2	21.1	17.7	15.6
(WY)	1940	1940	1940	1930	1930	1940	1936	1937	1934	1939	1929	1931

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1926 - 1992	
ANNUAL TOTAL	582718		962044			
ANNUAL MEAN	1596		2629		636	
HIGHEST ANNUAL MEAN					2629	1992
LOWEST ANNUAL MEAN					79.3	1956
HIGHEST DAILY MEAN	31900	Dec 23	31900	Dec 23	48900	May 3 1990
LOWEST DAILY MEAN	167	Jul 21	169	Sep 28	8.0	Sep 29 1931
ANNUAL SEVEN-DAY MINIMUM	172	Jul 19	184	Sep 24	9.6	Sep 25 1931
INSTANTANEOUS PEAK FLOW			54800	Dec 20	64400	May 3 1990
INSTANTANEOUS PEAK STAGE			33.88	Dec 20	33.88	May 3 1990
INSTANTANEOUS LOW FLOW			147	Sep 28	3.2	Jun 6 1925
ANNUAL RUNOFF (AC-FT)	1156000		1908000		460800	
10 PERCENT EXCEEDS	3270		4770		1470	
50 PERCENT EXCEEDS	361		1310		164	
90 PERCENT EXCEEDS	210		225		46	

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: January 1964 to current year. Chemical and biochemical analyses: January 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1966 to current year.
pH: October 1976 to current year.
WATER TEMPERATURE: October 1966 to current year.
DISSOLVED OXYGEN: October 1976 to current year.

INSTRUMENTATION.--Since November 1976, a four-parameter water-quality monitor records temperature, DO, pH, and specific conductance continuously at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument, probe, or probeline. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,320 microsiemens Dec. 12, 1978; minimum, 108 microsiemens May 1, 1986.
pH: Maximum, 8.6 units July 2, 1981, June 27, 1982, Mar. 26, 1983, Feb. 5, 1986; minimum, 6.6 units Jan. 6, 1979.
WATER TEMPERATURE: Maximum, 35.0°C Aug. 8, 1982; minimum, 3.0°C Jan. 9, 1973.
DISSOLVED OXYGEN: Maximum, 14.8 mg/L Dec. 14, 16, 1983; minimum, 0.0 mg/L on several days during period of record.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 925 microsiemens July 18; minimum, 140 microsiemens Oct. 27.
pH: Maximum, 8.5 units May 12, and July 21; minimum, 6.8 units on Sept. 30.
WATER TEMPERATURE: Maximum, 31.5°C July 25, 26, Aug. 9, 10; minimum, 7.0°C Jan. 19.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
NOV										
08...	1405	3640	390	8.1	11.5	10.3	94	0.8	140	24
JAN										
22...	1440	4520	433	7.9	9.0	10.7	95	2.1	160	24
APR										
16...	1235	578	698	8.0	22.5	8.1	95	1.7	220	33
JUN										
10...	1348	3310	503	7.8	27.5	7.4	97	1.2	170	25
AUG										
26...	1305	256	653	7.8	28.5	7.1	93	--	170	39
SEP										
09...	0940	199	747	7.6	28.0	6.6	85	3.3	190	48

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV										
08...	46	5.9	22	0.8	5.5	120	33	30	0.30	8.1
JAN										
22...	56	5.5	21	0.7	4.3	140	38	26	0.30	8.8
APR										
16...	74	8.5	53	2	6.7	190	66	60	0.60	6.6
JUN										
10...	54	8.5	32	1	4.7	150	42	46	0.20	4.7
AUG										
26...	56	7.7	61	2	4.5	130	74	65	0.60	8.2
SEP										
09...	61	8.5	74	2	9.1	140	71	79	1.0	10

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
NOV									
08...	220	0.660	0.040	0.700	0.050	0.45	0.50	0.170	0.130
JAN									
22...	243	0.830	0.070	0.900	0.110	0.59	0.70	0.220	0.170
APR									
16...	388	2.98	0.020	3.00	0.030	0.87	0.90	1.00	0.970
JUN									
10...	279	0.520	0.040	0.560	0.050	0.55	0.60	0.240	0.170
AUG									
26...	357	6.16	0.040	6.20	0.090	0.71	0.80	1.70	1.40
SEP									
09...	397	11.0	0.030	11.0	0.020	0.98	1.0	2.80	2.60

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

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	77529	278	157	32900	19	4030	24	5110	99
NOV.	1991	90148	382	215	52400	27	6560	34	8200	130
DEC.	1991	257894	337	190	133000	22	15600	29	20300	120
JAN.	1992	139620	399	225	84800	28	10700	35	13300	140
FEB.	1992	95159	464	260	66700	36	9310	42	10800	150
MAR.	1992	88041	503	281	66700	41	9760	46	11000	160
APR.	1992	21725	664	365	21400	64	3780	65	3810	170
MAY	1992	44740	489	273	32900	40	4840	45	5450	150
JUNE	1992	100243	439	246	66500	33	9050	40	10700	150
JULY	1992	24079	576	319	20700	52	3410	55	3580	160
AUG.	1992	11369	654	359	11000	64	1970	64	1970	170
SEPT	1992	11497	569	314	9750	52	1630	55	1690	160
TOTAL		962044	**	**	598000	**	80600	**	96000	**
WTD.AVG.		2629	411	230	**	31	**	37	**	140

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	742	710	728	382	331	352	559	520	543	370	349	354
2	769	716	747	416	385	401	603	447	504	359	335	350
3	793	772	785	407	386	398	517	448	478	369	346	358
4	789	763	776	400	386	393	566	510	545	375	358	366
5	790	757	773	---	---	e300	587	547	575	379	370	375
6	805	770	786	---	---	e310	607	567	597	387	377	381
7	816	773	801	---	---	e320	606	538	588	399	385	388
8	813	756	789	---	---	e305	564	495	546	399	388	394
9	826	781	805	---	---	e316	496	273	406	396	386	392
10	815	806	811	---	---	e328	522	429	486	397	385	393
11	839	798	820	---	---	e340	524	485	510	398	387	394
12	860	813	836	---	---	e350	494	446	467	409	395	402
13	840	818	828	---	---	e362	466	452	460	411	399	405
14	861	805	836	---	---	e375	475	459	468	432	411	421
15	813	765	785	---	---	e385	482	460	472	418	404	412
16	829	752	785	---	---	e392	500	457	479	412	402	408
17	841	821	830	425	379	398	514	486	503	429	409	416
18	854	836	847	418	387	402	520	488	505	446	417	434
19	855	837	844	497	389	427	531	351	438	420	410	415
20	882	846	867	502	457	484	368	211	277	415	407	410
21	874	834	855	---	---	e492	267	204	227	429	417	420
22	829	798	806	---	---	e515	307	273	293	441	426	432
23	818	780	797	550	516	539	323	309	317	440	430	436
24	870	812	839	547	514	535	338	324	332	440	428	435
25	867	845	850	562	520	546	347	339	343	441	429	436
26	848	230	593	562	523	550	348	345	347	470	420	447
27	261	140	167	572	536	560	349	340	345	422	337	368
28	---	---	e240	563	537	555	344	339	341	417	360	399
29	---	---	e190	570	523	546	355	338	346	438	414	425
30	---	---	e240	554	516	543	362	353	358	470	426	439
31	---	---	e295	---	---	---	359	344	350	440	431	436
MONTH	882	140	708	572	331	424	607	204	434	470	335	405

e Estimated

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

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	438	428	433	463	451	458	626	583	612	652	577	606
2	439	424	433	462	455	459	629	596	616	705	655	683
3	445	431	435	480	462	471	658	606	633	706	688	699
4	463	442	456	578	446	472	705	648	677	---	---	e705
5	443	429	435	464	399	430	754	697	724	---	---	e712
6	442	432	436	470	433	455	797	728	760	---	---	e720
7	459	442	451	470	462	466	755	687	715	744	704	728
8	468	457	463	477	460	469	757	726	743	765	734	749
9	478	461	471	491	420	446	758	728	743	809	769	794
10	480	465	474	480	415	456	752	717	726	825	797	815
11	481	467	476	496	482	489	723	693	708	838	792	819
12	574	473	489	512	494	504	725	680	707	812	780	798
13	514	481	493	519	500	513	735	670	695	841	789	821
14	515	493	505	523	508	517	711	661	687	831	431	727
15	526	508	518	526	510	519	713	680	698	745	392	593
16	526	502	515	529	500	520	727	694	708	644	516	576
17	524	506	516	622	531	566	732	677	714	628	398	481
18	588	519	561	638	596	624	673	514	585	459	282	379
19	629	580	608	605	540	561	703	622	661	389	310	346
20	688	616	659	555	541	549	685	592	612	449	295	363
21	733	643	694	566	548	558	641	591	620	575	453	518
22	912	697	745	573	560	565	668	628	648	570	501	539
23	719	546	657	613	571	602	690	647	668	556	523	538
24	566	391	511	688	609	648	736	693	710	549	509	532
25	550	331	405	687	582	650	775	729	744	541	409	500
26	397	340	370	649	577	626	802	776	789	476	412	454
27	443	397	426	640	614	631	808	773	793	491	468	481
28	455	437	443	636	600	623	791	656	783	521	351	467
29	458	440	448	622	581	607	722	455	556	458	363	404
30	---	---	---	609	580	598	574	462	525	474	461	467
31	---	---	---	615	583	599	---	---	---	482	471	476
MONTH	912	331	501	688	399	537	808	455	685	841	282	596

e Estimated

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	501	424	480	489	423	462	457	303	371	825	786	807
2	487	381	434	528	490	514	580	441	495	789	764	776
3	499	448	480	568	526	552	583	451	508	782	661	717
4	515	498	509	593	556	581	648	568	599	764	734	751
5	527	517	523	600	571	589	724	632	673	779	749	766
6	537	489	516	614	575	598	782	724	749	810	745	785
7	520	497	511	638	596	618	825	750	781	866	780	824
8	523	509	517	646	607	625	848	754	785	841	759	797
9	528	489	522	645	618	634	842	749	786	817	741	778
10	512	488	502	664	614	641	822	763	794	787	350	678
11	532	508	515	670	631	653	801	738	757	565	228	359
12	523	517	521	743	658	686	826	683	768	494	349	422
13	522	505	512	744	709	728	789	668	752	619	500	548
14	510	488	498	748	734	742	777	681	730	683	627	653
15	491	462	474	828	757	800	794	699	745	720	639	689
16	471	459	466	843	814	829	828	739	782	785	685	737
17	461	434	445	882	822	850	816	747	783	809	712	768
18	440	430	435	925	871	887	789	648	758	836	728	789
19	446	433	439	875	819	851	758	578	693	826	745	790
20	456	432	448	846	822	836	577	457	501	836	690	757
21	456	433	446	822	796	813	625	480	540	709	292	512
22	456	394	421	845	785	818	703	613	661	501	336	406
23	459	336	438	829	787	811	741	676	713	591	465	509
24	440	379	413	842	796	823	760	658	713	662	562	616
25	---	---	e392	876	812	844	719	676	694	755	642	700
26	471	262	384	884	829	864	711	655	686	738	630	686
27	562	408	472	852	758	830	798	704	771	757	734	750
28	561	216	379	829	301	546	839	774	798	773	747	762
29	296	189	237	460	332	405	832	822	827	763	727	747
30	419	258	349	592	458	516	830	819	825	824	736	773
31	---	---	---	597	257	402	838	814	826	---	---	---
MONTH	562	189	456	925	257	689	848	303	705	866	228	688
YEAR	925	140	569									

e Estimated

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

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

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	25.0	24.0	24.5	13.5	12.5	13.0	15.5	13.0	14.5	10.5	10.0	10.5
2	25.5	24.0	25.0	13.5	13.0	13.0	12.5	9.5	11.0	10.5	10.0	10.5
3	26.0	25.0	25.5	13.0	12.0	12.5	11.0	9.0	10.0	10.5	10.0	10.0
4	26.5	25.0	25.5	12.0	12.0	12.0	12.0	10.5	11.0	10.5	10.0	10.5
5	25.0	23.5	24.0	12.5	12.0	12.0	12.5	11.5	12.0	11.5	10.5	11.0
6	23.0	22.0	22.5	12.5	12.5	12.5	14.0	12.5	13.0	11.5	10.0	11.0
7	23.0	21.5	22.5	13.0	12.0	12.5	15.0	14.0	14.5	11.5	11.0	11.0
8	23.0	22.0	22.5	12.0	11.0	11.5	17.0	15.0	16.0	11.5	11.0	11.5
9	23.5	22.0	22.5	12.0	11.5	11.5	17.0	16.5	16.5	11.0	10.0	10.5
10	24.0	22.5	23.5	12.5	12.0	12.0	16.5	15.5	16.0	10.5	10.0	10.5
11	25.0	23.5	24.5	13.0	12.5	12.5	16.0	15.0	16.0	10.5	10.0	10.5
12	25.0	24.0	24.5	13.0	12.5	12.5	15.5	15.5	15.5	10.5	10.0	10.5
13	25.0	24.0	24.5	13.0	12.5	12.5	16.0	15.5	15.5	11.0	10.0	10.5
14	24.5	23.5	24.5	---	---	---	15.5	14.0	15.0	10.0	9.5	9.5
15	23.5	20.5	22.5	---	---	---	14.0	13.0	13.5	10.0	9.0	9.5
16	22.5	20.0	21.5	---	---	---	13.5	12.5	13.0	9.0	8.0	8.5
17	23.0	21.5	22.0	15.0	14.5	14.5	14.0	13.0	13.5	8.5	8.0	8.5
18	23.5	22.5	23.0	15.0	14.0	14.5	14.0	12.5	13.5	8.5	7.5	8.0
19	23.0	22.5	23.0	15.5	14.5	15.0	12.5	10.5	11.5	8.0	7.0	7.5
20	22.5	21.5	22.0	15.5	14.5	15.0	10.5	10.0	10.5	8.5	8.0	8.0
21	22.5	21.0	21.5	---	---	---	10.5	10.0	10.0	8.5	8.0	8.5
22	23.0	21.5	22.5	---	---	---	10.5	10.0	10.5	9.0	8.5	9.0
23	24.0	23.0	23.5	14.0	13.0	14.0	10.5	10.5	10.5	9.5	8.5	9.0
24	24.5	23.5	24.0	13.5	12.5	13.0	10.5	10.0	10.0	9.0	8.5	8.5
25	24.5	24.0	24.5	13.5	12.0	13.0	10.0	9.0	9.5	9.5	8.5	9.0
26	24.0	19.0	22.0	14.0	12.5	13.0	10.0	9.5	9.5	9.5	9.0	9.5
27	19.5	17.5	18.5	15.0	13.5	14.5	10.0	9.5	9.5	9.5	9.0	9.5
28	19.5	17.5	19.0	16.5	15.0	16.0	9.5	9.5	9.5	9.5	9.5	9.5
29	19.5	17.5	18.5	17.5	16.5	17.0	9.5	9.5	9.5	10.0	9.5	9.5
30	17.5	16.0	16.5	17.5	15.5	16.5	10.0	9.5	10.0	10.5	10.0	10.0
31	16.0	13.5	15.0	---	---	---	10.0	10.0	10.0	10.5	10.0	10.5
MONTH	26.5	13.5	22.5	17.5	11.0	13.5	17.0	9.0	12.5	11.5	7.0	9.5

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.0	20.5	21.0	28.5	27.5	28.0	29.0	26.5	27.5	28.5	27.5	28.0
2	21.5	21.0	21.0	29.5	27.5	28.5	29.0	27.5	28.5	29.0	27.0	28.0
3	22.5	21.5	22.0	29.5	28.0	28.5	29.5	27.5	28.5	28.5	27.5	28.0
4	23.5	22.5	23.0	29.0	27.5	28.5	30.0	28.0	29.0	28.5	27.5	28.0
5	24.0	23.5	23.5	29.0	27.5	28.5	30.5	28.5	29.5	29.0	27.5	28.5
6	24.5	23.5	24.0	29.0	27.5	28.5	30.5	29.0	30.0	28.5	28.0	28.0
7	24.5	23.5	24.0	29.0	27.5	28.0	30.5	29.0	30.0	29.5	27.5	28.5
8	24.5	24.0	24.5	29.5	28.0	28.5	31.0	29.0	30.0	30.0	28.0	29.0
9	25.5	24.5	25.0	29.5	28.0	28.5	31.5	29.5	30.5	29.5	28.0	29.0
10	26.0	24.5	25.0	29.5	28.0	29.0	31.5	29.5	30.5	29.0	24.0	27.5
11	26.5	25.5	26.0	29.5	28.0	28.5	31.0	30.0	30.5	25.5	23.0	25.0
12	26.5	26.0	26.5	29.5	27.5	28.5	30.5	27.5	29.0	26.5	25.0	25.5
13	27.0	26.0	26.5	29.5	27.5	28.5	28.5	26.5	27.5	27.5	26.0	27.0
14	27.0	26.0	26.5	30.0	27.5	28.5	28.5	27.0	28.0	28.5	27.0	27.5
15	27.0	26.0	26.5	30.0	28.0	29.0	28.0	26.5	27.5	28.5	27.5	28.0
16	27.5	26.5	27.0	29.5	28.0	29.0	28.0	26.0	27.0	28.5	27.0	28.0
17	27.5	27.5	27.5	28.5	27.5	28.0	28.0	26.0	27.0	29.0	27.5	28.0
18	28.0	27.5	27.5	28.0	27.5	27.5	27.0	26.0	26.5	29.5	27.5	28.5
19	28.5	27.5	28.0	29.0	26.5	27.5	26.0	23.5	25.0	29.0	28.0	28.5
20	28.0	27.0	28.0	29.0	27.5	28.0	25.5	23.0	24.5	29.0	28.0	28.5
21	28.0	26.0	27.0	29.0	27.5	28.5	27.0	24.5	25.5	28.5	26.0	27.0
22	26.5	25.5	26.0	29.5	28.0	28.5	28.0	26.0	27.0	27.0	26.0	26.5
23	27.0	25.5	26.0	30.5	28.5	29.5	28.5	26.5	27.5	26.0	25.0	25.5
24	28.0	26.0	27.0	31.0	29.5	30.0	29.0	27.5	28.5	25.0	24.0	24.5
25	---	---	---	31.5	30.0	30.5	29.5	27.5	28.5	25.5	24.0	24.5
26	27.5	25.0	26.5	31.5	30.0	31.0	30.0	26.5	29.0	26.0	24.5	25.0
27	29.0	27.0	27.5	31.0	30.0	30.5	29.0	28.0	28.5	26.0	25.0	25.5
28	28.0	23.0	26.0	30.0	27.0	29.0	28.5	27.0	28.0	25.5	24.0	25.0
29	25.0	22.0	23.5	29.5	27.0	28.0	28.5	27.0	27.5	25.5	24.0	24.5
30	27.5	24.5	26.0	30.5	28.0	29.0	28.5	27.0	28.0	24.5	23.0	24.0
31	---	---	---	30.0	25.5	27.0	29.0	27.5	28.0	---	---	---
MONTH	29.0	20.5	25.5	31.5	25.5	28.5	31.5	23.0	28.0	30.0	23.0	27.0
YEAR	31.5	7.0	20.0									

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

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.9	5.9	6.9	7.7	7.3	7.4	9.3	8.5	8.8	---	---	---
2	8.0	5.7	6.8	8.1	7.3	7.7	10.2	9.4	9.7	---	---	---
3	7.3	5.4	6.3	9.1	7.8	8.3	10.0	9.7	9.9	---	---	---
4	8.1	5.2	6.7	8.7	8.4	8.5	10.1	9.8	9.9	---	---	---
5	8.0	6.2	7.0	8.9	8.6	8.7	10.0	9.8	9.9	---	---	---
6	8.2	6.3	7.2	9.2	8.8	8.9	10.0	9.7	9.9	---	---	---
7	8.1	6.4	7.3	9.2	8.3	9.1	9.7	9.4	9.6	10.2	10.0	10.1
8	8.0	6.5	7.3	10.5	9.2	9.8	9.4	9.2	9.3	10.2	9.9	10.1
9	8.2	6.5	7.4	10.8	9.9	10.1	9.3	8.0	8.5	10.2	9.9	10.1
10	8.2	6.5	7.3	10.7	9.8	10.1	8.9	8.2	8.6	10.4	10.2	10.3
11	8.3	6.4	7.3	10.9	9.8	10.0	9.2	8.8	9.0	10.6	10.4	10.5
12	8.1	6.3	7.2	11.3	9.9	10.3	9.0	8.7	8.9	10.5	10.3	10.4
13	8.3	6.1	7.2	10.7	10.3	10.4	9.3	9.0	9.2	10.5	10.3	10.4
14	7.8	6.3	7.1	---	---	---	9.6	9.3	9.5	10.6	10.5	10.5
15	8.0	6.4	7.2	---	---	---	9.9	9.6	9.7	10.8	10.5	10.6
16	8.6	6.7	7.5	---	---	---	10.0	9.8	9.9	11.4	10.8	11.1
17	8.5	7.2	7.9	9.1	8.3	8.8	9.9	9.6	9.7	11.4	11.1	11.2
18	8.4	7.2	7.8	9.6	8.9	9.1	9.9	9.6	9.7	11.5	11.2	11.4
19	8.1	6.9	7.6	9.3	7.9	8.6	10.4	9.8	10.0	11.8	11.6	11.7
20	7.8	7.0	7.5	8.6	7.2	8.0	---	---	---	12.1	11.7	11.8
21	8.1	7.2	7.6	---	---	---	---	---	---	12.1	11.8	12.0
22	7.9	7.4	7.7	---	---	---	---	---	---	12.1	10.9	11.8
23	7.7	7.3	7.4	9.0	8.5	8.7	---	---	---	11.6	11.2	11.4
24	7.4	6.9	7.2	9.8	8.9	9.2	---	---	---	12.1	11.3	11.7
25	7.2	6.9	7.0	9.4	9.1	9.2	---	---	---	12.0	11.5	11.8
26	7.3	3.4	6.3	9.3	9.1	9.2	---	---	---	11.6	11.2	11.4
27	7.5	5.2	6.2	9.6	9.0	9.1	---	---	---	11.2	10.3	10.7
28	7.5	5.6	6.6	9.1	8.7	8.9	---	---	---	11.0	10.7	10.8
29	11.3	6.8	9.6	8.8	8.3	8.5	---	---	---	11.0	10.8	10.9
30	14.2	8.6	10.2	8.5	8.2	8.4	---	---	---	11.6	11.1	11.3
31	11.8	6.9	8.5	---	---	---	---	---	---	11.6	11.3	11.5
MONTH	14.2	3.4	7.4	11.3	7.2	9.0	10.4	8.0	9.5	12.1	9.9	11.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.5	11.1	11.3	10.7	10.3	10.5	9.9	8.5	9.1	---	---	---
2	11.5	11.1	11.2	10.8	10.3	10.5	9.8	8.7	9.2	---	---	---
3	11.2	11.1	11.2	10.6	9.4	10.0	10.4	8.9	9.5	---	---	---
4	11.2	10.9	11.1	9.5	8.7	9.1	10.5	8.8	9.5	---	---	---
5	11.3	10.6	11.2	9.2	8.5	8.9	9.7	8.4	9.0	---	---	---
6	11.4	11.0	11.2	9.3	8.8	9.1	8.7	8.1	8.4	---	---	---
7	11.1	10.8	10.9	9.4	8.9	9.2	9.5	8.1	8.7	---	---	---
8	11.2	10.8	10.9	9.4	8.9	9.1	9.6	7.9	8.6	---	---	---
9	10.9	10.8	10.8	9.1	8.3	8.7	---	---	---	---	---	---
10	10.9	10.7	10.8	9.6	8.3	8.9	---	---	---	---	---	---
11	10.8	10.4	10.6	9.7	8.5	9.5	---	---	---	---	---	---
12	10.4	9.9	10.2	9.7	9.2	9.5	---	---	---	---	---	---
13	10.1	9.7	9.9	9.5	8.6	9.3	---	---	---	---	---	---
14	10.0	9.5	9.9	9.7	9.2	9.4	---	---	---	---	---	---
15	9.7	9.3	9.4	9.7	9.1	9.3	---	---	---	---	---	---
16	9.8	9.3	9.5	9.2	8.3	8.9	---	---	---	---	---	---
17	9.7	9.4	9.5	---	---	---	---	---	---	---	---	---
18	9.5	9.1	9.3	---	---	---	---	---	---	---	---	---
19	9.2	8.8	9.0	---	---	---	---	---	---	---	---	---
20	9.3	8.8	9.0	---	---	---	---	---	---	---	---	---
21	9.3	8.7	9.0	---	---	---	---	---	---	---	---	---
22	8.7	7.9	8.5	---	---	---	---	---	---	---	---	---
23	8.4	7.9	8.2	---	---	---	---	---	---	---	---	---
24	9.1	8.4	8.8	---	---	---	---	---	---	---	---	---
25	15.3	8.6	10.8	---	---	---	---	---	---	---	---	---
26	10.8	10.5	10.6	9.8	7.5	8.9	---	---	---	---	---	---
27	10.6	10.1	10.3	9.7	8.9	9.3	---	---	---	---	---	---
28	10.6	10.3	10.4	9.6	8.9	9.2	---	---	---	---	---	---
29	10.7	10.2	10.4	9.9	8.7	9.2	---	---	---	---	---	---
30	---	---	---	9.9	8.7	9.3	---	---	---	---	---	---
31	---	---	---	9.6	8.9	9.2	---	---	---	---	---	---
MONTH	15.3	7.9	10.1	10.8	7.5	9.3	10.5	7.9	9.0	---	---	---

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

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
YEAR	15.3	3.4	9.3									

08049580 MOUNTAIN CREEK NEAR VENUS, TX
(Flood-hydrograph Partial-record Station)

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

DRAINAGE AREA.--25.5 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1985 to September 1987. October 1987 to current year, (peaks above base discharge).

GAGE.--Water-stage recorder. Datum of gage is 580.49 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair including those for estimated daily discharges. Gage-height telemeter at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 27	1145	1,560	9.24	Feb. 4	0745	1,090	8.33
Oct. 29	0130	4,970	12.72	Feb. 24	2100	1,380	8.92
Nov. 19	1245	2,230	10.25	Mar. 4	0415	710	7.35
Dec. 9	0330	2,910	11.04	Mar. 9	0745	2,550	10.64
Dec. 19	2030	1,050	8.26	May 18	0730	1,080	8.31
Dec. 20	1515	7,620	14.03	May 25	1930	762	7.49
Jan. 27	0200	1,270	8.71	June 1	2300	1,020	8.18

08049580 MOUNTAIN CREEK NEAR VENUS, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: December 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
DEC											
10...	1400	26	632	7.4	21.0	62	40	9.0	103	1.0	260
JAN											
29...	1121	25	688	7.7	11.0	60	17	10.4	95	1.8	300
MAR											
17...	1125	5.5	1650	7.7	17.5	10	5.6	9.2	99	0.2	720
MAY											
07...	1130	0.55	986	7.4	19.5	40	9.2	5.8	64	2.6	450
JUN											
26...	0955	0.67	1590	7.8	26.0	10	4.7	7.6	96	1.6	720

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
DEC											
10...	120	94	6.6	29	0.8	5.0	140	170	23	0.40	13
JAN											
29...	130	110	6.1	32	0.8	4.0	170	160	19	0.30	12
MAR											
17...	420	250	23	99	2	2.8	300	480	69	0.60	11
MAY											
07...	290	160	11	58	1	4.4	150	320	44	0.50	9.5
JUN											
26...	480	250	23	91	1	4.0	250	550	58	0.50	11

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
DEC											
10...	425	52	20	32	0.330	0.070	0.400	0.050	0.65	0.70	0.150
JAN											
29...	446	2	<1	--	0.220	0.020	0.240	0.050	0.45	0.50	0.070
MAR											
17...	1110	21	16	5	0.360	0.030	0.390	<0.010	--	0.40	0.020
MAY											
07...	700	26	7	19	0.360	0.080	0.440	0.030	0.47	0.50	0.020
JUN											
26...	1140	10	9	1	--	<0.010	<0.050	0.060	0.34	0.40	<0.010

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
DEC											
10...	0.120	9.9	3	47	<0.5	1.0	<5	<3	<10	62	<10
JAN											
29...	0.060	7.2	--	--	--	--	--	--	--	--	--
MAR											
17...	<0.010	4.8	--	--	--	--	--	--	--	--	--
MAY											
07...	0.020	7.1	2	64	<0.5	<1.0	<5	<3	<10	<3	<10
JUN											
26...	<0.010	5.4	1	88	<0.5	<1.0	<5	<3	<10	4	<10

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC										
10...	13	61	<0.1	<10	<10	<1	<1.0	560	7	9
JAN										
29...	--	--	--	--	--	--	--	--	--	--
MAR										
17...	--	--	--	--	--	--	--	--	--	--
MAY										
07...	19	<1	<0.1	<10	<10	<1	<1.0	990	<6	<3
JUN										
26...	46	9	<0.1	<10	<10	<1	<1.0	2000	<6	9

08049590 BEAR CREEK OUTFALL AT SHADY GROVE ROAD, IRVING, TX

LOCATION.--Lat 32°48'02", long 96°58'44", Dallas County, Hydrologic Unit 12030102, on south side of Shady Grove Road, just west of Story Road, and 2.1 miles south of Irving.

DRAINAGE AREA.--0.10 mi².

PERIOD OF RECORD.-- Chemical and biochemical analyses: July 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
SEP 03-03	0122	0.37	2.0	0.14	78	98	7.8	7.0	25.0	56	8.5	210000
SEP 10-10	1345	0.44	6.6	0.17	502	99	7.2	7.2	25.5	51	7.7	>600000

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
SEP 03-03	280000	22	2	20	43	69	39	7.9	0.55	3.1	20	0.3
SEP 10-10	54000	30	1	29	49	24	62	11	0.65	2.9	15	0.2

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)
SEP 03-03	3.9	5.6	3.5	0.030	0.580	0.240	0.90	0.430	0.390	<10.0	3	<10
SEP 10-10	4.0	4.0	3.5	0.030	0.340	0.170	1.2	0.490	0.300	<10.0	4	<10

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	THAL-LIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
SEP 03-03	<1	3	5	<0.010	13	--	3	<2	<1	<5	60	27
SEP 10-10	<1	1	5	0.010	12	<0.10	2	<2	<1	<5	60	15

08049590 BEAR CREEK OUTFALL AT SHADY GROVE ROAD, IRVING, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACRO-LEIN TOTAL (UG/L)	ACRYLO-NITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
SEP 03-03	<1	2	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
SEP 10-10	3	21	<20	<20	<1.0	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<1.0

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMO CHLORO-PROPANE WATER WHOLE TOT.REC (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)
SEP 03-03	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
SEP 10-10	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<1.0

DATE	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)
SEP 03-03	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SEP 10-10	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)
SEP 03-03	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
SEP 10-10	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2

08049590 BEAR CREEK OUTFALL AT SHADY GROVE ROAD, IRVING, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,2,3-TRI-CHLORO BENZENE WAT, WH REC (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	PSEUDO-CUMENE WATER UNFLTRD REC (UG/L)	MESIT-YLENE WATER UNFLTRD REC (UG/L)
SEP 03-03	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
SEP 10-10	<0.2	<0.2	<1.0	<0.20	<5.0	<0.2	<0.2	<1.0	<0.2	<0.2	<0.20	<0.20

DATE	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)
SEP 03-03	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
SEP 10-10	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0

DATE	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6 -DIBENZ -ANTHRA -CENE TOTAL (UG/L)	3,3'-DI-CHLORO-BENZI-DINE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)
SEP 03-03	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
SEP 10-10	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0

DATE	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)
SEP 03-03	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
SEP 10-10	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0

08049590 BEAR CREEK OUTFALL AT SHADY GROVE ROAD, IRVING, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	FLUORENE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	2-NITROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)
SEP 03-03	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
SEP 10-10	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0

DATE	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXACHLORIDE TOTAL (UG/L)	DELTA BENZENE HEXACHLORIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE CIS WATER WHOLE TOTAL (UG/L)
SEP 03-03	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
SEP 10-10	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

DATE	CHLORDANE TRANS WATER WHOLE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN-I WATER WHOLE REC (UG/L)	ENDOSULFAN BETA TOTAL (UG/L)	ENDOSULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDEHYDE TOTAL (UG/L)
SEP 03-03	<0.10	0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
SEP 10-10	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)
SEP 03-03	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.80
SEP 10-10	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.50

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.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 531.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair, except those for periods of estimated daily discharges, which are poor. Several observations of water temperature were made during the year. Gage-height telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 29	1030	4,120	23.37	Feb. 25	0600	1,630	17.11
Oct. 31	1445	1,160	14.98	Mar. 9	1345	756	12.93
Nov. 19	1130	730	12.52	May 18	0645	781	13.08
Dec. 9	1145	1,160	14.98	June 2	1300	1,610	17.03
Dec. 20	1945	11,700	30.32	June 29	0030	2,130	19.02
Jan. 27	0900	1,440	16.34				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	204	5.4	22	7.8	28	9.6	7.9	21	12	2.7	.92
2	.25	44	29	25	6.0	24	8.9	5.9	929	5.9	1.2	.57
3	.07	24	29	14	36	24	8.8	4.8	74	4.2	.83	.73
4	.11	18	9.4	8.9	257	303	8.9	4.5	29	2.6	.60	.27
5	.05	15	6.8	9.7	84	163	8.3	4.7	17	1.8	.51	.09
6	.04	12	6.1	8.7	48	49	9.3	3.9	33	1.3	.37	.07
7	.04	11	5.8	8.3	36	32	8.8	3.3	16	1.2	.33	.06
8	.03	9.0	11	9.1	30	28	8.2	3.1	29	.89	.40	.03
9	.03	8.5	686	5.3	26	367	7.5	2.9	14	.90	.34	.03
10	.03	8.1	65	3.5	24	65	7.2	2.9	10	.72	.18	16
11	.04	7.5	56	3.3	23	31	6.9	2.8	7.4	.63	.25	30
12	.04	7.1	134	4.3	28	25	6.4	2.7	6.7	.70	12	1.8
13	.04	7.4	35	5.1	29	21	6.7	2.5	4.7	.63	3.1	.61
14	.05	6.5	19	4.1	26	20	5.8	2.4	4.2	.62	.81	.49
15	.05	6.3	12	3.0	24	18	5.4	2.3	3.6	.57	.62	.48
16	.06	8.5	9.8	2.6	20	17	5.0	19	3.2	.60	.49	.41
17	.10	38	9.3	7.5	19	25	4.8	62	2.8	.55	.42	.26
18	.12	27	11	295	19	202	4.7	290	2.5	2.4	4.2	.06
19	.11	358	707	98	14	37	7.3	97	2.4	3.7	28	.03
20	.09	169	4980	17	13	23	6.3	37	2.1	.85	2.1	.03
21	.13	25	2720	5.8	13	18	4.8	20	28	.59	1.1	.97
22	.08	20	209	112	26	17	4.3	17	15	.49	.74	.06
23	.06	11	128	25	44	14	4.0	13	6.0	.49	.66	.03
24	.04	7.8	52	6.7	257	14	3.4	11	30	.29	.61	.04
25	.00	6.8	33	3.4	1230	14	3.0	129	38	.11	1.0	.03
26	44	6.8	33	49	135	14	2.8	246	264	.11	.64	.02
27	2280	6.3	39	911	56	12	2.8	32	19	7.7	.52	.00
28	1640	6.3	28	171	40	13	2.7	63	286	102	.37	.04
29	3020	5.9	19	102	32	13	133	101	403	9.9	.19	.01
30	808	5.5	13	42	---	11	15	28	30	1.7	.24	.02
31	645	---	11	17	---	9.7	---	19	---	24	1.3	---
TOTAL	8438.90	1090.3	10111.6	1999.3	2602.8	1651.7	320.6	1240.6	2330.6	190.14	66.82	54.16
MEAN	272	36.3	326	64.5	89.8	53.3	10.7	40.0	77.7	6.13	2.16	1.81
MAX	3020	358	4980	911	1230	367	133	290	929	102	28	30
MIN	.00	5.5	5.4	2.6	6.0	9.7	2.7	2.3	2.1	.11	.18	.00
AC-FT	16740	2160	20060	3970	5160	3280	636	2460	4620	377	133	107
CFSM	4.33	.58	5.19	1.03	1.43	.85	.17	.64	1.24	.10	.03	.03
IN.	5.00	.65	5.99	1.18	1.54	.98	.19	.73	1.38	.11	.04	.03

08049700 WALNUT CREEK NEAR MANSFIELD, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1992, BY WATER YEAR (WY)

MEAN	18.7	3.83	16.4	7.01	16.3	23.1	38.0	55.3	29.1	4.35	2.23	6.91
MAX	272	36.3	326	64.5	95.9	184	174	378	300	57.1	21.8	67.4
(WY)	1992	1992	1992	1992	1965	1977	1990	1989	1986	1975	1979	1973
MIN	.000	.000	.000	.000	.014	.13	.40	.074	.030	.000	.000	.000
(WY)	1964	1961	1964	1981	1981	1963	1978	1962	1963	1964	1961	1971

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1961 - 1992	
ANNUAL TOTAL	25654.78		30097.52			
ANNUAL MEAN	70.3		82.2		18.4	
HIGHEST ANNUAL MEAN					82.2	1992
LOWEST ANNUAL MEAN					1.34	1978
HIGHEST DAILY MEAN	4980	Dec 20	4980	Dec 20	7900	May 17 1989
LOWEST DAILY MEAN	.00	Jul 21	.00	Oct 25	.00	Oct 1 1960
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 19	.02	Sep 24	.00	Oct 15 1960
INSTANTANEOUS PEAK FLOW			11700	Dec 20	22800	May 17 1989
INSTANTANEOUS PEAK STAGE			30.32	Dec 20	33.77	May 17 1989
INSTANTANEOUS LOW FLOW					.00	*
ANNUAL RUNOFF (AC-FT)	50890		59700		13360	
ANNUAL RUNOFF (CFSM)	1.12		1.31		.29	
ANNUAL RUNOFF (INCHES)	15.20		17.83		3.99	
10 PERCENT EXCEEDS	45		102		11	
50 PERCENT EXCEEDS	.71		7.8		.20	
90 PERCENT EXCEEDS	.06		.11		.00	

* No flow at times in 1960-74, and 1976-91.

08049700 WALNUT CREEK NEAR MANSFIELD, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
DEC 11...	1101	35	797	7.8	15.0	60	22	8.9	90	1.1	320
JAN 28...	1445	145	504	7.7	11.0	100	49	10.6	97	2.0	210
MAR 19...	1150	37	852	7.8	15.5	50	20	9.8	99	1.3	320
MAY 07...	1530	3.1	1560	7.7	20.0	20	4.5	8.8	98	0.7	670
JUN 26...	1505	13	423	7.7	25.0	110	130	7.8	96	3.8	150
AUG 12...	1235	0.41	1500	7.7	26.0	13	3.3	7.2	90	3.0	610

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
DEC 11...	140	100	16	44	1	6.8	180	170	51	0.30	13
JAN 28...	86	68	9.1	27	0.8	5.4	120	110	30	0.20	10
MAR 19...	140	100	17	53	1	5.9	180	200	86	0.70	12
MAY 07...	390	210	35	98	2	4.4	280	420	130	0.50	14
JUN 26...	52	48	6.9	23	0.8	6.6	97	70	27	0.20	10
AUG 12...	360	190	33	92	2	5.0	250	410	120	0.50	15

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
DEC 11...	510	40	16	24	0.200	0.030	0.230	0.040	0.66	0.70	0.140
JAN 28...	332	2	<1	--	0.240	0.030	0.270	0.060	0.54	0.60	0.110
MAR 19...	582	24	19	5	0.190	0.070	0.260	0.050	0.95	1.0	0.130
MAY 07...	1080	20	20	0	0.170	0.030	0.200	0.060	0.24	0.30	0.040
JUN 26...	250	260	56	204	0.210	0.040	0.250	0.150	0.85	1.0	0.280
AUG 12...	1020	13	10	3	--	<0.010	<0.050	0.040	0.26	0.30	0.040

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
DEC 11...	0.090	8.7	<1	72	<0.5	1.0	<5	<3	<10	51	<10
JAN 28...	0.080	--	--	--	--	--	--	--	--	--	--
MAR 19...	0.040	11	--	--	--	--	--	--	--	--	--
MAY 07...	0.020	5.3	<1	80	<0.5	<1.0	<5	<3	<10	<3	<10
JUN 26...	0.270	16	1	40	<0.5	<1.0	<5	<3	<10	200	<10
AUG 12...	0.020	6.6	<1	95	<0.5	<1.0	<5	<3	<10	11	10

08049700 WALNUT CREEK NEAR MANSFIELD, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC										
11...	20	130	<0.1	<10	<10	<1	1.0	710	<6	6
JAN										
28...	--	--	--	--	--	--	--	--	--	--
MAR										
19...	--	--	--	--	--	--	--	--	--	--
MAY										
07...	49	<1	<0.1	<10	<10	<1	<1.0	1700	<6	<3
JUN										
26...	9	13	<0.1	<10	<10	<1	<1.0	310	<6	5
AUG										
12...	57	120	<0.1	<10	<10	<1	1.0	1500	<6	13

08049800 JOE POOL LAKE NEAR DUNCANVILLE, TX

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

DRAINAGE AREA.--232 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--The lake is formed by a rolled earthfill dam 22,360 ft long, including a 50-foot uncontrolled broad-crested concrete spillway. Impoundment of water began Jan. 7, 1986, after closure of the dam was completed in December 1985. The flood-control outlet works consist of a 10.5-foot-diameter conduit that is controlled by two 4.75- by 10.5-foot slide gates. Above an elevation of 541 ft, water will flow over a 50-foot-long uncontrolled broad-crested concrete spillway located 0.5 mi to left of the outlet works tower. The low-flow outlet works consist of four 3- by 5-foot slide gates having invert elevations at 486.0, 495.0, 504.0, and 513.0 ft that open to a wet-well. Discharge from the wet-well to the 10.5-foot-diameter conduit is controlled by a 2- by 4-foot gate with invert at elevation 483.0 ft. A low-flow bypass system consisting of a turbine pump and 10-inch-diameter piping is also available for use if needed. The capacity table was provided by the U.S. Army Corps of Engineers. The lake was built for water supply, conservation, and flood-control. During the current year, no water has been diverted for municipal or industrial supply since the initial filling of the lake is in progress. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	564.5	-
Crest of spillway	541.0	362,700
Top of conservation pool	522.0	176,900
Lowest gated outlet	466.0	1,095

COOPERATION.--Records provided by the U.S. Army Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 274,600 acre-ft May 20, 1990 (elevation, 533.21 ft); minimum since initial filling began, 1,595 acre-ft Jan. 24, 1986 (elevation, 467.65 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 192,500 acre-ft Apr. 18 (elevation, 524.03 ft); minimum daily, 166,300 acre-ft Nov. 3 (elevation, 520.56 ft).

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

520.0	162,300	522.0	176,900	524.0	192,200
521.0	169,500	523.0	184,500	525.0	200,200

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88170	153400	90110	178100	96870	99760	88510	89230	88700	89190	87460	86080
2	88140	153800	90260	176100	95590	98570	88510	89120	89610	89040	87720	86040
3	88140	152800	90140	172200	95550	97520	88510	89080	89840	89000	87800	85970
4	88140	150500	89990	167300	97920	98120	88550	89040	89650	88970	87760	85970
5	87760	147200	89720	162300	97960	98000	88620	88850	89540	88810	87760	85850
6	87680	143800	89340	157500	97350	97030	88810	88780	89800	88740	87650	85820
7	87650	140300	88740	152600	96550	95910	88930	88740	89950	88620	87570	85740
8	87570	136400	88850	147500	95790	94640	89000	88700	90140	88510	87460	85630
9	87420	132000	89880	142400	94840	94880	89000	88700	90070	88360	87380	85480
10	87420	127600	90600	137400	93700	93770	89040	88620	89610	88210	87310	86040
11	87350	123200	91140	132400	92560	92880	89000	88550	89230	88100	87160	86110
12	87270	118800	92290	127500	91520	92100	89000	88590	89040	87760	87230	86110
13	87200	114400	92760	123400	90640	91330	88970	88590	88850	87610	87230	86040
14	87080	110000	92760	119700	90030	90450	88930	88550	88660	87500	87120	85970
15	86930	105600	92600	115900	89270	89540	88890	88510	88620	87420	87010	85930
16	86820	101400	92410	112100	88550	89230	88780	88780	88700	87270	86860	85710
17	86750	97840	92060	109000	88360	89380	89080	88930	88700	87270	86750	85520
18	86670	96190	92020	107300	88550	89950	89040	89120	88700	87230	86860	85260
19	86560	96350	97520	104700	88700	89610	89120	89540	88740	87160	87010	85080
20	86520	96230	147800	101900	88780	89190	89000	89690	88740	87050	87010	84860
21	86450	95830	168600	99270	88890	88930	88890	89950	89080	87010	86970	84780
22	86380	95230	175900	97520	89270	89230	88700	90110	89270	86900	86900	84740
23	86380	94680	179700	95910	89540	89540	88660	90070	89500	86820	86780	84630
24	86300	94090	180900	94480	92180	89690	88660	89950	89540	86750	86670	84560
25	86260	93500	180900	93580	98650	89540	88700	90490	89420	86640	86600	84490
26	87570	92910	180900	94360	101400	89380	88740	90370	89800	86520	86560	84380
27	109800	92410	180800	98570	102500	89190	88780	89690	89570	87230	86410	84300
28	122500	91830	180500	101000	101800	89040	89190	89540	89570	87310	86380	84160
29	137200	91330	180000	101100	100800	88810	89230	89310	89540	87270	86230	83860
30	141300	90640	179600	99590	---	88590	89270	88850	89380	87160	86110	83610
31	149400	---	178900	98080	---	88590	---	88440	---	87530	86040	---
MAX	149400	153800	180900	178100	102500	99760	89270	90490	90140	89190	87800	86110
MIN	86260	90640	88740	93580	88360	88590	88510	88440	88620	86520	86040	83610
(†)	529.63	522.25	531.23	523.79	523.48	522.08	522.16	522.14	523.67	522.10	521.86	521.55
(ϕ)	-28100	-58760	+88260	-80820	+2720	-12210	+680	-830	+940	-1850	-1490	-2430

CAL YR 1991 MAX 192500 MIN 86260 (†) +11700
WTR YR 1992 MAX 180900 MIN 83610 (ϕ) -93890

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

08049800 JOE POOL LAKE NEAR DUNCANVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January 1986 to current year.

323812096591701 - JOE POOL LAKE SITE AR

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
JAN							
23...	1218	1.00	373	8.1	9.0	7.6	67
23...	1221	10.0	373	8.0	9.0	7.6	67
23...	1224	20.0	374	8.0	9.0	7.6	67
23...	1227	30.0	373	8.0	9.0	7.6	67
23...	1230	45.0	373	8.0	9.0	7.7	68
APR							
09...	1100	1.00	437	8.4	19.0	9.1	101
09...	1103	10.0	437	8.3	19.0	8.8	97
09...	1107	20.0	436	8.2	18.0	8.5	92
09...	1110	30.0	435	8.1	17.0	8.1	86
09...	1113	42.0	435	8.1	16.0	7.3	76
AUG							
03...	1202	1.00	445	8.1	29.5	6.2	83
03...	1205	10.0	444	8.0	29.0	6.0	80
03...	1208	20.0	445	8.0	29.0	5.8	77
03...	1212	30.0	452	7.6	28.5	3.5	46
03...	1216	38.0	456	7.4	28.0	1.1	14

323819096584801 - JOE POOL LAKE SITE AC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	RESERVOIR STORAGE (AC-FT)	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
JAN												
23...	1139	193000	1.00	371	8.0	9.0	0.43	7.6	67	K2	K7	140
23...	1145	--	10.0	370	8.0	9.0	--	7.7	68	--	--	--
23...	1151	--	20.0	371	7.9	9.0	--	7.7	68	--	--	--
23...	1157	--	30.0	370	7.8	9.0	--	7.8	69	--	--	--
23...	1203	--	40.0	371	7.8	9.0	--	7.9	69	--	--	--
23...	1206	--	55.0	369	7.5	9.0	--	8.2	72	--	--	140
APR												
09...	1032	177000	1.00	432	8.3	19.0	0.60	8.9	98	<1	<1	170
09...	1036	--	10.0	435	8.2	18.5	--	8.8	96	--	--	--
09...	1040	--	20.0	435	8.0	18.0	--	8.5	92	--	--	--
09...	1046	--	30.0	433	7.8	17.0	--	7.9	84	--	--	--
09...	1050	--	40.0	433	7.5	16.0	--	7.2	75	--	--	--
09...	1054	--	51.0	441	7.3	15.5	--	6.3	65	--	--	170
AUG												
03...	1123	178000	1.00	445	8.1	29.0	1.30	6.3	84	K1	K4	160
03...	1128	--	10.0	446	8.1	29.0	--	6.1	81	--	--	--
03...	1133	--	20.0	445	8.0	29.0	--	5.8	77	--	--	--
03...	1138	--	30.0	446	7.9	28.5	--	5.4	71	--	--	--
03...	1145	--	35.0	455	7.4	28.0	--	1.7	22	--	--	--
03...	1150	--	40.0	460	7.2	27.5	--	0	0	--	--	--
03...	1155	--	49.0	459	7.1	27.0	--	0	0	--	--	170

08049800 JOE POOL LAKE NEAR DUNCANVILLE, TX--Continued

323819096584801 - JOE POOL LAKE SITE AC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
JAN											
23...	41	49	4.0	20	0.7	6.5	98	69	17	0.50	6.6
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	41	49	4.0	20	0.7	6.5	98	67	14	0.30	6.9
APR											
09...	58	59	4.6	22	0.7	6.4	110	87	18	0.30	6.3
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	59	60	4.7	21	0.7	6.2	110	87	18	0.30	7.1
AUG											
03...	60	57	5.1	26	0.9	6.9	100	95	21	0.30	5.4
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	57	61	5.3	26	0.9	7.1	120	92	21	0.30	6.8

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN											
23...	231	0.360	0.010	0.370	0.010	0.29	0.30	0.040	0.040	18	3
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	226	0.340	0.030	0.370	0.030	0.27	0.30	0.040	0.060	16	5
APR											
09...	268	0.290	0.020	0.310	0.020	0.28	0.30	<0.010	<0.010	6	<1
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	270	0.380	0.030	0.410	0.050	0.25	0.30	0.020	0.030	8	24
AUG											
03...	278	--	<0.010	0.096	0.010	0.29	0.30	<0.010	<0.010	6	4
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	<0.010	0.170	0.030	0.37	0.40	<0.010	<0.010	<10	10
03...	--	--	<0.010	0.160	0.070	0.23	0.30	<0.010	<0.010	<10	150
03...	290	0.072	0.010	0.082	0.160	0.34	0.50	<0.010	<0.010	61	400

08049800 JOE POOL LAKE NEAR DUNCANVILLE, TX--Continued

323731097013901 - JOE POOL LAKE SITE BC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
JAN											
23...	1505	1.00	369	8.0	9.0	0.49	7.9	69	K13	29	140
23...	1509	10.0	367	8.0	9.0	--	8.0	70	--	--	--
23...	1513	20.0	365	8.0	9.0	--	8.0	70	--	--	--
23...	1517	30.0	370	8.0	9.0	--	7.9	69	--	--	--
23...	1521	40.0	363	8.0	9.0	--	7.7	68	--	--	--
23...	1524	53.0	729	7.8	7.5	--	6.4	54	--	--	280
APR											
09...	1335	1.00	439	8.4	19.0	--	9.0	99	K2	K1	170
09...	1338	10.0	437	8.3	18.5	--	8.7	95	--	--	--
09...	1342	20.0	434	8.1	17.5	--	8.2	88	--	--	--
09...	1345	30.0	449	8.0	16.5	--	7.0	73	--	--	--
09...	1348	40.0	450	7.9	16.0	--	6.6	69	--	--	--
09...	1352	50.0	444	7.8	16.0	--	6.4	66	--	--	170
AUG											
03...	1448	1.00	440	8.3	30.5	--	7.1	97	22	120	160
03...	1453	10.0	441	8.1	29.0	--	6.1	81	--	--	--
03...	1457	20.0	441	7.9	29.0	--	5.4	72	--	--	--
03...	1501	30.0	448	7.7	29.0	--	4.2	56	--	--	--
03...	1506	35.0	460	7.3	28.5	--	0	0	--	--	--
03...	1512	40.0	480	7.3	28.0	--	0	0	--	--	--
03...	1517	49.0	475	7.2	28.0	--	0	0	--	--	180

DATE	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
JAN											
23...	41	49	4.0	20	0.7	6.3	98	66	15	0.30	6.6
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	140	--	--	--	--
23...	140	93	12	42	1	4.8	140	150	43	0.30	8.2
APR											
09...	58	59	4.7	21	0.7	6.4	110	88	19	0.30	6.2
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	56	60	4.9	23	0.8	6.5	110	87	19	0.30	6.9
AUG											
03...	63	57	5.2	26	0.9	6.9	100	94	20	0.30	5.2
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	55	63	5.6	27	0.9	7.1	120	94	22	0.30	7.4

08049800 JOE POOL LAKE NEAR DUNCANVILLE, TX--Continued

323731097013901 - JOE POOL LAKE SITE BC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN											
23...	226	0.350	0.020	0.370	0.020	0.28	0.30	0.050	0.050	6	5
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	0.340	0.020	0.360	0.020	0.28	0.30	0.060	0.050	<10	10
23...	438	0.260	0.020	0.280	0.140	0.46	0.60	0.080	0.060	15	200
APR											
09...	270	0.280	0.010	0.290	0.020	0.18	0.20	<0.010	<0.010	<3	2
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	276	0.360	0.050	0.410	0.050	0.25	0.30	0.010	0.040	12	7
AUG											
03...	275	--	<0.010	0.052	0.020	0.28	0.30	<0.010	<0.010	8	15
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	0.072	0.010	0.082	0.050	0.25	0.30	<0.010	<0.010	<10	80
03...	--	--	<0.010	0.150	0.060	0.34	0.40	<0.010	<0.010	10	260
03...	--	--	--	--	--	--	--	--	--	--	--
03...	302	--	0.010	<0.050	0.270	0.63	0.90	0.100	<0.010	230	800

323645097002001 - JOE POOL LAKE SITE CR

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
JAN							
23...	1320	1.00	369	8.1	8.5	7.9	69
23...	1323	10.0	372	8.1	8.5	7.9	69
23...	1326	20.0	372	8.1	8.5	8.0	70
23...	1329	30.0	370	8.1	8.5	8.0	70
23...	1331	41.0	370	8.1	8.5	7.8	68
APR							
09...	1149	1.00	441	8.2	17.5	8.3	89
09...	1152	10.0	441	8.2	17.0	8.3	88
09...	1155	20.0	440	8.2	17.0	8.2	87
09...	1158	30.0	440	8.1	17.0	8.0	85
09...	1202	38.0	437	8.0	15.5	6.9	71
AUG							
03...	1259	1.00	444	8.1	29.5	6.0	81
03...	1304	10.0	446	8.0	29.0	5.6	75
03...	1308	20.0	446	7.9	28.5	5.3	70
03...	1312	30.0	450	7.8	28.5	4.6	61
03...	1315	37.0	456	7.4	28.5	1.9	25

08049800 JOE POOL LAKE NEAR DUNCANVILLE, TX--Continued

323646097005101 - JOE POOL LAKE SITE CC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
JAN										
23...	1251	1.00	368	8.1	8.5	0.37	8.0	70	100	0.360
23...	1258	10.0	369	8.1	8.5	--	7.9	69	--	--
23...	1302	20.0	370	8.1	8.5	--	7.9	69	--	--
23...	1306	30.0	367	8.1	8.5	--	8.0	70	--	--
23...	1309	40.0	368	8.1	8.5	--	7.9	69	--	--
23...	1311	50.0	369	8.1	8.5	--	7.8	68	--	--
23...	1313	56.0	369	8.0	8.5	--	7.9	69	98	0.350
APR										
09...	1127	1.00	444	8.2	17.5	0.60	8.2	88	--	0.360
09...	1130	10.0	438	8.2	17.0	--	8.1	86	--	--
09...	1133	20.0	439	8.2	17.0	--	8.0	85	--	--
09...	1136	30.0	441	8.1	16.5	--	7.9	83	--	--
09...	1139	40.0	437	8.0	16.0	--	6.8	71	--	--
09...	1142	52.0	439	8.0	16.0	--	6.5	67	--	0.370
AUG										
03...	1236	1.00	446	8.1	29.5	1.30	6.0	81	--	0.100
03...	1239	10.0	444	8.0	28.5	--	5.7	75	--	--
03...	1242	20.0	447	7.9	28.5	--	5.4	71	--	--
03...	1246	30.0	449	7.9	28.5	--	5.2	69	--	--
03...	1249	40.0	459	7.3	27.5	--	0	0	--	--
03...	1252	48.0	466	7.3	27.0	--	0	0	--	--

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JAN									
23...	0.010	0.370	0.010	0.29	0.30	0.040	0.040	<10	<10
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	0.020	0.370	0.030	0.27	0.30	0.060	0.040	10	<10
APR									
09...	0.020	0.380	0.020	--	<0.20	0.010	<0.010	<10	<10
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	0.040	0.410	0.050	0.25	0.30	0.010	0.030	<10	20
AUG									
03...	0.010	0.110	0.030	0.17	0.20	<0.010	<0.010	<10	20
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	<0.010	<0.050	0.280	0.42	0.70	0.020	<0.010	200	720

323503097012201 - JOE POOL LAKE SITE DC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
JAN									
23...	1340	1.00	360	8.1	8.0	8.5	73	98	0.320
23...	1351	10.0	363	8.1	7.5	8.2	70	--	0.260
23...	1356	20.0	385	8.0	7.5	7.8	66	--	0.310
23...	1401	34.0	608	7.9	7.0	7.2	60	130	0.330
APR									
09...	1216	1.00	472	8.2	18.0	8.2	89	--	0.300
09...	1219	10.0	437	8.0	16.0	7.2	75	--	--
09...	1221	20.0	441	8.0	16.0	6.9	72	--	--
09...	1225	28.0	440	8.0	16.0	6.8	71	--	0.400
AUG									
03...	1329	1.00	450	8.1	30.0	6.2	84	--	0.085
03...	1334	10.0	450	8.0	28.0	5.5	72	--	--
03...	1337	20.0	466	7.3	27.5	1.1	14	--	--
03...	1342	28.0	499	7.3	27.0	0	0	--	0.048

08049800 JOE POOL LAKE NEAR DUNCANVILLE, TX--Continued

323503097012201 - JOE POOL LAKE SITE DC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN									
23...	0.020	0.340	0.030	0.47	0.50	0.050	0.030	70	<10
23...	0.030	0.290	0.050	0.25	0.30	0.060	0.040	<10	<10
23...	0.030	0.340	0.040	0.26	0.30	0.060	0.040	10	<10
23...	0.020	0.350	0.120	0.38	0.50	0.050	0.040	10	50
APR									
09...	0.020	0.320	0.020	0.28	0.30	0.020	<0.010	<10	<10
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
09...	0.010	0.410	0.040	0.26	0.30	0.010	<0.010	10	<10
AUG									
03...	0.010	0.095	0.020	0.28	0.30	<0.010	<0.010	<10	10
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	0.050	0.098	0.220	0.38	0.60	0.020	0.020	20	240

32332909/024101 - JOE POOL LAKE SITE EC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
JAN											
23...	1421	1.00	655	8.1	8.5	0.12	8.1	70	K1100	>600	230
23...	1425	10.0	670	8.0	8.0	--	8.1	70	--	--	--
23...	1430	20.0	670	8.0	8.0	--	8.0	69	--	--	--
23...	1435	27.0	674	8.0	8.0	--	7.9	68	--	--	250
APR											
09...	1250	1.00	869	8.0	20.5	0.20	7.1	81	51	K7	310
09...	1255	10.0	512	7.8	16.5	--	4.1	43	--	--	--
09...	1300	16.0	513	7.8	16.5	--	4.2	44	--	--	190
AUG											
03...	1459	1.00	680	7.9	28.0	0.20	5.6	73	--	--	180
03...	1503	10.0	729	7.5	26.5	--	3.5	45	--	--	--
03...	1507	14.0	728	7.5	26.5	--	3.4	43	--	--	180

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
JAN											
23...	95	85	5.5	42	1	11	140	150	26	0.30	9.3
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	100	89	5.8	45	1	9.5	140	150	22	0.30	8.0
APR											
09...	160	110	7.9	52	1	19	140	250	34	0.40	5.9
09...	--	--	--	--	--	--	--	--	--	--	--
09...	65	69	5.0	29	0.9	8.8	130	110	20	0.30	7.4
AUG											
03...	80	61	6.1	53	2	31	97	200	31	0.50	7.7
03...	--	--	--	--	--	--	--	--	--	--	--
03...	87	62	6.3	59	2	34	94	200	34	0.50	8.0

08049800 JOE POOL LAKE NEAR DUNCANVILLE, TX--Continued

323329097024101 - JOE POOL LAKE SITE EC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JAN											
23...	413	0.480	0.050	0.530	0.040	0.56	0.60	0.120	0.090	19	28
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	416	0.520	0.040	0.560	0.050	0.55	0.60	0.110	0.080	13	24
APR											
09...	565	0.080	0.030	0.110	0.070	0.33	0.40	0.020	0.020	<3	46
09...	--	--	--	--	--	--	--	--	--	--	--
09...	326	0.190	0.090	0.280	0.160	0.34	0.50	0.150	<0.010	6	75
AUG											
03...	448	0.130	0.080	0.210	0.030	0.57	0.60	0.020	0.020	16	9
03...	--	--	--	--	--	--	--	--	--	--	--
03...	460	0.076	0.020	0.096	0.120	0.48	0.60	0.040	<0.010	29	52

Joe Pool Lake AC (323819096584801)

Phytoplankton Analyses October 1991 to September 1992

Date	1-23-92
Time	1140
TOTAL CELLS/mL	2,640,902
NUMBER OF SPECIES	14
DEPTH COLLECTED (ft.)	0.7

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	10,728
Cyclotella ocellata	5,109
Stephanodiscus astraea var. *minutula*	9,196
Order Pennales	
Fragilaria crotonensis	8,344
Navicula cryptocephala	2,086
Nitzschia palea	2,086
CHLOROPHYTA	
Chlamydomonas sp.	37,548
Chlorococcum humicola	25,032
Selenastrum minutum	12,516
CHRYSOPHYTA	
Unknown flagellate	125,161
CYANOPHYTA	
Aphanocapsa delicatissima	2,240,387
Chroococcus sp.	137,677
CRYPTOPHYTA	
Cryptomonas erosa	12,516
Rhodomonas minuta	12,516

Joe Pool Lake EC (323329097024101)

Phytoplankton Analyses October 1991 to September 1992

Date	1-23-92
Time	1422
TOTAL CELLS/mL	2,240,387
NUMBER OF SPECIES	16
DEPTH COLLECTED (ft.)	0.2

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	11,125
Stephanodiscus astraea var. *minutula*	1,391
Order Pennales	
Navicula cryptocephala	501
Nitzschia acicularis	1,502
Nitzschia palea	1,502
Synedra delicatissima	5,006
Synedra delicatissima var. *angustissima*	3,505
Synedra tenera	501
CHLOROPHYTA	
Chlamydomonas sp.	12,516
Chlorella ellipsoidea	25,032
Chlorococcum humicola	12,516
CHRYSOPHYTA	
Unknown flagellate	137,677
CYANOPHYTA	
Aphanocapsa delicatissima	1,902,452
Chroococcus sp.	75,097
CRYPTOPHYTA	
Cryptomonas erosa	12,516
Rhodomonas minuta	37,548

Joe Pool Lake AC (232819096584801)

Phytoplankton Analyses October 1991 to September 1992

Date	4-9-92
Time	1029
TOTAL CELLS/mL	138,362
NUMBER OF SPECIES	13
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	21,771
Stephanodiscus astraea	3,629
Order Pennales	
Achanthes lanceolata	735
Fragilaria crotonensis	735
Navicula sp	1,471
Punnularia sp.	4,412
CHLOROPHYTA	
Ankistrodesmus falcatus	4,679
CYANOPHYTA	
Aphanocapsa delicatissima	73,525
Chroococcus minimus	5,347
Merismopedia tenuissima	10,695
EUGLENOPHYTA	
Euglena sp.	668
Trachelomonas sp.	2,674
CRYPTOPHYTA	
Cryptomonas erosa	8,021

Joe Pool Lake EC (323329097024101)

Phytoplankton Analyses October 1991 to September 1992

Date	4-9-92
Time	1248
TOTAL CELLS/mL	218,568
NUMBER OF SPECIES	18
DEPTH COLLECTED (ft.)	0.4

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	2,762
Melosira varians	276
Stephanodiscus astraea	304
Order Pennales	
Achanthes linearis	348
Cocconeis placentula	696
Cymbella cymbiformis	1,218
Fragilaria crotonensis	3,829
Gyrosigma sp.	696
Navicula contenta	2,437
Navicula sp.	696
Synedra fasciculata	6,440
Pinnularia sp.	348
CHLOROPHYTA	
Ankistrodesmus falcatus	12,700
Chlamydomonas sp.	668
CYANOPHYTA	
Aphanocapsa delicatissima	126,998
Chroococcus minimus	2,674
Merismopedia tenuissima	53,473
EUGLENOPHYTA	
Trachelomonas sp.	2,005

Joe Pool Lake AC (323819096584801)

Phytoplankton Analyses October 1991 to September 1992

Date	8-3-92
Time	1122
TOTAL CELLS/mL	323,509
NUMBER OF SPECIES	15
DEPTH COLLECTED (ft.)	2.1

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	17,379
Order Pennales	
Fragilaria crotenensis	14,705
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	2,005
Chlamydomonas sp.	1,337
Cosmarium sp.	668
Scenedesmus quadricauda	1,337
CHRYSOPHYTA (Golden-brown algae)	
Dinobryon sociale	1,337
Mallamonas sp.	668
CYANOPHYTA (Blue-green algae)	
Aphanocapsa delicatissima	126,998
Aphanizomenon flos-aquae	10,026
Chroococcus limneticus	12,031
Merismopedia tenuissima	125,661
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	2,005
Trachelomonas spp.	3,342
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas erosa	4,010

Joe Pool Lake EC (323329097024101)

Phytoplankton Analyses October 1991 to September 1992

Date	**8-3-92**
Time	**1458**
TOTAL CELLS/mL	**172,451**
NUMBER OF SPECIES	**20**
DEPTH COLLECTED (ft.)	**0.2**

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella ocellata	204
Melosira varians	455
Stephanodiscus astraea	9
Order Pennales	
Achnanthes sp.	2,971
Fragilaria crotenensis	2,971
Fragilaria vaucherie	1,114
Navicula sp.	743
Synedra sp.	2,228
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	8,021
Chlamydomonas sp.	2,005
Selenestrum westii	2,674
Scenedesmus quadricauda	1,337
CHRYSOPHYTA (Golden-brown algae)	
Mallamonas sp.	668
CYANOPHYTA (Blue-green algae)	
Anabaena spiroides	33,421
Aphanocapsa delicatissima	66,841
Aphanizomenon flos-aquae	33,421
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	2,005
Trachelomonas spp.	8,021
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas erosa	2,674
Cryptomonas ovata	668

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 and biochemical analyses: February to September 1987, September 1991 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
JAN 23...	1230	1580	364	8.0	8.5	30	15	12.7	110	0.7	140
APR 09...	1130	18	434	8.2	16.5	20	15	9.5	99	2.2	160
AUG 03...	1330	10	453	8.1	27.0	10	8.3	7.6	97	1.1	170

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
JAN 23...	44	50	3.9	20	0.7	6.5	97	68	14	0.40	6.7
APR 09...	57	58	4.7	23	0.8	6.7	110	86	16	0.30	6.0
AUG 03...	58	58	5.0	25	0.8	7.2	110	94	18	0.30	6.3

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
JAN 23...	228	14	<1	--	0.350	0.020	0.370	0.040	0.26	0.30	0.040
APR 09...	266	47	18	29	0.370	0.010	0.380	0.010	0.29	0.30	0.030
AUG 03...	279	29	<1	--	0.100	0.010	0.110	0.090	0.31	0.40	0.030

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
JAN 23...	0.030	4.7	1	31	<0.5	<1.0	<5	<3	<10	15	<10
APR 09...	0.020	4.6	<1	39	<0.5	2.0	<5	<3	<10	5	<10
AUG 03...	0.010	4.8	2	40	<0.5	1.0	<5	<3	<10	4	<10

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
JAN 23...	11	<1	<0.1	<10	<10	<1	<1.0	400	<6	<3
APR 09...	11	1	0.2	<10	<10	<1	1.0	470	<6	<3
AUG 03...	11	230	0.3	<10	<10	<1	<1.0	510	<6	8

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.--October 1960 to current year.
Water-quality records.--Chemical analyses: October 1969 to September 1985.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 21, 1960, non-recording gage at powerplant at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam 5,800 ft long, including a controlled spillway six 34- by 27 foot tainter gates. The dam was completed in December 1936 and deliberate impoundment began on Mar. 24, 1937. The lake was built and is operated by Dallas Power and Light Co. to supply cooling water for their generating plant. The capacity curve is based on a survey made in 1963. For statement regarding regulation by Joe Pool Dam, see station 08049900. Figures given herein represent total contents. Gage-height telemeter at station. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	467.0	-
Top of gates	458.0	25,720
Top of dry weather conservation pool	457.0	22,840
Top of wet weather conservation pool	456.0	20,260
Crest of spillway (sill of tainter gates)	431.0	0

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 28,360 acre-ft May 17, 1989 (elevation, 458.80 ft); minimum, 14,120 acre-ft Oct. 18, 1972 (elevation, 453.25 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 26,020 acre-ft Dec. 20 at 1800 hours (elevation, 458.09 ft); minimum, 20,800 acre-ft Oct. 29 (elevation, 456.21 ft).

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

456.0	20,260	458.0	25,720
457.0	22,840	459.0	29,020

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23530	21680	23190	22690	22900	22400	23070	22660	23530	22790	23760	21810
2	23790	21060	22840	22840	23160	22250	23100	22610	22040	22380	23040	21860
3	23760	21400	22580	21600	23390	21960	23210	22580	22450	22480	22300	21810
4	23330	22320	22870	21730	22500	22120	23160	22710	23620	23070	22270	21810
5	23330	22480	23160	22300	22500	22320	23160	22610	22430	22610	22220	21760
6	23330	22300	23360	22500	22430	22220	23330	22560	22270	23100	22170	21730
7	23330	22170	21760	22760	22140	21990	23330	22560	22740	23130	22090	21680
8	23300	23040	22430	22760	22400	21890	23420	22450	23210	23100	22010	21650
9	23210	23470	22610	22660	23360	22010	23420	22400	22250	23100	21960	21580
10	23210	23530	23130	22610	23040	21810	23420	22350	22960	23070	21910	21760
11	23190	23040	23420	22580	22250	22530	23440	22270	22300	23040	21830	21830
12	23160	22270	21890	22660	22560	23620	23500	22300	22610	22980	22170	21830
13	23130	21700	22250	23010	23500	23330	23620	22300	22690	22960	22170	21780
14	23040	21890	23330	22960	22300	22840	23620	22740	22690	22900	22120	21730
15	23040	22250	22760	22760	21730	22220	23620	22740	22690	22840	22090	21700
16	23010	22870	23330	22810	21830	22500	23620	23070	22690	22760	22040	21680
17	22930	23040	22400	23040	22140	22810	21960	21910	22530	22760	21990	21650
18	22870	22560	21960	23240	21960	21990	21760	22360	22500	22870	21940	21630
19	22810	23270	23040	22170	21960	22270	21960	22250	22480	22930	22190	21580
20	22790	21650	24680	22070	22010	22660	21990	22580	22500	22900	22220	21450
21	22760	22190	21320	22350	22070	23330	21990	23240	22690	22900	22190	21730
22	22740	22690	22270	22870	22320	22430	21990	23070	22740	22870	22170	21630
23	22760	23190	22530	22790	22500	21810	21990	22810	22790	22840	22170	21550
24	22760	23270	22710	22500	23240	21990	22140	22530	21830	22790	22090	21520
25	22740	22960	22870	22070	22120	22040	21810	23040	22350	22740	22070	21470
26	23390	22560	21890	22930	21780	22250	21810	23010	22430	22710	22010	21340
27	21500	21700	22010	22480	22320	22450	21760	22740	22760	22740	21940	21340
28	22500	22300	22220	22170	23100	22690	22220	23130	23300	23360	21910	21320
29	21630	22580	22250	22300	22740	22900	22610	22630	21910	23360	21860	21240
30	22040	22840	22350	22500	---	23040	22660	21830	22250	23010	21780	21210
31	22760	---	22500	22660	---	23070	---	22390	---	23560	21730	---
MAX	23790	23530	24680	23240	23500	23620	23620	23240	23620	23560	23760	21860
MIN	21500	21060	21320	21600	21730	21810	21760	21830	21830	22380	21730	21210
(†)	456.97	457.00	456.87	456.93	456.96	457.08	456.94	456.82	456.77	457.25	456.57	456.37
(ϕ)	-710	+80	-40	+160	+80	+330	-410	-270	-140	+1310	-1830	-520

CAL YR 1991 MAX 24680 MIN 20490 (ϕ) -660
WTR YR 1992 MAX 24680 MIN 21060 (ϕ) -2260

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

08050100 MOUNTAIN CREEK AT GRAND PRAIRIE, TX

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

DRAINAGE AREA.--298 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 404.31 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 19, 1984, at datum 3.0 ft higher.

REMARKS.--Records fair except those of estimated daily discharges, which are poor. Since March 1937, flow regulated by Mountain Creek Lake (station 08050050), 1.5 mi upstream. Reconstruction of the upstream road embankment and bridge was completed during the 1991 water year. Several observations of water temperature were made during the year. The instantaneous peak stage that occurred on Dec. 20, 1991, was influenced by backwater from the West Fork Trintity River. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	e595	e3.0	e1.5	e1220	e890	1.3	1.5	244	e34	2.8	2.0
2	1.9	e300	e800	e1.3	e1220	e890	1.5	1.5	1900	920	231	2.4
3	1.7	8.8	e410	e1350	e1250	e890	1.4	1.4	11	998	462	5.3
4	2.4	434	e1.7	e1500	e1640	e1300	1.3	1.3	12	522	2.0	3.7
5	2.1	1440	e1.3	e1710	e900	e900	.97	1.2	1170	1080	2.0	3.3
6	2.2	1630	e35	e1750	e895	e890	1.6	1.1	649	510	1.6	3.2
7	2.3	1630	e900	e1750	e890	e890	1.1	1.4	3.5	4.2	1.6	3.4
8	1.9	e2000	e25	e1740	e275	e890	.82	1.4	2.9	3.3	1.4	3.2
9	1.6	e2750	e1200	e1730	e9.0	e1400	.80	1.2	734	2.6	1.2	3.2
10	1.5	e2850	e1.7	e1710	e620	e910	.91	1.2	120	2.7	1.2	3.8
11	1.4	e3200	e790	e1650	e895	e500	.99	1.3	920	2.5	1.2	5.6
12	1.3	e3400	e1200	e1650	e370	e280	1.0	1.3	6.8	2.6	3.5	5.5
13	1.4	e3200	e690	e1650	e11	e895	1.1	.91	5.1	2.2	5.1	6.1
14	1.3	e2200	e380	e2000	e660	e889	.89	5.4	4.2	2.1	4.0	5.7
15	1.5	e700	e1200	e2300	e440	e496	.94	2.0	3.8	1.6	4.4	5.4
16	1.6	e600	e650	e2300	e2.4	e2.3	1.0	6.9	3.7	2.4	4.8	5.3
17	1.7	e990	e1250	e2310	e2.3	e14	702	86	3.0	1.8	3.8	6.1
18	1.7	e1200	e520	e2500	e1.8	e717	123	2190	2.5	1.7	3.1	5.5
19	1.4	e1500	e1200	e1850	e1.6	e4.3	2.2	230	2.0	1.7	3.1	5.3
20	1.6	e1750	e7900	e1200	e1.4	3.4	2.6	3.2	3.5	1.6	2.0	5.4
21	1.7	e650	e4500	e1180	e1.3	2.7	2.7	309	2.5	1.5	1.9	11
22	1.7	e600	e35	e1550	e2.6	523	2.8	1050	2.0	1.5	1.6	3.9
23	1.8	e600	e5.0	e1720	e3.2	472	2.5	1050	58	1.5	1.4	3.8
24	1.8	e880	e3.0	e1700	e355	3.4	2.6	1050	620	1.3	1.3	3.8
25	2.1	e1200	e2.5	e1430	e2500	5.1	2.3	1050	6.8	1.2	1.4	3.4
26	6.1	e1200	e680	e900	e400	2.0	2.3	1050	1320	1.1	1.3	3.1
27	e6000	e1050	e10	e1600	e20	1.6	1.8	1040	31	1.8	1.4	2.5
28	e3100	e24	e3.5	e475	e450	1.6	1.6	1080	e2040	8.3	1.9	2.4
29	e2800	e4.1	e2.5	e340	e900	1.5	13	1090	e4520	5.4	1.9	2.3
30	e210	e2.0	e2.0	e1200	---	1.4	1.8	1060	e85	2.2	1.6	2.3
31	e415	---	e1.5	e1210	---	1.4	---	373	---	4.1	1.5	---
TOTAL	12574.6	38587.9	24402.7	45957.8	15936.6	14666.7	880.82	12742.21	14486.3	4126.9	759.0	127.9
MEAN	406	1286	787	1483	550	473	29.4	411	483	133	24.5	4.26
MAX	6000	3400	7900	2500	2500	1400	702	2190	4520	1080	462	11
MIN	1.3	2.0	1.3	1.3	1.3	1.4	.80	.91	2.0	1.1	1.2	2.0
AC-FT	24940	76540	48400	91160	31610	29090	1750	25270	28730	8190	1510	254

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1992#, BY WATER YEAR (WY)

MEAN	73.1	66.2	82.4	104	131	168	207	301	153	35.5	10.2	21.3
MAX	785	1286	1102	1483	714	1104	1170	1941	1028	511	88.6	188
(WY)	1974	1992	1972	1992	1975	1977	1966	1969	1990	1989	1962	1973
MIN	.22	.30	.26	.11	.17	.30	.91	.68	.50	.21	.16	.36
(WY)	1989	1964	1976	1976	1964	1976	1987	1984	1971	1972	1972	1972

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1961 - 1992#	
ANNUAL TOTAL	115400.67		185249.43			
ANNUAL MEAN	316		506		113	
HIGHEST ANNUAL MEAN					506	1992
LOWEST ANNUAL MEAN					4.39	1988
HIGHEST DAILY MEAN	7900	Dec 20	7900	Dec 20	24700	May 7 1969
LOWEST DAILY MEAN	.32	Feb 3	.80	Apr 9	.00	Jan 25 1964
ANNUAL SEVEN-DAY MINIMUM	.46	Jan 28	.93	Apr 8	.02	Dec 23 1983
INSTANTANEOUS PEAK FLOW			17900	Dec 20	38100	Apr 19 1976
INSTANTANEOUS PEAK STAGE			a/25.12	Dec 20	a/25.12	Dec 20 1991
INSTANTANEOUS LOW FLOW			.64	Apr 8	.00	at times
ANNUAL RUNOFF (AC-FT)	228900		367400		81600	
10 PERCENT EXCEEDS	1140		1630		22	
50 PERCENT EXCEEDS	2.7		5.1		1.0	
90 PERCENT EXCEEDS	.89		1.4		.30	

Period of regulated streamflow.
a/ Peak stage probably affected by backwater from the West Fork Trinity River.

08050400 ELM FORK TRINITY RIVER AT GAINESVILLE, TX

LOCATION.--Lat 33°37'27", long 97°09'22", Cooke County, Hydrologic Unit 12030103, on right bank 16 ft to the right of the right end of the bridge on Farm Road 51, 31 ft downstream from the centerline of the 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 (corrected).

DRAINAGE AREA.--174 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 700.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Several observations of water temperature were made during the year. Gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	1070	97	215	164	109	39	11	191	39	55	2.2
2	12	663	786	209	149	97	38	11	424	31	93	2.6
3	9.1	372	400	198	143	92	35	10	265	26	19	1590
4	6.7	243	205	179	137	392	35	9.3	134	24	11	249
5	5.0	197	142	171	115	364	36	8.3	89	21	5.6	181
6	4.0	168	111	169	102	210	36	7.2	887	17	4.5	93
7	3.6	129	96	169	100	157	36	5.9	342	13	3.1	46
8	3.2	102	87	164	96	133	34	5.4	795	11	2.8	30
9	2.9	85	136	151	85	133	33	5.6	478	11	2.6	20
10	2.8	67	99	128	80	112	30	5.2	346	8.8	2.7	534
11	2.4	52	255	114	79	91	28	5.0	458	7.6	2.2	232
12	2.4	43	1410	114	79	85	188	5.0	214	6.9	2.2	29
13	2.3	35	466	740	78	76	68	5.0	147	6.4	2.4	14
14	2.3	33	267	588	76	73	44	4.8	112	7.3	2.6	8.2
15	2.2	35	189	377	71	66	35	4.9	86	6.9	2.4	6.1
16	2.1	259	153	224	63	55	30	5.2	75	6.5	2.4	5.0
17	2.1	405	125	190	61	56	25	25	66	8.3	2.2	4.1
18	2.7	171	97	238	56	71	24	124	54	8.0	2.2	3.5
19	3.1	121	1730	282	51	66	24	93	52	7.1	2.4	3.2
20	4.1	105	7160	404	46	57	20	93	50	6.4	2.1	7.5
21	4.5	71	1720	636	44	55	23	36	47	5.1	2.2	44
22	4.4	56	e2620	887	49	52	24	21	43	4.0	2.5	12
23	4.5	41	1240	350	76	48	20	402	39	3.7	2.3	5.1
24	4.4	30	784	244	81	46	18	316	35	3.5	2.3	3.9
25	7.8	24	647	e202	945	58	14	130	42	3.4	2.6	3.2
26	770	24	517	e174	343	52	13	85	42	3.6	2.4	3.0
27	306	23	380	e1120	203	47	11	47	40	6.0	2.1	2.9
28	2660	22	327	436	149	50	11	493	64	5.5	2.0	2.8
29	1100	31	289	286	130	51	10	289	89	5.1	1.9	2.6
30	e724	29	268	229	---	44	10	140	63	6.1	1.9	2.4
31	2790	---	228	197	---	39	---	101	---	11	1.9	---
TOTAL	8465.6	4706	23031	9785	3851	3037	992	2503.8	5769	330.2	246.5	3142.3
MEAN	273	157	743	316	133	98.0	33.1	80.8	192	10.7	7.95	105
MAX	2790	1070	7160	1120	945	392	188	493	887	39	93	1590
MIN	2.1	22	87	114	44	39	10	4.8	35	3.4	1.9	2.2
AC-FT	16790	9330	45680	19410	7640	6020	1970	4970	11440	655	489	6230

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1992, BY WATER YEAR (WY)

MEAN	64.3	33.2	161	105	130	172	200	417	242	21.5	3.85	45.1
MAX	273	157	743	316	348	565	1063	1359	659	91.1	7.95	105
(WY)	1992	1992	1992	1992	1987	1990	1990	1990	1989	1987	1992	1992
MIN	.72	2.56	2.61	5.72	18.0	6.54	6.25	5.79	5.36	1.02	.025	1.40
(WY)	1989	1990	1991	1986	1991	1986	1991	1988	1988	1988	1988	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1986 - 1992	
ANNUAL TOTAL	48524.17		65859.4			
ANNUAL MEAN	133		180		133	
HIGHEST ANNUAL MEAN					277	1990
LOWEST ANNUAL MEAN					35.2	1991
HIGHEST DAILY MEAN	7160	Dec 20	7160	Dec 20	12500	May 2 1990
LOWEST DAILY MEAN	.46	Jul 23	1.9	Aug 29	.00	Aug 2 1988
ANNUAL SEVEN-DAY MINIMUM	.57	Jul 17	2.1	Aug 26	.00	Aug 2 1988
INSTANTANEOUS PEAK FLOW			11300	Dec 20	24000	May 16 1989
INSTANTANEOUS PEAK STAGE			18.70	Dec 20	25.33	May 16 1989
INSTANTANEOUS LOW FLOW			1.7	Aug 30	.00	*
ANNUAL RUNOFF (AC-FT)	96250		130600		96340	
10 PERCENT EXCEEDS	248		401		259	
50 PERCENT EXCEEDS	15		48		13	
90 PERCENT EXCEEDS	1.0		2.8		1.1	

* No flow for several days in August 1988 because of cannel construction upstream.

08050410 ELM FORK TRINITY RIVER NEAR GAINESVILLE, TX

LOCATION.--Lat 33°34'56", long 97°07'49", Cooke County, Hydrologic Unit 12030103, on Farm Road 2071 bridge, over center of channel at downstream side of bridge, 1.0 mi downstream from Atchison, Topeka, and Santa Fe Railroad Co. bridge, and 3.0 mi south of Cooke County Courthouse in Gainesville.

DRAINAGE AREA.--1.79 mi.²

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1988 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT 02...	0915	14	651	7.8	19.0	30	19	7.2	80	1.7	170
NOV 19...	1330	121	564	8.1	14.0	29	10	9.2	92	0.5	210
JAN 07...	1315	208	516	8.2	10.5	20	12	9.4	86	0.4	220
FEB 25...	1640	1410	382	8.1	8.0	230	60	11.2	97	2.2	150
APR 14...	1200	53	646	8.0	19.5	25	23	8.0	89	1.3	240
JUN 06...	1630	580	616	8.2	21.5	15	97	8.5	99	1.5	220

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT 02...	0	63	4.2	69	2	5.2	210	44	61	0.40	9.1
NOV 19...	21	80	3.5	30	0.9	4.5	190	36	41	0.20	12
JAN 07...	36	82	4.3	27	0.8	3.1	190	33	34	0.20	9.9
FEB 25...	21	55	3.3	21	0.7	3.2	130	27	27	0.10	8.6
APR 14...	33	86	5.8	45	1	3.2	210	50	52	0.30	8.8
JUN 06...	42	79	4.9	40	1	3.6	180	35	69	0.20	9.9

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
OCT 02...	379	38	18	20	0.160	0.020	0.180	0.060	0.64	0.70	0.060
NOV 19...	324	16	11	5	2.08	0.020	2.10	0.010	0.49	0.50	0.240
JAN 07...	306	25	16	9	1.68	0.020	1.70	0.030	0.37	0.40	0.180
FEB 25...	223	94	2	92	2.04	0.060	2.10	0.190	1.1	1.3	0.260
APR 14...	375	69	21	48	1.65	0.050	1.70	0.110	0.59	0.70	0.290
JUN 06...	348	467	35	432	1.28	0.020	1.30	0.030	1.7	1.7	0.450

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT 02...	0.030	11	--	--	--	--	--	--	--	--	--
NOV 19...	0.190	6.3	<1	77	<0.5	<1.0	<5	<3	<10	19	<10
JAN 07...	0.180	4.2	--	--	--	--	--	--	--	--	--
FEB 25...	0.150	9.6	--	--	--	--	--	--	--	--	--
APR 14...	0.250	6.9	2	88	<0.5	1.0	<5	<3	<10	11	10
JUN 06...	0.110	11	1	82	<0.5	<1.0	<5	<3	<10	12	<10

08050410 ELM FORK TRINITY RIVER NEAR GAINESVILLE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
02...	--	--	--	--	--	--	--	--	--	--
NOV										
19...	9	6	<0.1	<10	<10	<1	<1.0	330	<6	<3
JAN										
07...	--	--	--	--	--	--	--	--	--	--
FEB										
25...	--	--	--	--	--	--	--	--	--	--
APR										
14...	10	8	<0.1	<10	<10	<1	<1.0	430	<6	5
JUN										
06...	6	1	<0.1	<10	10	<1	2.0	400	<6	<3

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.--August 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 640.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Several observations of water temperature were made during the year. Gage-height telemeter at station.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 cfs:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 26	1045	2,480	12.53	Feb. 25	1800	1,320	11.99
Dec. 2	1845	1,060	11.69	Apr. 12	1115	4,010	12.96
Dec. 8	1715	1,010	11.50	May 19	0330	1,720	12.21
Dec. 12	0930	1,040	11.64	June 2	1230	1,160	11.88
Dec. 20	2145	7,470	13.56	Sept. 10	2130	1,160	11.88
Jan. 13	2345	1,100	11.83				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	625	5.2	11	9.4	7.7	3.2	9.6	118	1.8	3.0	.00
2	.35	26	571	9.9	8.2	6.2	3.2	9.2	896	1.3	1.4	.00
3	.25	13	109	9.0	7.6	5.9	3.2	9.2	147	.93	.95	47
4	.16	8.5	15	8.7	7.3	133	3.2	8.9	9.1	.84	.81	2.4
5	.06	7.5	7.3	8.1	6.9	154	3.1	8.7	4.4	.82	.64	.79
6	.04	6.2	5.1	7.8	6.6	26	3.2	8.4	102	.72	.51	.52
7	.00	5.1	4.3	7.7	6.7	11	3.3	8.3	19	.60	.42	.43
8	.00	4.5	243	8.1	6.1	8.0	3.1	8.2	5.0	.51	.36	.43
9	.00	3.9	230	7.9	5.9	10	3.1	8.1	3.4	.40	.30	.30
10	.00	3.5	19	7.5	6.1	7.1	3.0	8.0	2.5	.35	.17	405
11	.00	3.3	29	7.4	5.7	5.6	2.9	8.0	2.0	.23	.13	330
12	.00	3.1	713	8.0	5.7	5.3	1470	8.1	1.8	.15	.11	2.9
13	.00	3.1	40	379	5.5	4.9	233	8.3	1.6	.11	.04	1.2
14	.00	3.3	12	511	6.2	4.7	26	8.2	1.6	.12	.00	.81
15	.00	3.8	5.4	46	5.7	4.6	18	7.8	1.4	.10	.00	.62
16	.00	12	3.1	23	5.2	4.5	15	7.6	1.3	.07	.00	.52
17	.00	367	1.9	18	6.3	18	13	7.6	1.1	2.0	.00	.40
18	.00	29	1.3	108	6.1	71	12	185	1.3	.74	.00	.30
19	.00	18	658	107	5.9	8.3	12	1390	1.1	.39	.00	.29
20	.00	32	3460	90	5.3	5.3	12	76	.84	.25	.00	.52
21	.00	9.6	2080	87	5.2	4.8	12	22	.74	.19	.00	160
22	.00	5.2	834	146	8.5	4.6	14	53	.69	.16	.00	2.3
23	.00	3.6	897	42	22	3.8	11	15	.66	.15	.00	.78
24	.00	2.7	47	20	16	3.7	10	23	.63	.13	.00	.53
25	.00	2.6	26	13	1090	5.3	9.9	10	2.4	.13	.00	.39
26	1450	2.5	19	12	256	4.1	9.4	7.7	6.6	.11	.00	.31
27	265	2.4	16	382	24	3.7	9.5	5.4	2.0	.07	.00	.26
28	988	2.3	14	108	14	3.5	9.7	328	31	.05	.00	.22
29	648	2.6	12	34	9.7	3.6	9.9	108	15	.04	.00	.19
30	71	3.0	11	24	---	3.4	10	14	2.8	.21	.00	.18
31	754	---	10	15	---	3.2	---	14	---	29	.00	---
TOTAL	4177.23	1214.3	10098.6	2266.1	1573.8	544.8	1950.9	2393.3	1382.96	42.67	8.84	959.59
MEAN	135	40.5	326	73.1	54.3	17.6	65.0	77.2	46.1	1.38	.29	32.0
MAX	1450	625	3460	511	1090	154	1470	1390	896	29	3.0	405
MIN	.00	2.3	1.3	7.4	5.2	3.2	2.9	5.4	.63	.04	.00	.00
AC-FT	8290	2410	20030	4490	3120	1080	3870	4750	2740	85	18	1900
CFSM	3.47	1.04	8.40	1.88	1.40	.45	1.68	1.99	1.19	.04	.01	.82
IN.	4.00	1.16	9.68	2.17	1.51	.52	1.87	2.29	1.33	.04	.01	.92

08050800 TIMBER CREEK NEAR COLLINSVILLE, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1992, BY WATER YEAR (WY)

MEAN	27.0	12.1	60.3	25.7	33.8	35.6	62.3	82.8	52.6	7.10	.93	10.5
MAX	135	40.5	326	73.1	63.5	89.6	259	168	193	36.9	4.40	32.0
(WY)	1992	1992	1992	1992	1989	1990	1990	1989	1989	1989	1990	1992
MIN	.000	.000	.097	.60	2.00	2.72	1.82	.69	1.10	.000	.000	.026
(WY)	1988	1990	1990	1986	1991	1986	1987	1988	1988	1988	1986	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1986 - 1992	
ANNUAL TOTAL	19102.48		26613.09			
ANNUAL MEAN	52.3		72.7		34.2	
HIGHEST ANNUAL MEAN					72.7	1992
LOWEST ANNUAL MEAN					10.1	1991
HIGHEST DAILY MEAN	3460	Dec 20	3460	Dec 20	3460	Dec 20 1991
LOWEST DAILY MEAN	.00	Jul 11	.00	Oct 7	.00	Oct 1 1985
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 11	.00	Oct 7	.00	Oct 1 1985
INSTANTANEOUS PEAK FLOW			7470	Dec 20	7470	Dec 20 1991
INSTANTANEOUS PEAK STAGE			13.56	Dec 20	14.79	Apr 26 1990
INSTANTANEOUS LOW FLOW			.00	Oct 7	.00	*
ANNUAL RUNOFF (AC-FT)	37890		52790		24800	
ANNUAL RUNOFF (CFSM)	1.35		1.87		.88	
ANNUAL RUNOFF (INCHES)	18.31		25.52		11.99	
10 PERCENT EXCEEDS	34		108		26	
50 PERCENT EXCEEDS	2.2		5.2		1.9	
90 PERCENT EXCEEDS	.00		.00		.00	

* No flow at times most years.

08050815 JORDAN CREEK TRIBUTARY NEAR COLLINSVILLE, TX.

LOCATION.--Lat 33°32'15", long 96°55'22", Grayson County, Hydrologic Unit 12030103, at culvert on gravel road, 0.4 mi upstream from mouth of Jordan Creek, and 1.5 mi southwest of Collinsville.

DRAINAGE AREA.--1.65 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1988 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT 02...	1230	0.01	1040	7.8	19.5	60	26	3.5	39	3.5	71
NOV 19...	1652	0.53	823	8.1	14.5	55	4.3	7.0	70	2.5	130
JAN 07...	1630	0.94	645	8.3	13.0	33	6.5	12.3	120	1.2	150
FEB 26...	1530	2.7	390	8.1	12.0	250	19	11.2	106	3.5	110
APR 15...	0825	0.90	478	7.7	19.5	55	12	6.8	76	1.4	120
JUN 03...	1620	1.2	506	7.8	22.0	55	6.6	8.0	94	2.1	140

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SI02)
OCT 02...	0	22	4.0	200	10	11	360	54	94	0.40	6.6
NOV 19...	0	40	7.0	130	5	8.1	270	59	69	0.30	12
JAN 07...	0	47	8.4	88	3	5.9	200	52	51	0.40	7.0
FEB 26...	0	33	5.9	38	2	5.0	120	30	29	0.20	7.4
APR 15...	0	38	6.9	53	2	5.4	150	35	38	0.30	6.6
JUN 03...	0	41	7.9	54	2	6.9	170	34	38	0.30	10

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
OCT 02...	608	15	<1	--	--	0.030	<0.050	0.180	1.0	1.2	2.90
NOV 19...	489	9	8	1	0.960	0.340	1.30	1.40	1.2	2.6	1.50
JAN 07...	380	13	12	1	2.11	0.090	2.20	0.090	0.61	0.70	0.430
FEB 26...	223	4	1	3	0.460	0.040	0.500	0.470	0.93	1.4	0.420
APR 15...	277	48	19	29	0.740	0.070	0.810	0.100	0.70	0.80	0.470
JUN 03...	297	15	15	0	0.530	0.050	0.580	0.050	1.2	1.3	0.530

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT 02...	2.50	12	--	--	--	--	--	--	--	--	--
NOV 19...	1.40	8.8	2	45	0.7	<1.0	<5	<3	<10	71	10
JAN 07...	0.350	5.8	--	--	--	--	--	--	--	--	--
FEB 26...	0.340	10	--	--	--	--	--	--	--	--	--
APR 15...	0.420	9.5	1	51	<0.5	2.0	<5	<3	<10	80	10
JUN 03...	0.390	13	1	57	<0.5	<1.0	<5	<3	<10	250	<10

08050815 JORDAN CREEK TRIBUTARY NEAR COLLINSVILLE, TX.--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
02...	--	--	--	--	--	--	--	--	--	--
NOV										
19...	10	23	<0.1	<10	<10	<1	2.0	270	<6	<3
JAN										
07...	--	--	--	--	--	--	--	--	--	--
FEB										
26...	--	--	--	--	--	--	--	--	--	--
APR										
15...	6	88	<0.1	<10	<10	<1	1.0	270	<6	<3
JUN										
03...	6	140	<0.1	<10	<10	<1	<1.0	300	<6	<3

08051100 RAY ROBERTS LAKE NEAR PILOT POINT, TX

LOCATION.--Lat 32°21'19", long 97°02'59", Denton County, Hydrologic Unit 12030103, in control room of outlet works tower located 336 ft upstream from centerline of Ray Roberts Dam (and Farm Road 455 which is located on top of dam) on Elm Fork Trinity River, 3.7 mi upstream from Bray Branch, 5.7 mi southwest of Pilot Point, and at river mile 60.0.

DRAINAGE AREA.--692 mi².

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Lake is formed by a rolled earthfill dam 15,250 ft long. There is an uncontrolled, broad-crested spillway excavated in natural ground about 5,000 ft right of right end of dam. A reinforced concrete tower houses the flood-control and low-flow gates and operating equipment. Construction started Sept. 16, 1980 and closure was made in May 1986. The dam was built and is owned by the U.S. Army Corps of Engineers. Deliberate impoundment started June 30, 1987. The lake was built for water supply, flood control, and recreation purposes. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	665.0	-
Spillway crest (uncontrolled)	645.5	1,262,000
Top of flood-control pool	640.5	1,065,000
Top of conservation pool	632.5	799,600
Invert, lowest gated outlet	551.0	990

COOPERATION.--Area and capacity tables provided by the U.S. Army Corps of Engineers. Records of elevations and contents provided by the U.S. Army Corps of Engineers and reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,219,000 acre-ft May 3, 1990 (elevation, 644.48 ft); minimum since initial filling began, 990 acre-ft July 1, 1987 (elevation, 551.00 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 1,001,000 acre-ft Jan. 3-5 (elevation, 638.74 ft); minimum daily, 774,000 acre-ft Oct. 24 (elevation, 631.61 ft).

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

631.0	756,700	634.0	844,800	637.0	941,200
632.0	785,200	635.0	876,000	638.0	975,000
633.0	814,500	636.0	908,100	639.0	1,010,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	784600	854000	803300	1000000	947000	882700	813900	797400	811300	808000	803300	789000
2	784300	854400	811300	1000000	944300	880400	810700	798000	814200	807700	805300	791300
3	783200	853400	813600	1001000	940900	879200	808300	798000	814500	807400	805300	812200
4	783200	852200	813600	1001000	937500	881700	806800	797400	813000	806200	804800	812200
5	782900	850900	814200	1001000	933900	882000	804800	797100	811900	804800	804200	811900
6	782000	847600	814200	999000	930900	880800	804200	796500	816300	804200	803600	811600
7	781100	843600	814200	996200	927200	877900	803300	795900	816000	803300	802400	811000
8	780600	839300	825300	993700	923900	875000	801800	795600	816000	803000	801500	810400
9	780300	835600	834400	990600	919900	876300	801500	794800	815100	802100	800900	809800
10	780000	832900	834400	986700	916300	872500	800900	793900	813600	801500	799700	832000
11	779700	829200	836800	982600	912400	868700	800900	794500	811900	800300	799700	833500
12	779400	825600	846000	978400	908500	866500	807700	794800	810100	799200	798900	831100
13	778800	822300	846900	981900	903300	863400	808300	794200	808600	798300	798300	828300
14	778600	819900	846600	982600	898700	861200	807700	793900	806800	798300	798000	825900
15	778000	816600	846300	979400	894500	858100	805900	793600	804500	797400	796800	823200
16	777400	816600	844800	973900	890700	853700	804200	794500	803300	798000	796500	820800
17	776600	816300	842900	969400	887100	856500	803300	795100	803000	800600	795600	817500
18	776300	814200	841400	969400	883900	856800	802400	804200	802100	802100	795900	816000
19	776000	813000	861200	966700	880800	855000	802700	809500	800900	801800	795600	812700
20	775400	810400	934900	963300	877600	853400	802100	810400	802400	801200	795400	811000
21	775100	807700	960200	961600	874400	851600	801800	810400	802100	800600	794800	814500
22	774500	805600	979800	960500	873100	850000	800900	810100	800600	800300	794200	811900
23	774300	804200	988500	955800	870300	847900	800900	811600	800600	799500	793900	808900
24	774000	803000	990900	950000	872200	846000	800600	811900	799200	798900	793300	805000
25	776300	802700	993000	945600	886500	843900	800000	811900	804200	798300	793000	803000
26	790100	802100	994800	941600	889400	839900	799500	811000	804200	797700	792400	802100
27	797700	801500	995800	947000	889700	835300	798900	810100	803300	798600	791600	800900
28	819600	801500	996500	949300	888400	830500	799500	813000	804200	799500	790700	799700
29	829200	802700	997200	950300	885500	825600	798300	812500	808300	799200	790100	798600
30	831700	803000	998300	951000	---	820800	798300	811300	808300	800000	789500	798000
31	850000	---	999000	949700	---	816900	---	810700	---	801500	788700	---
MAX	850000	854400	999000	1001000	947000	882700	813900	813000	816300	808000	805300	833500
MIN	774000	801500	803300	941600	870300	816900	798300	793600	799200	797400	788700	789000
(†)	634.17	632.61	638.68	637.25	635.30	633.08	632.45	632.87	632.79	632.56	632.12	632.44
(ϕ)	+65100	-47000	+196000	-49300	-64200	-68600	-18600	+12400	-2400	-6800	-12800	+9300

CAL YR 1991 MAX 999000 MIN 748000 (ϕ) +250700
WTR YR 1992 MAX 1001000 MIN 774000 (ϕ) +13100

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

08051100 RAY ROBERTS LAKE NEAR PILOT POINT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: February 1989 to current year.

332138097024101 - RAY ROBERTS LAKE SITE AC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	RESER-VOIR STORAGE (AC-FT)	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
FEB												
07...	1013	92/000	1.00	280	8.1	8.5	0.70	9.8	86	K6	K1	120
07...	1015	--	10.0	280	8.1	8.5	--	9.8	86	--	--	--
07...	1017	--	20.0	280	8.0	8.5	--	9.8	86	--	--	--
07...	1019	--	30.0	281	8.0	8.5	--	9.8	86	--	--	--
07...	1021	--	40.0	279	8.0	8.5	--	9.8	86	--	--	--
07...	1023	--	50.0	282	7.9	8.5	--	9.8	86	--	--	--
07...	1025	--	60.0	282	7.8	8.5	--	9.8	86	--	--	--
07...	1028	--	70.0	284	7.7	8.5	--	9.8	86	--	--	--
07...	1032	--	83.0	281	7.3	8.5	--	9.7	85	--	--	120
JUN												
03...	1116	814000	1.00	287	8.3	22.0	1.70	7.3	87	K2	K1	110
03...	1120	--	10.0	283	8.2	21.5	--	7.0	82	--	--	--
03...	1125	--	20.0	286	8.2	21.5	--	6.8	80	--	--	--
03...	1130	--	30.0	286	8.2	21.0	--	6.8	79	--	--	--
03...	1135	--	40.0	285	7.4	19.5	--	3.0	34	--	--	--
03...	1140	--	50.0	287	7.2	18.5	--	0	0	--	--	--
03...	1145	--	60.0	287	7.2	17.0	--	0	0	--	--	--
03...	1150	--	70.0	288	7.2	17.0	--	0	0	--	--	--
03...	1155	--	78.0	292	7.1	16.5	--	0	0	--	--	120
AUG												
14...	1046	798000	1.00	308	8.2	27.5	1.30	5.4	70	K1	K1	110
14...	1049	--	10.0	307	8.2	27.5	--	5.4	70	--	--	--
14...	1053	--	20.0	307	8.2	27.5	--	5.3	68	--	--	--
14...	1056	--	30.0	307	8.1	27.5	--	5.3	68	--	--	--
14...	1059	--	40.0	307	8.1	27.0	--	5.4	69	--	--	--
14...	1103	--	50.0	328	7.4	21.0	--	0	0	--	--	--
14...	1108	--	60.0	330	7.4	20.0	--	0	0	--	--	--
14...	1115	--	70.0	330	7.3	20.0	--	0	0	--	--	--
14...	1120	--	77.0	332	7.2	20.0	--	0	0	--	--	120

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
FEB											
07...	14	41	3.6	14	0.6	4.5	100	15	19	0.20	4.6
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	7	41	3.6	14	0.6	4.4	110	15	18	0.20	4.6
JUN											
03...	6	39	3.8	15	0.6	4.4	110	15	19	0.20	2.9
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	8	42	4.0	14	0.6	4.3	110	14	18	0.20	4.7
AUG											
14...	9	39	4.0	15	0.6	4.5	100	18	22	0.20	2.8
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	0	43	4.1	14	0.5	4.1	130	8.6	22	0.20	6.0

08051100 RAY ROBERTS LAKE NEAR PILOT POINT, TX--Continued

33213809/024101 - RAY ROBERTS LAKE SITE AC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB											
07...	164	--	<0.010	0.550	0.020	0.38	0.40	<0.010	<0.010	12	<1
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	167	--	<0.010	0.570	0.020	0.48	0.50	0.050	0.010	12	32
JUN											
03...	163	0.180	0.020	0.200	0.030	0.47	0.50	0.010	<0.010	3	7
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	0.180	0.030	0.210	0.040	0.46	0.50	0.010	0.010	<10	30
03...	--	0.270	0.020	0.290	0.050	0.35	0.40	<0.010	0.010	20	450
03...	--	--	<0.010	0.410	0.030	0.37	0.40	0.020	<0.010	20	80
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	170	0.350	0.030	0.380	0.130	0.47	0.60	0.030	0.040	140	980
AUG											
14...	169	--	<0.010	<0.050	0.020	0.28	0.30	<0.010	<0.010	5	43
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	<0.010	<0.050	0.030	0.37	0.40	<0.010	<0.010	20	120
14...	--	--	<0.010	<0.050	0.460	0.44	0.90	0.040	0.040	630	1500
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	183	--	0.010	<0.050	0.690	0.51	1.2	0.120	0.080	1100	1600

332200097010001 - RAY ROBERTS LAKE SITE AL

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
FEB							
07...	1042	1.00	278	8.2	8.5	9.8	86
07...	1044	10.0	277	8.2	8.5	9.8	86
07...	1046	20.0	280	8.2	8.5	9.9	87
07...	1048	30.0	283	8.2	8.0	9.9	86
07...	1050	40.0	283	8.2	8.0	9.9	86
07...	1052	50.0	282	8.2	8.5	9.9	87
07...	1054	60.0	283	8.2	8.0	9.9	86
07...	1056	73.0	283	8.2	8.5	9.8	86
JUN							
03...	1214	1.00	287	8.3	22.0	7.4	88
03...	1217	10.0	285	8.3	22.0	7.4	88
03...	1220	20.0	286	8.2	21.5	6.9	81
03...	1222	30.0	286	8.2	21.5	6.8	80
03...	1224	40.0	287	8.1	20.5	5.6	65
03...	1226	50.0	285	7.3	17.5	0	0
03...	1228	60.0	287	7.3	17.0	0	0
03...	1230	68.0	289	7.4	16.5	0	0
AUG							
14...	1131	1.00	308	8.2	27.5	5.4	70
14...	1134	10.0	308	8.2	27.5	5.4	70
14...	1137	20.0	307	8.2	27.5	5.3	68
14...	1140	30.0	308	8.1	27.5	5.2	67
14...	1143	40.0	308	8.1	27.0	5.1	65
14...	1146	45.0	326	7.5	21.5	0	0
14...	1149	50.0	327	7.4	21.0	0	0
14...	1153	60.0	331	7.4	20.0	0	0
14...	1157	67.0	332	7.5	20.0	0	0

08051100 RAY ROBERTS LAKE NEAR PILOT POINT, TX--Continued

332301097050601 - RAY ROBERTS LAKE SITE BC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
07...	1342	1.00	275	8.1	8.5	9.3	81
07...	1344	10.0	278	8.1	8.5	9.2	80
07...	1346	20.0	278	8.1	8.5	9.2	80
07...	1348	30.0	278	8.1	8.5	9.2	80
07...	1350	40.0	277	8.0	8.5	9.2	80
07...	1352	50.0	279	8.0	8.5	9.1	80
07...	1354	60.0	276	8.0	8.5	9.1	80
07...	1356	70.0	276	7.9	8.5	9.1	80
07...	1358	80.0	276	7.8	8.5	8.8	77
07...	1400	88.0	287	7.3	8.5	8.0	70
JUN							
03...	1508	1.00	285	8.3	21.5	7.0	82
03...	1511	10.0	286	8.2	21.5	6.8	80
03...	1514	20.0	285	8.2	21.5	6.6	78
03...	1517	30.0	285	7.9	20.5	5.4	62
03...	1520	40.0	285	7.5	19.5	2.6	29
03...	1523	50.0	287	7.3	18.0	0	0
03...	1526	60.0	293	7.3	17.0	0	0
03...	1529	70.0	291	7.4	16.5	0	0
03...	1533	80.0	295	7.4	16.5	0	0
03...	1536	87.0	295	7.5	16.5	0	0
AUG							
14...	1450	1.00	309	8.3	28.0	4.6	60
14...	1453	10.0	309	8.3	28.0	4.5	59
14...	1456	20.0	308	8.3	27.5	4.3	55
14...	1500	30.0	308	8.2	27.5	4.0	52
14...	1503	35.0	309	7.9	27.0	3.0	38
14...	1506	40.0	324	7.4	25.0	0	0
14...	1509	50.0	329	7.4	21.0	0	0
14...	1512	60.0	333	7.4	20.5	0	0
14...	1515	70.0	333	7.4	20.0	0	0
14...	1519	78.0	329	7.4	20.0	0	0

332353097020101 - RAY ROBERTS LAKE SITE CC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
07...	1118	1.00	275	8.1	8.5	9.6	84
07...	1120	10.0	275	8.1	8.5	9.6	84
07...	1122	20.0	276	8.1	8.5	9.5	83
07...	1124	30.0	273	8.1	8.5	9.5	83
07...	1126	40.0	270	8.1	8.5	9.4	82
07...	1128	50.0	271	8.1	8.5	9.5	83
07...	1132	60.0	274	8.1	8.5	9.5	83
07...	1134	70.0	275	8.1	8.5	9.5	83
07...	1136	80.0	274	8.1	8.5	9.5	83
07...	1138	89.0	274	8.1	8.5	9.4	82
JUN							
03...	1253	1.00	282	8.4	22.0	7.4	88
03...	1255	10.0	283	8.3	21.5	7.4	87
03...	1258	20.0	285	8.2	21.5	6.8	80
03...	1300	30.0	284	8.0	20.5	5.8	67
03...	1302	40.0	284	7.9	20.0	5.0	57
03...	1305	50.0	282	7.4	19.0	1.5	17
03...	1307	60.0	289	7.3	16.5	0	0
03...	1309	70.0	289	7.4	16.5	0	0
03...	1312	80.0	291	7.4	16.5	0	0
03...	1315	88.0	293	7.5	16.5	0	0
AUG							
14...	1212	1.00	306	8.3	28.0	5.7	74
14...	1216	10.0	306	8.3	28.0	5.7	74
14...	1220	20.0	307	8.2	27.5	5.5	71
14...	1224	30.0	307	8.1	27.5	5.2	67
14...	1228	35.0	308	8.0	27.0	4.8	61
14...	1232	40.0	319	7.4	24.5	0	0
14...	1238	45.0	326	7.4	22.0	0	0
14...	1242	50.0	328	7.4	20.5	0	0
14...	1246	60.0	330	7.4	20.0	0	0
14...	1249	70.0	330	7.4	20.0	0	0
14...	1252	84.0	331	7.5	20.0	0	0

08051100 RAY ROBERTS LAKE NEAR PILOT POINT, TX--Continued

332459097063001 - RAY ROBERTS LAKE SITE DC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
FEB											
07...	1422	1.00	297	8.1	8.5	0.61	9.6	84	K9	K2	120
07...	1424	10.0	295	8.1	8.5	--	9.6	84	--	--	--
07...	1426	20.0	296	8.1	8.5	--	9.5	83	--	--	--
07...	1428	30.0	292	8.1	8.5	--	9.4	82	--	--	--
07...	1430	40.0	291	8.0	8.5	--	9.4	82	--	--	--
07...	1432	50.0	292	8.0	8.5	--	9.4	82	--	--	--
07...	1434	60.0	292	8.0	8.5	--	9.3	81	--	--	--
07...	1438	65.0	292	8.0	8.5	--	9.2	80	--	--	120
JUN											
03...	1556	1.00	293	8.2	22.0	1.10	6.6	78	K1	K1	120
03...	1559	10.0	291	8.1	21.5	--	6.1	72	--	--	--
03...	1602	20.0	290	7.6	20.5	--	3.8	44	--	--	--
03...	1605	30.0	303	7.5	20.0	--	3.0	34	--	--	--
03...	1610	40.0	385	7.3	19.0	--	1.0	11	--	--	--
03...	1616	50.0	392	7.3	18.5	--	1.1	12	--	--	--
03...	1621	59.0	387	7.3	18.5	--	1.2	13	--	--	140
AUG											
14...	1537	1.00	312	8.2	28.0	1.60	5.3	69	76	K1	110
14...	1544	10.0	312	8.2	28.0	--	5.3	69	--	--	--
14...	1551	20.0	312	8.0	27.5	--	5.1	66	--	--	--
14...	1558	30.0	312	7.6	27.0	--	2.4	31	--	--	--
14...	1605	40.0	345	7.4	25.0	--	0	0	--	--	--
14...	1612	50.0	360	7.3	22.0	--	0	0	--	--	--
14...	1618	55.0	358	7.3	22.0	--	0	0	--	--	140

DATE	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
FEB											
07...	9	43	3.6	15	0.6	4.4	110	16	20	0.20	5.3
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	8	42	3.6	14	0.6	4.1	110	16	19	0.20	5.0
JUN											
03...	11	40	3.9	16	0.6	4.4	100	15	20	0.20	3.0
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	16	48	4.2	26	1	5.0	120	23	34	0.20	9.2
AUG											
14...	9	39	4.0	16	0.7	4.5	100	18	23	0.20	3.0
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	0	47	4.3	14	0.5	4.2	140	5.6	24	0.20	6.9

08051100 RAY ROBERTS LAKE NEAR PILOT POINT, TX--Continued

332459097063001 - RAY ROBERTS LAKE SITE DC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB											
07...	175	0.670	0.010	0.680	0.030	0.37	0.40	0.040	0.020	8	3
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	171	0.640	0.010	0.650	0.040	0.46	0.50	0.070	0.020	9	28
JUN											
03...	165	0.210	0.030	0.240	0.040	0.36	0.40	<0.010	<0.010	18	20
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	222	1.39	0.110	1.50	0.280	0.62	0.90	0.080	0.100	52	130
AUG											
14...	171	--	<0.010	<0.050	<0.010	--	0.40	<0.010	<0.010	53	39
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	<0.010	<0.050	0.030	0.37	0.40	<0.010	0.010	30	400
14...	--	--	0.020	<0.050	0.570	0.53	1.1	0.110	0.060	400	1500
14...	--	--	--	--	--	--	--	--	--	--	--
14...	197	--	0.020	<0.050	0.430	0.57	1.0	0.090	0.060	2400	2200

332509096595301 - RAY ROBERTS LAKE SITE EC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
FEB											
07...	1201	1.00	264	8.0	8.5	1.20	9.4	82	K2	K1	110
07...	1203	10.0	264	8.0	8.5	--	9.4	82	--	--	--
07...	1205	20.0	262	8.0	8.5	--	9.4	82	--	--	--
07...	1208	30.0	265	8.0	8.5	--	9.4	82	--	--	--
07...	1210	40.0	264	8.0	8.5	--	9.3	81	--	--	--
07...	1212	50.0	262	8.0	8.5	--	9.3	81	--	--	--
07...	1215	60.0	262	8.0	8.5	--	9.2	80	--	--	--
07...	1219	75.0	267	8.1	8.5	--	9.2	80	--	--	110
JUN											
03...	1333	1.00	278	8.4	22.0	2.00	7.7	92	K3	K1	110
03...	1336	10.0	278	8.3	21.5	--	7.3	86	--	--	--
03...	1339	20.0	281	8.1	21.0	--	6.4	75	--	--	--
03...	1342	30.0	278	8.0	20.5	--	5.9	68	--	--	--
03...	1345	40.0	277	7.6	20.0	--	3.5	40	--	--	--
03...	1349	50.0	293	7.2	18.0	--	0	0	--	--	--
03...	1353	60.0	296	7.2	18.0	--	0	0	--	--	--
03...	1356	69.0	295	7.4	17.5	--	0	0	--	--	120
AUG											
14...	1304	1.00	307	8.1	27.5	1.90	5.1	66	120	K1	110
14...	1307	10.0	307	8.1	27.5	--	5.0	64	--	--	--
14...	1310	20.0	308	7.9	27.0	--	4.6	59	--	--	--
14...	1314	30.0	310	7.5	26.5	--	1.0	13	--	--	--
14...	1318	40.0	322	7.4	24.0	--	0	0	--	--	--
14...	1322	50.0	339	7.3	21.0	--	0	0	--	--	--
14...	1326	60.0	337	7.4	20.5	--	0	0	--	--	--
14...	1331	72.0	336	7.4	20.5	--	0	0	--	--	120

08051100 RAY ROBERTS LAKE NEAR PILOT POINT, TX--Continued

332509096595301 - RAY ROBERTS LAKE SITE EC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
FEB											
07...	8	37	3.7	13	0.5	4.6	100	14	18	0.20	3.6
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	/	37	3.6	13	0.5	4.6	100	15	18	0.20	3.9
JUN											
03...	/	38	3.9	14	0.6	4.4	100	15	18	0.20	2.6
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	0	40	4.0	15	0.6	4.4	120	13	18	0.20	5.1
AUG											
14...	6	38	4.0	16	0.7	4.2	100	18	23	0.20	2.9
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	0	43	4.1	14	0.5	4.2	130	7.7	24	0.20	6.1

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB											
07...	154	--	<0.010	0.440	0.020	0.38	0.40	0.030	<0.010	10	<1
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	155	--	<0.010	0.450	0.030	0.47	0.50	0.030	<0.010	9	11
JUN											
03...	159	0.140	0.020	0.160	0.040	0.46	0.50	<0.010	<0.010	8	35
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	0.160	0.020	0.180	0.060	0.44	0.50	<0.010	<0.010	40	430
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	176	--	0.020	<0.050	0.480	0.82	1.3	0.250	0.090	960	1400
AUG											
14...	169	--	<0.010	<0.050	0.020	0.28	0.30	<0.010	<0.010	13	17
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	<0.010	<0.050	0.050	0.25	0.30	<0.010	0.010	70	150
14...	--	--	<0.010	<0.050	0.390	0.41	0.80	0.050	0.030	540	1200
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	184	--	<0.010	<0.050	0.870	0.63	1.5	0.200	0.010	1700	1600

08051100 RAY ROBERTS LAKE NEAR PILOT POINT, TX--Continued

332758097063301 - RAY ROBERTS LAKE SITE FC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
07...	1459	1.00	336	8.1	9.5	9.5	85
07...	1502	10.0	335	8.0	8.5	8.9	78
07...	1505	20.0	343	8.0	9.0	8.8	78
07...	1507	30.0	347	7.9	9.0	8.4	74
07...	1509	40.0	365	7.8	8.5	6.9	60
JUN							
03...	1647	1.00	305	8.8	23.0	11.8	143
03...	1650	10.0	340	7.6	21.0	4.5	52
03...	1653	20.0	492	7.5	19.5	3.3	37
03...	1656	34.0	466	7.5	19.5	2.1	24
AUG							
14...	1636	1.00	317	8.1	28.0	5.5	72
14...	1639	10.0	317	8.0	28.0	4.4	57
14...	1642	20.0	319	7.4	27.5	0	0
14...	1645	25.0	322	7.4	27.5	0	0
14...	1648	30.0	324	7.4	27.0	0	0
14...	1651	41.0	395	7.4	25.5	0	0

332642096561201 - RAY ROBERTS LAKE SITE GC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
07...	1301	1.00	164	7.6	8.5	7.4	65
07...	1303	10.0	166	7.6	8.0	7.2	62
07...	1305	20.0	164	7.6	8.0	6.5	56
07...	1307	30.0	172	7.7	8.0	6.3	54
07...	1309	41.0	173	7.8	8.0	6.2	54
JUN							
03...	1423	1.00	256	8.5	22.5	8.9	107
03...	1426	10.0	249	7.9	21.0	6.6	77
03...	1429	20.0	259	7.1	20.0	0	0
03...	1432	30.0	267	7.1	19.0	0	0
03...	1435	37.0	280	7.0	18.0	0	0
AUG							
14...	1357	1.00	282	7.7	28.5	4.0	53
14...	1400	10.0	282	7.6	28.5	3.4	45
14...	1403	15.0	286	7.2	28.0	0	0
14...	1407	20.0	283	7.0	27.0	0	0
14...	1410	25.0	249	6.9	26.0	0	0
14...	1413	30.0	239	6.9	25.5	0	0
14...	1416	37.0	298	6.9	24.5	0	0

Ray Roberts Lake AC (332138097024101)

Phytoplankton Analyses October 1991 to September 1992

Date	2-7-92
Time	1014
TOTAL CELLS/mL	1,307,934
NUMBER OF SPECIES	17
DEPTH COLLECTED (ft.)	1.2

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	5,257
Stephanodiscus astraea var. *minutula*	1,001
Order Pennales	
Navicula cryptocephala	1,252
Navicula pelliculosa	1,252
Nitzschia acicularis	2,503
Synedra delicatissima	1,252
CHLOROPHYTA	
Chlamydomonas sp.	37,548
Chlorella ellipsoidea	12,516
Chlorococcum humicola	25,032
Selenastrum minutum	6,258
CHRYSOPHYTA	
Unknown flagellate	93,871
CYANOPHYTA	
Aphanocapsa delicatissima	1,032,580
Chroococcus sp.	37,548
Oscillatoria limnetica	6,258
EUGLENOPHYTA	
Euglena sp.	6,258
CRYPTOPHYTA	
Cryptomonas erosa	25,032
Rhodomonas minuta	12,516

Ray Roberts Lake DC (332459097063001)

Phytoplankton Analyses October 1991 to September 1992

Date	2-7-92
Time	1423
TOTAL CELLS/mL	1,270,386
NUMBER OF SPECIES	18
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	3,698
Melosira varians	1,802
Stephanodiscus astraea var. *minutula*	759
Order Pennales	
Cymbella minuta	894
Gomphonema parvulum	894
Gomphonema subclavatum var. *mexicanum*	894
Navicula pelliculosa	1,788
Nitzschia acicularis	894
Synedra delicatissima	894
CHLOROPHYTA	
Chlamydomonas sp.	12,516
Chlorella ellipsoidea	37,548
Chlorococcum humicola	43,806
Scenedesmus quadricauda var. *longispina*	25,032
Selenastrum minutum	6,258
CHRYSOPHYTA	
Unknown flagellate	87,613
CYANOPHYTA	
Aphanocapsa delicatissima	938,709
Chroococcus sp.	87,613
CRYPTOPHYTA	
Cryptomonas erosa	18,774

Ray Roberts Lake AC (332138097024101)

Phytoplankton Analyses October 1991 to September 1992

Date	6-3-92
Time	1115
TOTAL CELLS/mL	191,833
NUMBER OF SPECIES	15
DEPTH COLLECTED (ft.)	2.8

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	1,337
Order Pennales	
Fragilaria crotonensis	4,679
CHLOROPHYTA	
Ankistrodesmus falcatus	668
Chlamydomonas sp.	2,005
Elakotothrix gelatinosa	1,337
Gloeocystis gigas	1,337
Pediastrum duplex	668
Scenedesmus bujuga	2,005
Scenedesmus quadricauda	4,010
CYANOPHYTA	
Anabaena affinis	25,400
Aphanocapsa delicatissima	100,262
Aphanizomenon flos-aquae	20,052
Chroococcus limneticus	8,021
Merismopedia tenuissima	18,715
EUGLENOPHYTA	
Trachelomonas sp.	1,337

Ray Roberts Lake DC (332459097063001)

Phytoplankton Analysis October 1991 to September 1992

Date	6-3-92
Time	1555
TOTAL CELLS/mL	282,069
NUMBER OF SPECIES	15
DEPTH COLLECTED (ft.)	1.8

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	955
Stephanodiscus astraea	382
Order Pennales	
Fragilaria crotonensis	2,005
CHLOROPHYTA	
Ankistrodesmus falcatus	2,005
Chlamydomonas sp.	2,005
Gloeocystis gigas	668
Scenedesmus quadricauda	2,674
Staurastrum sp.	668
CYANOPHYTA	
Aphanocapsa delicatissima	140,366
Aphanizomenon flos-aquae	6,684
Chroococcus limneticus	10,695
Chroococcus minimus	2,674
Merismopedia tenuissima	101,598
EUGLENOPHYTA	
Trachelomonas sp.	6,016
CRYPTOPHYTA	
Cryptomonas erosa	2,674

08051100 RAY ROBERTS LAKE NEAR PILOT POINT, TX—Continued

Ray Roberts Lake AC (332138097024101)

Phytoplankton Analyses October 1991 to September 1992

Date	8-14-92
Time	1045
TOTAL CELLS/mL	344,232
NUMBER OF SPECIES	15
DEPTH COLLECTED (ft.)	2.2

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Melosira varians	6,684
Order Pennales	
Fragilaria crotenensis	19,384
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	20,721
Ankistrodesmus spiralis	13,368
Chlamydomonas sp.	668
Scenedesmus quadricauda	2,674
Staurastrum spp.	1,337
CHRYSOPHYTA (Golden-brown algae)	
Mallamonas sp.	1,337
CYANOPHYTA (Blue-green algae)	
Aphanizomenon flos-aquae	58,152
Aphanocapsa delicatissima	140,366
Chroococcus limneticus	16,042
Merismopedia tenuissima	58,820
EUGLENOPHYTA (Euglenoids)	
Trachelomonas spp.	1,337
PYRRHOPHYTA (Dinoflagellates)	
Ceratium hirundinella	668
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas erosa	2,674

Ray Roberts Lake DC (332459097063001)

Phytoplankton Analyses October 1991 to September 1992

Date	8-14-92
Time	1536
TOTAL CELLS/mL	362,946
NUMBER OF SPECIES	15
DEPTH COLLECTED (ft.)	2.6

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Centrales	
Cyclotella ocellata	289
Melosira varians	2,385
Pennales	
Fragilaria crotenensis	15,170
Fragilaria vaucherie	4,214
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	18,715
Ankistrodesmus spiralis	24,731
Chlamydomonas sp.	2,674
CHRYSOPHYTA (Golden-brown algae)	
Mallamonas sp.	1,337
CYANOPHYTA (Blue-green algae)	
Aphanizomenon flos-aquae	19,384
Aphanocapsa delicatissima	153,734
Chroococcus minimus	10,695
Chroococcus varius	4,010
Merismopedia tenuissima	101,598
EUGLENOPHYTA (Euglenoids)	
Trachelomonas spp.	668
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas erosa	3,342

08051130 ELM FORK TRINITY RIVER NEAR PILOT POINT, TX

LOCATION.--Lat 33°21'01", long 97°02'49", Denton County, Hydrologic Unit 12030103, on right bank of excavated outlet channel, 1,600 ft downstream from center line of Ray Roberts Dam on Elm Fork Trinity River, 3.3 mi upstream from Bray Branch, 4.9 mi upstream from Farm Road 428 bridge, and 5.7 mi southwest of town square in Pilot Point.

DRAINAGE AREA.--692 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements and annual maximum, water years 1981-84, July 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 526.26 ft above National Geodetic Vertical Datum of 1929. Prior to July 1985, nonrecording staff and crest-stage gages at site 0.8 mi downstream at 526.26 ft lower datum.

REMARKS.--Records good, except those below 20 ft³/s and those of estimated daily discharges, which are poor. Flow is regulated by Ray Roberts Lake (station 08051100) 1,600 ft upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1900, 183,000 ft³/s in October 1981 from discontinued gages 5.0 mi upstream on Elm Fork Trinity River and 6.3 mi upstream on Isle du Bois Creek. The crest-stage gage then in use recorded an elevation of 566.32 ft (gage height to current datum 40.06 ft) for that flood.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	72	94	176	1820	1460	1420	1.9	848	2.8	3.7	3.7
2	.76	386	93	173	1800	1460	1390	1.9	850	76	3.7	3.7
3	.86	531	92	172	1790	1470	1200	1.9	851	152	89	75
4	.80	465	92	174	1770	1470	823	1.3	849	152	80	163
5	.92	702	116	548	1790	1480	816	1.0	848	152	142	163
6	1.0	1900	162	1210	1800	1480	818	.89	827	152	153	163
7	1.0	1780	161	1530	1770	1480	644	.82	847	66	153	164
8	1.1	1740	163	1500	1750	1480	510	.82	995	3.3	154	164
9	1.3	1710	295	1640	1740	1490	333	.82	1110	3.3	154	164
10	1.4	1680	496	1910	1720	1450	180	.82	1100	3.2	151	171
11	1.8	1650	500	2310	2080	1440	181	.82	1100	3.3	5.9	713
12	2.1	1630	500	2400	2770	1430	143	.82	957	3.3	3.7	1190
13	2.5	1710	495	2350	2700	1430	345	.82	834	3.3	3.7	1190
14	2.5	1760	493	2320	2490	1440	678	.82	834	3.7	3.7	1180
15	2.9	1720	494	2270	2100	1440	832	.82	671	3.7	3.6	1190
16	2.9	1700	764	2780	1930	1470	816	.82	435	3.5	3.3	1180
17	3.0	1670	1170	3200	e1800	1140	674	.87	277	3.7	3.3	1180
18	2.9	1630	1160	3200	e1780	829	360	1.3	173	3.7	3.3	1180
19	2.9	1560	1180	3230	e1620	821	318	1.2	177	3.7	3.6	1180
20	3.1	1460	1650	3210	e1460	819	355	89	178	60	3.7	1160
21	3.3	1450	e1690	3190	1470	819	258	272	179	99	3.7	1070
22	3.1	961	e781	3250	1460	819	130	343	180	166	3.7	1180
23	2.9	488	214	3210	1460	960	184	343	181	166	3.7	1170
24	3.2	487	164	3170	1450	1190	184	341	180	7.0	3.7	1160
25	3.5	315	174	3180	817	1330	182	341	162	3.3	3.7	848
26	11	173	175	3180	181	1760	60	421	180	2.9	3.7	323
27	2.9	158	175	2350	400	2340	1.4	506	180	3.1	3.7	323
28	15	162	175	692	1070	2610	1.4	587	181	3.7	3.7	322
29	1.5	151	175	692	1470	2550	25	764	142	3.7	3.7	137
30	1.2	94	175	692	---	2320	1.9	847	96	3.7	3.7	2.1
31	5.0	---	173	1200	---	1740	---	847	---	3.5	3.6	---
TOTAL	89.01	31895	14241	61109	48258	45417	13863.7	5721.46	16422	1316.4	1161.8	19112.5
MEAN	2.87	1063	459	1971	1664	1465	462	185	547	42.5	37.5	637
MAX	15	1900	1690	3250	2770	2610	1420	847	1110	166	154	1190
MIN	.67	72	92	172	181	819	1.4	.82	96	2.8	3.3	2.1
AC-FT	177	63260	28250	121200	95720	90080	27500	11350	32570	2610	2300	37910

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1992#, BY WATER YEAR (WY)

MEAN	164	191	92.6	351	431	428	383	763	807	183	143	117
MAX	942	1063	459	1971	1664	1465	1418	3657	2398	1203	955	637
(WY)	1986	1992	1992	1992	1992	1992	1990	1990	1990	1990	1990	1992
MIN	.27	1.43	.57	.062	.61	.82	.33	.62	.71	.48	.25	.008
(WY)	1989	1990	1989	1988	1991	1991	1989	1988	1988	1988	1987	1987

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1986 - 1992#	
ANNUAL TOTAL	58574.16		258606.87			
ANNUAL MEAN	160		707		337	
HIGHEST ANNUAL MEAN					810	1990
LOWEST ANNUAL MEAN					1.38	1989
HIGHEST DAILY MEAN	1900	Nov 6	3250	Jan 22	7960	May 3 1990
LOWEST DAILY MEAN	.03	Apr 27	.67	Oct 1	.00	Aug 20 1987
ANNUAL SEVEN-DAY MINIMUM	.04	Apr 14	.82	May 7	.00	Aug 20 1987
INSTANTANEOUS PEAK FLOW			3270	Jan 19	8190	May 3 1990
INSTANTANEOUS PEAK STAGE			15.73	Jan 19	27.33	May 3 1990
INSTANTANEOUS LOW FLOW			.67	Oct 1	.00	*
ANNUAL RUNOFF (AC-FT)	116200		512900		243900	
10 PERCENT EXCEEDS	495		1780		1300	
50 PERCENT EXCEEDS	.86		316		3.3	
90 PERCENT EXCEEDS	.37		2.1		.13	

\# Period of regulated streamflow.
* No flow at times in 1987-89.

08051130 ELM FORK TRINITY RIVER NEAR PILOT POINT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: December 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT											
03...	1225	0.45	342	7.6	19.0	50	50	8.2	91	9.5	130
NOV											
20...	1523	1430	287	8.2	12.5	13	3.1	11.1	105	0.3	110
FEB											
07...	1240	1770	285	8.3	9.0	20	10	12.8	113	1.1	110
21...	1400	1510	281	8.2	10.5	20	5.8	12.0	109	1.9	120
JUN											
03...	1315	850	286	7.6	19.0	5	3.1	8.8	98	0.6	120
AUG											
14...	1240	3.6	353	8.0	21.0	35	5.2	8.3	94	0.8	130

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT											
03...	0	46	4.0	13	0.5	4.6	150	3.2	22	0.50	6.0
NOV											
20...	0	39	3.7	13	0.5	5.2	110	9.9	17	0.20	3.7
FEB											
07...	6	40	3.5	13	0.5	4.4	110	15	18	0.20	3.9
21...	11	40	3.8	13	0.5	4.3	100	14	19	0.20	3.8
JUN											
03...	15	42	3.8	14	0.6	4.2	110	17	21	0.20	4.0
AUG											
14...	0	44	4.4	22	0.8	3.8	130	22	20	0.30	7.1

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
OCT											
03...	187	87	14	73	0.042	0.010	0.052	1.00	0.90	1.9	0.960
NOV											
20...	159	25	17	8	0.390	0.010	0.400	0.020	0.38	0.40	0.040
FEB											
07...	164	19	18	1	--	<0.010	0.530	0.020	0.38	0.40	0.030
21...	161	11	<1	--	--	<0.010	0.450	0.030	0.37	0.40	0.030
JUN											
03...	170	10	9	1	0.360	0.010	0.370	0.050	0.35	0.40	0.010
AUG											
14...	205	13	9	4	--	0.010	<0.050	0.480	0.42	0.90	0.100

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT											
03...	0.160	8.3	--	--	--	--	--	--	--	--	--
NOV											
20...	0.020	5.9	--	--	--	--	--	--	--	--	--
FEB											
07...	0.020	5.4	1	46	<0.5	<1.0	<5	<3	<10	10	<10
21...	<0.010	5.0	--	--	--	--	--	--	--	--	--
JUN											
03...	0.010	4.7	<1	55	<0.5	<1.0	<5	<3	<10	<3	<10
AUG											
14...	0.060	5.5	3	56	<0.5	<1.0	<5	<3	<10	5	10

08051130 ELM FORK TRINITY RIVER NEAR PILOT POINT, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
03...	--	--	--	--	--	--	--	--	--	--
NOV										
20...	--	--	--	--	--	--	--	--	--	--
FEB										
07...	<4	<1	<0.1	<10	<10	<1	<1.0	170	<6	7
21...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	<4	130	<0.1	<10	<10	<1	<1.0	180	<6	<3
AUG										
14...	5	1200	<0.1	<10	<10	<1	<1.0	220	<6	4

08051500 CLEAR CREEK NEAR SANGER, TX

LOCATION.--Lat 33°20'10", long 97°10'45", Denton County, Hydrologic Unit 12030103, at the downstream side near right end of bridge on county road, 1,350 ft downstream from Duck Creek, 1.1 mi upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, and 1.8 mi south of Sanger.

DRAINAGE AREA.--295 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1949 to current year.

REVISED RECORDS.--WSP 1512: 1950, 1955. WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 582.23 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Apr. 18, 1975, water-stage recorder at datum 5.00 ft higher. Apr. 18, 1975 to June 9, 1988, at site 950 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. There are no appreciable diversions above station. Flow affected at times by discharge from the flood-detention pools of 51 floodwater-retarding structures with a combined detention capacity of 38,850 acre-ft. These structures control runoff from 149 mi² in the Clear Creek watershed. Gage-height telemeter at station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--31 years (water years 1950-80), 74.3 ft³/s (53,830 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1950-80).--Maximum discharge, 18,200 ft³/s Sept. 13, 1950 (gage height, 29.80 ft) at site and datum then in use; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1880, 36.5 ft in May 1908, from information by Gulf, Colorado, and Santa Fe Railway Co. Flood in May 1935 reached a stage of 34.0 ft, from information by State Department of Highways and Public Transportation. Both peaks now referenced to present site and datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	1560	28	408	277	200	84	51	608	80	16	9.0
2	8.1	958	275	315	250	176	82	47	833	59	16	12
3	9.1	642	454	249	227	165	79	44	742	49	14	139
4	9.3	330	205	220	216	514	76	47	347	56	14	55
5	9.0	178	125	197	196	562	76	46	191	49	13	22
6	7.3	106	92	181	174	340	78	41	1060	39	13	16
7	6.8	60	78	167	164	250	80	37	819	34	13	25
8	7.0	42	350	161	154	200	77	35	1170	31	13	18
9	7.2	35	973	142	147	525	74	34	920	29	12	13
10	6.8	32	367	130	143	286	70	34	666	27	11	214
11	7.0	31	303	123	137	190	67	34	523	26	9.5	374
12	6.5	31	1570	131	141	166	88	34	290	26	9.3	138
13	6.3	31	935	331	138	151	86	32	185	24	9.3	45
14	6.0	30	389	772	133	141	73	31	136	22	9.3	24
15	7.1	31	219	424	126	131	67	31	107	22	9.2	18
16	7.5	42	168	283	116	125	64	31	88	22	9.4	15
17	7.5	812	135	230	114	137	61	34	73	23	9.3	14
18	7.8	374	105	611	109	198	61	119	62	24	9.0	13
19	7.7	138	1760	700	99	159	59	312	57	22	9.6	12
20	8.2	111	6950	642	96	123	59	215	54	21	11	12
21	8.0	81	4680	639	94	114	56	102	58	20	11	62
22	7.3	60	3160	1090	97	113	56	67	56	20	10	40
23	6.8	39	2480	613	133	105	55	103	52	20	9.3	22
24	7.5	32	1720	357	166	98	51	203	49	19	9.0	17
25	15	28	1520	277	1470	137	49	106	60	18	8.9	14
26	799	27	1400	241	983	132	46	74	93	17	8.9	13
27	804	28	1340	1230	436	111	45	57	69	17	8.9	12
28	1760	30	1250	961	304	102	44	268	66	34	8.9	11
29	1410	29	1170	524	246	109	50	382	211	21	8.9	11
30	954	29	1040	384	---	99	59	205	136	16	8.7	11
31	1880	---	634	317	---	87	---	156	---	17	8.5	---
TOTAL	7802.0	5957	35875	13050	7086	5946	1972	3012	9781	904	330.9	1401.0
MEAN	252	199	1157	421	244	192	65.7	97.2	326	29.2	10.7	46.7
MAX	1880	1560	6950	1230	1470	562	88	382	1170	80	16	374
MIN	6.0	27	28	123	94	87	44	31	49	16	8.5	9.0
AC-FT	15480	11820	71160	25880	14060	11790	3910	5970	19400	1790	656	2780

08051500 CLEAR CREEK NEAR SANGER, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1992#, BY WATER YEAR (WY)

MEAN	287	64.3	143	93.8	137	215	226	477	314	39.5	7.70	32.0
MAX	2739	344	1157	421	475	719	1811	1764	1307	174	20.2	155
(WY)	1982	1982	1992	1992	1989	1990	1990	1990	1989	1982	1982	1986
MIN	.70	1.09	5.83	6.62	9.22	26.2	27.7	15.5	13.1	.16	.000	.000
(WY)	1989	1981	1984	1981	1981	1986	1981	1984	1983	1984	1988	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1981 - 1992#	
ANNUAL TOTAL	65377.5		93116.9			
ANNUAL MEAN	179		254		170	
HIGHEST ANNUAL MEAN					476	1982
LOWEST ANNUAL MEAN					20.0	1983
HIGHEST DAILY MEAN	6950	Dec 20	6950	Dec 20	39700	Oct 13 1981
LOWEST DAILY MEAN	1.3	Aug 9	6.0	Oct 14	.00	Oct 12 1980
ANNUAL SEVEN-DAY MINIMUM	1.7	Aug 5	6.7	Oct 8	.00	Aug 2 1981
INSTANTANEOUS PEAK FLOW			11300	Dec 20	104000	Oct 13 1981
INSTANTANEOUS PEAK STAGE			26.96	Dec 20	35.70	Oct 13 1981
INSTANTANEOUS LOW FLOW			.15	Oct 15	.00	*
ANNUAL RUNOFF (AC-FT)	129700		184700		123100	
10 PERCENT EXCEEDS	370		713		303	
50 PERCENT EXCEEDS	26		75		26	
90 PERCENT EXCEEDS	5.9		9.3		.56	

Period of regulated streamflow.
* No flow at times most years.

08051500 CLEAR CREEK NEAR SANGER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: April 1959, January 1966, October 1984 to current year. Sediment analyses: February 1966 to May 1977.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1969 to August 1977.
WATER TEMPERATURE: May 1968 to August 1977.
SUSPENDED SEDIMENT DISCHARGE: May 1968 to August 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (1972-77): Maximum daily, 1,920 microsiemens Oct. 12, 1976; minimum daily, 182 microsiemens July 29, 1973.
WATER TEMPERATURE (1968-70, 1972-77): 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, 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 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT											
01...	1258	8.3	515	8.2	20.0	5	3.8	9.4	105	1.4	190
NOV											
18...	1605	299	343	8.2	15.0	130	62	9.6	98	0.6	150
JAN											
06...	1330	181	563	8.2	11.5	22	24	10.2	95	0.4	260
FEB											
26...	1530	150	596	8.2	13.0	10	5.6	10.2	99	3.1	260
APR											
13...	1335	83	604	8.2	19.5	5	14	8.4	93	0.8	240
JUN											
01...	1515	609	406	8.1	20.0	30	110	8.4	93	1.6	180

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT											
01...	25	56	13	32	1	2.5	170	41	39	0.50	11
NOV											
18...	12	54	3.4	10	0.4	3.2	140	20	12	0.20	11
JAN											
06...	29	92	7.6	23	0.6	2.5	230	37	28	0.20	11
FEB											
26...	34	88	9.6	26	0.7	1.6	230	45	34	0.20	9.7
APR											
13...	39	79	11	34	1	1.8	200	52	44	0.30	8.5
JUN											
01...	28	64	4.7	21	0.7	3.2	150	25	27	0.20	11

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
OCT											
01...	296	9	8	1	--	<0.010	<0.050	0.010	--	<0.20	0.020
NOV											
18...	196	76	25	51	0.600	0.030	0.630	0.020	0.58	0.60	0.140
JAN											
06...	340	17	16	1	0.440	0.020	0.460	0.020	--	<0.20	0.040
FEB											
26...	349	9	<1	--	--	<0.010	0.310	0.020	0.28	0.30	0.020
APR											
13...	354	52	20	32	0.290	0.020	0.310	0.010	0.19	0.20	0.030
JUN											
01...	248	477	34	443	1.06	0.040	1.10	0.040	0.96	1.0	0.130

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT											
01...	0.010	2.9	--	--	--	--	--	--	--	--	--
NOV											
18...	0.070	8.2	<1	60	<0.5	<1.0	<5	<3	<10	39	<10
JAN											
06...	0.020	4.0	--	--	--	--	--	--	--	--	--
FEB											
26...	<0.010	3.1	--	--	--	--	--	--	--	--	--
APR											
13...	0.020	3.1	<1	94	<0.5	1.0	<5	<3	<10	8	10
JUN											
01...	0.020	11	1	75	<0.5	<1.0	<5	<3	<10	14	<10

08051500 CLEAR CREEK NEAR SANGER, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
01...	--	--	--	--	--	--	--	--	--	--
NOV										
18...	5	1	<0.1	<10	<10	<1	1.0	210	<6	<3
JAN										
06...	--	--	--	--	--	--	--	--	--	--
FEB										
26...	--	--	--	--	--	--	--	--	--	--
APR										
13...	10	12	0.1	<10	<10	<1	2.0	570	<6	4
JUN										
01...	5	2	0.2	<10	<10	<1	<1.0	320	<6	<3

08052700 LITTLE ELM CREEK NEAR AUBREY, TX

LOCATION.--Lat 33°17'00", long 96°53'33", Denton County, Hydrologic Unit 12030103, on left bank at downstream side of bridge on Farm Road 1385, 1.5 mi upstream from Mustang Creek, 5.5 mi east of Aubrey, and 18 mi upstream from Lewisville Dam on the Elm Fork Trinity River.

DRAINAGE AREA.--75.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1956 to September 1976, October 1979 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 534.76 ft above National Geodetic Vertical Datum of 1929 (State Department of Highways and Public Transportation bench mark).

REMARKS.--No estimated daily discharges. Records good. There are several small diversions for irrigation above station. Flow affected at times by discharge from the flood-detention pools of 17 floodwater-retarding structures with a combined detention capacity of 10,460 acre-ft. These structures control runoff from 36.4 mi² above this station. Several observations of water temperature were obtained during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1900, 18.2 ft in May 1941, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 29	0130	3,430	16.41	Feb. 25	1730	1,230	14.77
Dec. 20	2115	5,950	17.09				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	664	8.9	254	37	53	3.0	.98	1.4	53	52	.00
2	.18	365	319	172	26	33	2.5	.91	2.3	16	40	.00
3	.07	320	272	129	20	23	2.5	.83	4.5	5.9	20	373
4	.03	226	124	82	17	123	2.3	.74	4.1	2.8	14	178
5	.01	187	80	52	14	322	2.1	.69	2.1	1.7	9.0	104
6	.00	158	51	32	11	129	2.5	.45	62	.97	5.0	60
7	.00	140	29	19	8.9	78	2.4	.40	25	.54	2.7	28
8	.00	124	28	15	7.8	50	2.2	.35	52	.33	1.5	12
9	.00	108	754	11	7.0	495	2.3	.26	26	.28	.86	5.6
10	.00	97	299	8.4	6.5	184	1.9	.20	9.9	.30	.52	64
11	.25	90	220	7.1	6.2	81	1.9	.32	3.8	.35	.36	107
12	1.0	84	437	7.9	7.4	45	2.4	.52	2.2	.32	.31	34
13	1.9	53	186	49	8.2	26	24	.54	1.5	.08	.24	10
14	2.3	22	101	193	7.7	18	41	.51	.98	.01	.09	4.4
15	2.2	12	66	102	7.1	13	33	.48	.65	.00	.09	2.4
16	2.0	10	42	67	6.3	9.6	22	.35	.47	.01	.04	1.6
17	1.8	19	24	46	5.7	8.3	13	1.4	.27	.27	.02	1.1
18	1.6	29	16	359	5.1	24	13	110	.19	.57	.01	.75
19	1.3	27	301	394	4.2	18	24	84	.18	30	.04	.47
20	1.2	77	2470	175	3.8	11	22	21	.47	47	.12	.28
21	1.0	38	1950	105	3.4	7.8	20	6.4	1.2	40	.10	1.1
22	1.0	22	820	183	12	6.6	13	4.5	1.9	29	.12	.62
23	.95	14	907	103	44	5.5	9.0	20	1.2	17	.10	.47
24	.77	10	482	62	29	4.2	6.3	7.7	.63	8.3	.04	.34
25	414	8.3	444	39	914	4.2	4.4	1.9	34	4.3	.25	.25
26	1310	7.3	423	27	486	4.2	3.2	1.1	72	2.4	.10	.24
27	1390	6.4	406	110	248	4.2	2.3	.80	64	1.5	.03	.15
28	1730	6.2	381	251	137	3.9	1.7	3.3	266	1.2	.01	.10
29	2530	6.4	313	145	81	4.2	1.6	5.0	356	1.1	.00	.10
30	822	6.9	215	88	---	3.5	1.2	2.0	126	.66	.00	.06
31	706	---	173	58	---	3.2	---	1.2	---	7.1	.00	---
TOTAL	8921.89	2937.5	12341.9	3345.4	2171.3	1795.4	282.7	278.83	1122.94	272.99	147.65	990.03
MEAN	288	97.9	398	108	74.9	57.9	9.42	8.99	37.4	8.81	4.76	33.0
MAX	2530	664	2470	394	914	495	41	110	356	53	52	373
MIN	.00	6.2	8.9	7.1	3.4	3.2	1.2	.20	.18	.00	.00	.00
AC-FT	17700	5830	24480	6640	4310	3560	561	553	2230	541	293	1960

08052700 LITTLE ELM CREEK NEAR AUBREY, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1992, BY WATER YEAR (WY)

MEAN	57.1	52.1	42.0	21.9	50.5	43.5	73.5	132	58.9	7.15	2.33	34.7
MAX	641	332	398	108	315	251	677	897	286	59.0	28.5	258
(WY)	1982	1975	1992	1992	1986	1990	1957	1982	1989	1989	1966	1964
MIN	.000	.000	.000	.000	.000	.026	.10	.000	.000	.000	.000	.000
(WY)	1957	1959	1959	1959	1959	1963	1959	1959	1972	1964	1957	1958

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1957 - 1992	
ANNUAL TOTAL	28091.28		34608.53			
ANNUAL MEAN	77.0		94.6		47.8	
HIGHEST ANNUAL MEAN					178	1982
LOWEST ANNUAL MEAN					2.24	1959
HIGHEST DAILY MEAN	2530	Oct 29	2530	Oct 29	10400	May 13 1982
LOWEST DAILY MEAN	.00	Jul 4	.00	Oct 6	.00	Oct 1 1956
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 4	.01	Oct 4	.00	Oct 1 1956
INSTANTANEOUS PEAK FLOW			5950	Dec 20	18300	May 13 1982
INSTANTANEOUS PEAK STAGE			17.09	Dec 20	17.80	May 13 1982
INSTANTANEOUS LOW FLOW			.00	Oct 6	.00	*
ANNUAL RUNOFF (AC-FT)	55720		68650		34650	
10 PERCENT EXCEEDS	168		252		73	
50 PERCENT EXCEEDS	3.0		7.3		.41	
90 PERCENT EXCEEDS	.00		.18		.00	

* No flow at times each year.

08052700 LITTLE ELM CREEK NEAR AUBREY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: June 1962 to June 1963, June 1965 to January 1968. Chemical and biochemical analyses: October 1984 to current year. Sediment analyses: April 1966 to October 1974.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1966 to June 1975.
WATER TEMPERATURES: February 1966 to June 1975.
SUSPENDED SEDIMENT DISCHARGE: February 1966 to September 1975.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: (1966-68, 1971-74): Maximum daily, 1,380 microsiemens Jan. 24, Feb. 25, 1967; minimum daily, 195 microsiemens June 4, 1968.
WATER TEMPERATURE (1966-68, 1971-74): Maximum daily, 33.0°C June 16, 1968; minimum daily, 0.0°C Feb. 22, 1968.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,750 mg/L Aug. 13, 1966; minimum daily mean, no flow on many days.
SEDIMENT LOADS: Maximum daily, 17,900 tons May 31, 1967; minimum daily, 0 tons on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT											
04...	1052	0.02	646	7.9	22.5	45	69	5.8	69	3.3	200
NOV											
21...	1600	33	367	7.8	12.5	--	--	10.0	95	1.9	150
JAN											
09...	1445	11	410	8.3	10.0	50	94	10.8	97	0.6	160
FEB											
27...	1535	283	301	8.0	11.0	200	190	10.9	100	3.7	120
APR											
16...	1150	23	378	8.1	20.0	80	160	7.5	84	5.5	150
JUN											
04...	1100	4.4	772	8.0	20.5	30	67	7.2	82	1.4	230

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT											
04...	79	67	7.0	57	2	6.6	120	200	14	0.50	2.1
NOV											
21...	31	52	4.0	18	0.6	5.8	120	66	10	0.30	11
JAN											
09...	45	57	3.9	23	0.8	3.6	110	75	11	0.30	6.7
FEB											
27...	39	44	3.3	14	0.5	2.7	84	54	5.7	0.20	7.1
APR											
16...	35	52	3.9	20	0.7	4.4	110	65	8.3	0.40	3.2
JUN											
04...	55	78	7.6	85	2	6.1	170	170	29	0.40	4.7

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
OCT											
04...	424	5	5	0	--	0.020	<0.050	0.020	0.48	0.50	0.050
NOV											
21...	237	--	--	--	1.10	0.100	1.20	0.210	0.59	0.80	0.230
JAN											
09...	248	118	27	91	0.680	0.070	0.750	0.060	0.44	0.50	0.190
FEB											
27...	181	250	8	242	0.680	0.110	0.790	0.120	0.58	0.70	0.140
APR											
16...	224	349	51	298	0.760	0.240	1.00	0.420	0.78	1.2	0.140
JUN											
04...	485	104	14	90	4.03	0.070	4.10	0.020	1.1	1.1	0.470

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT											
04...	0.020	8.7	--	--	--	--	--	--	--	--	--
NOV											
21...	0.200	13	4	41	<0.5	<1.0	<5	<3	<10	39	<10
JAN											
09...	0.170	7.1	--	--	--	--	--	--	--	--	--
FEB											
27...	0.140	11	--	--	--	--	--	--	--	--	--
APR											
16...	0.120	14	2	37	<0.5	2.0	<5	<3	<10	72	10
JUN											
04...	0.330	9.0	3	54	<0.5	<1.0	<5	<3	<10	16	10

08052700 LITTLE ELM CREEK NEAR AUBREY, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
04...	--	--	--	--	--	--	--	--	--	--
NOV										
21...	10	5	<0.1	<10	<10	<1	2.0	390	<6	<3
JAN										
09...	--	--	--	--	--	--	--	--	--	--
FEB										
27...	--	--	--	--	--	--	--	--	--	--
APR										
16...	10	1	<0.1	<10	<10	<1	<1.0	360	<6	7
JUN										
04...	20	5	<0.1	<10	<10	<1	<1.0	760	<6	<3

08052730 PECAN CREEK NEAR AUBREY, TX

LOCATION.--Lat 33°17'50", long 96°55'06", Denton County, Hydrologic Unit 12030103, at Farm Road 428 bridge, over center of channel at downstream side of bridge, 1.1 mi downstream from unnamed tributary on right bank, 2.2 mi upstream from unnamed tributary on right bank, and 4.0 mi east of Aubrey.

DRAINAGE AREA.--32.2 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: December 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 21...	1000	8.9	413	7.5	10.0	130	46	9.5	86	1.3	140
JAN 09...	1000	3.6	990	7.6	8.0	30	7.1	10.1	86	0.5	390
FEB 27...	1120	19	370	7.5	9.0	200	72	11.6	102	2.8	130
JUN 04...	1250	7.0	525	7.6	21.0	90	44	7.6	87	2.1	170
SEP 03...	1715	880	152	7.3	23.5	110	160	5.1	61	6.2	46
08...	1245	0.31	297	7.3	25.0	65	17	4.7	58	2.4	110

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 21...	78	39	10	22	0.8	8.0	61	110	21	0.20	12
JAN 09...	270	110	29	70	2	5.0	130	320	64	0.40	9.2
FEB 27...	65	36	8.9	23	0.9	4.3	62	84	23	0.20	8.3
JUN 04...	84	46	13	37	1	6.9	85	110	38	0.30	11
SEP 03...	17	13	3.4	8.9	0.6	7.4	29	31	7.2	0.20	6.3
08...	50	30	7.4	16	0.7	6.8	56	65	9.3	0.30	9.9

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
NOV 21...	259	28	19	9	0.450	0.060	0.510	0.070	0.83	0.90	0.280
JAN 09...	684	70	21	49	0.120	0.020	0.140	0.020	0.28	0.30	0.050
FEB 27...	225	38	2	36	0.520	0.070	0.590	0.210	0.79	1.0	0.250
JUN 04...	314	65	18	47	0.940	0.060	1.00	0.050	1.4	1.4	0.190
SEP 03...	95	289	27	262	0.320	0.070	0.390	0.100	1.0	1.1	0.490
08...	179	14	<1	--	--	<0.010	0.076	0.040	0.76	0.80	0.220

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
NOV 21...	0.190	13	--	--	--	--	--	--	--	--	--
JAN 09...	0.020	5.5	--	--	--	--	--	--	--	--	--
FEB 27...	0.170	10	--	--	--	--	--	--	--	--	--
JUN 04...	0.070	14	1	55	<0.5	1.0	<5	<3	<10	220	<10
SEP 03...	0.380	17	--	--	--	--	--	--	--	--	--
08...	0.140	11	3	49	<0.5	<1.0	<5	<3	<10	160	<10

08052730 PECAN CREEK NEAR AUBREY, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV										
21...	--	--	--	--	--	--	--	--	--	--
JAN										
09...	--	--	--	--	--	--	--	--	--	--
FEB										
27...	--	--	--	--	--	--	--	--	--	--
JUN										
04...	33	51	<0.1	<10	<10	<1	<1.0	320	<6	<3
SEP										
03...	--	--	--	--	--	--	--	--	--	--
08...	17	62	0.1	<10	<10	<1	1.0	180	<6	<3

08052800 LEWISVILLE LAKE NEAR LEWISVILLE, TX

LOCATION.--Lat 33°04'09", long 96°57'51", Denton County, Hydrologic Unit 12030103, in intake structure of Lewisville Dam on Elm Fork Trinity River, 2 mi upstream from bridge on State Highway 121, 2.4 mi northeast of Lewisville, 12 mi upstream from Denton Creek, and 30.0 mi upstream from mouth.

DRAINAGE AREA.--1,660 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1954 to current year. Prior to October 1970, published as Garza-Little Elm Reservoir near Lewisville.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 17, 1955, non-recording gage at site 4,000 ft upstream at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam 32,888 ft long, including a 560-foot uncontrolled off-channel concrete-gravity spillway with ogee weir section. Deliberate impoundment began Nov. 1, 1954, and the dam was completed in August 1955. The controlled low-flow outlet works consist of a 16.0-foot-diameter conduit that is controlled by three 6.5- by 13.0-foot broome-type gates and two 60-inch steel pipes with service valves. The lake was built for flood control and water conservation. The city of Dallas obtains most of its municipal water supply from this lake. The capacity table is based on a survey made in 1965. Inflow is affected at times by discharge from the flood-detention pools of 118 floodwater-retarding structures with a combined detention capacity of 81,670 acre-ft. These structures control runoff from 298 mi² 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. Gage-height telemeter at station. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	560.0	-
Crest of spillway	532.0	981,800
Top of conservation pool	515.0	457,600
Lowest intakes to wet wells (invert)	481.0	42,560
Invert of three broome-type gates	448.0	0

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 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 daily contents, 922,300 acre-ft Dec. 28 (elevation, 530.45 ft); minimum daily, 549,300 acre-ft Oct. 24 (elevation, 518.72 ft).

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

518.0	530,800	524.0	701,600	529.0	869,000
520.0	583,500	526.0	765,100	530.0	905,500
522.0	641,000	528.0	833,100	531.0	943,100

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	567600	702500	648100	910700	821200	746300	673700	638000	645700	654700	623400	596100
2	566500	702800	653800	905500	815600	742100	671500	638600	648700	653800	623400	595300
3	565500	702200	657100	898800	810100	738300	669100	638000	650500	651400	623100	598100
4	565200	691100	657400	890400	806000	741200	666700	637400	649600	649900	622500	599000
5	564400	684700	658000	883400	799500	742500	664000	636900	647800	647500	621900	598400
6	563300	681000	658000	876100	794000	740900	661600	635700	651400	646000	621100	598400
7	562300	677000	658300	871100	787600	736700	658300	634500	652000	644500	619900	597500
8	561000	671500	663100	866000	780900	734200	656500	633300	652300	643400	619000	597300
9	560400	668800	679800	859900	773900	746600	652900	631600	651400	641900	618200	596400
10	560200	667000	679500	854500	767400	743400	649600	630100	648700	640100	617300	606100
11	559700	664900	678800	849500	760800	739600	649300	629800	647200	638600	616100	609200
12	559100	662200	685300	845600	758600	736100	649000	629500	645100	636600	615800	611200
13	558100	659800	685000	844100	756000	730700	648100	628600	642200	635400	614400	613500
14	557300	659200	681600	841600	755300	726300	647500	628600	641600	634500	613200	615000
15	556800	658600	677600	838100	753700	721200	647500	627800	641900	633600	611500	617000
16	555200	659200	674000	833800	751400	716200	646900	627800	641600	633300	610100	618700
17	554200	660100	671900	833100	750500	714000	646900	629200	641900	632100	608400	620500
18	553900	660700	668500	838400	748500	712200	644500	636600	641600	631300	608100	622200
19	553400	662500	687400	840600	745700	705900	644500	643700	640700	630100	607500	623700
20	552600	661900	793000	839900	745000	700000	643700	645100	641600	629800	606600	626600
21	551900	660100	855600	839500	743100	694500	643100	645700	641000	629200	605800	629800
22	550600	659800	882300	841600	741200	689200	642500	645400	640400	628600	604600	631300
23	549500	655600	900300	839500	736700	682500	642500	645400	640400	628000	602900	632100
24	549300	652900	906600	836000	740200	677900	642500	645100	639200	626900	604400	633300
25	552400	651100	911800	832400	756600	674300	641900	645400	640700	625700	604100	634200
26	579300	648700	917400	831400	762800	673100	641600	644800	641000	624300	604400	634500
27	601200	647500	921100	845200	759900	672800	640100	644500	641000	623400	602600	633600
28	641600	646000	922300	846300	755300	674000	639800	648700	644500	623700	601200	633300
29	670300	649600	920000	842000	751100	676400	640700	648100	655900	622500	599800	632100
30	677600	648100	916600	834600	---	675800	639800	646300	656200	622800	598400	631300
31	694800	---	912900	826800	---	675200	---	645100	---	624000	597000	---
MAX	694800	702800	922300	910700	821200	746600	673700	648700	656200	654700	623400	634500
MIN	549300	646000	648100	826800	736700	672800	639800	627800	639200	622500	597000	595300
(†)	523.78	522.24	530.20	527.82	525.57	523.14	521.96	522.14	522.51	521.42	520.48	521.67
(ϕ)	+126400	-46700	+264800	-86100	-75700	-75900	-35400	+5300	+11100	-32200	-27000	+34300

CAL YR 1991 MAX 922300 MIN 549300 (ϕ) +324700
WTR YR 1992 MAX 922300 MIN 549300 (ϕ) +62900

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

08052800 LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: March 1962 to July 1964, December 1969 to current year.

330419096575401 - LEWISVILLE LAKE SITE AC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	RESER-VOIR STORAGE (AC-FT)	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
FEB												
06...	1154	794000	1.00	267	8.1	9.0	0.55	9.8	87	K6	K9	110
06...	1158	--	10.0	268	8.1	9.0	--	9.7	86	--	--	--
06...	1202	--	20.0	265	8.1	9.0	--	9.7	86	--	--	--
06...	1206	--	30.0	266	8.1	9.0	--	9.7	86	--	--	--
06...	1210	--	40.0	264	8.1	9.0	--	9.7	86	--	--	--
06...	1214	--	50.0	264	8.1	9.0	--	9.6	85	--	--	--
06...	1217	--	60.0	267	8.2	9.0	--	9.6	85	--	--	--
06...	1221	--	69.0	267	8.2	9.0	--	9.7	86	--	--	110
MAY												
27...	1113	641000	1.00	306	8.4	23.0	1.50	7.8	93	K1	K5	120
27...	1116	--	10.0	303	8.3	23.0	--	7.7	92	--	--	--
27...	1119	--	20.0	305	8.3	23.0	--	7.6	91	--	--	--
27...	1122	--	30.0	308	8.0	22.5	--	6.2	73	--	--	--
27...	1125	--	40.0	317	7.3	20.0	--	2.5	28	--	--	--
27...	1129	--	50.0	322	7.2	17.5	--	0	0	--	--	--
27...	1135	--	64.0	328	7.0	17.0	--	0	0	--	--	130
AUG												
13...	1312	614000	1.00	312	8.6	29.5	1.30	6.6	88	K1	K1	110
13...	1314	--	10.0	312	8.5	29.0	--	6.5	86	--	--	--
13...	1318	--	20.0	313	8.4	29.0	--	6.1	81	--	--	--
13...	1322	--	30.0	313	8.2	29.0	--	5.8	77	--	--	--
13...	1327	--	40.0	327	7.5	27.0	--	0	0	--	--	--
13...	1331	--	50.0	353	7.4	24.0	--	0	0	--	--	--
13...	1337	--	62.0	360	7.3	23.5	--	0	0	--	--	130

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
FEB											
06...	10	38	3.3	13	0.5	3.9	98	22	14	0.20	6.2
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	10	38	3.2	13	0.5	3.9	98	21	13	0.30	6.0
MAY											
27...	11	41	3.7	16	0.6	3.7	110	26	17	0.20	2.6
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	6	46	3.8	15	0.6	3.6	120	25	17	0.20	6.5
AUG											
13...	14	37	4.1	17	0.7	4.2	95	29	19	0.30	2.8
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	1	46	4.2	17	0.6	4.1	130	22	19	0.30	7.1

08052800 LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330419096575401 - LEWISVILLE LAKE SITE AC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB											
06...	159	0.580	0.010	0.590	0.020	0.38	0.40	0.040	0.040	13	<1
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	157	0.580	0.010	0.590	0.020	0.38	0.40	0.060	0.040	8	6
MAY											
27...	174	0.160	0.020	0.180	0.030	0.37	0.40	0.040	<0.010	<3	5
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	0.270	0.010	0.280	0.030	0.37	0.40	0.050	<0.010	<10	20
27...	--	0.510	0.010	0.520	0.020	0.28	0.30	0.050	<0.010	<10	110
27...	--	--	--	--	--	--	--	--	--	--	--
27...	193	0.470	0.020	0.490	0.110	0.49	0.60	0.110	0.010	79	940
AUG											
13...	170	--	<0.010	<0.050	0.020	0.28	0.30	<0.010	<0.010	14	2
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	<0.010	<0.050	0.020	0.38	0.40	0.010	<0.010	10	10
13...	--	--	<0.010	<0.050	0.030	0.37	0.40	0.030	0.010	20	100
13...	--	--	--	--	--	--	--	--	--	--	--
13...	201	--	<0.010	<0.050	0.780	0.72	1.5	0.340	0.040	1100	1400

330410096584501 - LEWISVILLE LAKE SITE AL

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
FEB							
06...	1230	1.00	262	8.1	9.0	9.7	86
06...	1232	10.0	263	8.1	9.0	9.8	87
06...	1235	20.0	267	8.1	8.5	9.8	86
06...	1237	30.0	267	8.1	8.5	9.7	85
06...	1239	40.0	267	8.1	8.5	9.7	85
06...	1241	50.0	270	8.1	8.5	9.6	84
06...	1243	58.0	268	8.1	8.5	9.4	82
MAY							
27...	1147	1.00	308	8.4	23.0	7.7	92
27...	1150	10.0	306	8.4	23.0	7.7	92
27...	1152	20.0	307	8.4	23.0	7.7	92
27...	1155	30.0	308	8.3	22.5	7.4	88
27...	1157	40.0	321	7.5	19.5	2.3	26
27...	1200	54.0	324	7.5	18.0	1.0	11
AUG							
13...	1350	1.00	311	8.6	29.5	6.7	90
13...	1353	10.0	311	8.6	29.0	6.6	87
13...	1356	20.0	313	8.4	28.5	5.8	76
13...	1359	30.0	312	8.2	28.5	5.6	74
13...	1402	40.0	330	7.6	26.5	0	0
13...	1405	53.0	351	7.8	24.0	0	0

08052800 LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330450096560501 - LEWISVILLE LAKE SITE BC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB							
06...	1331	1.00	309	8.3	9.0	9.9	88
06...	1333	10.0	311	8.2	9.0	10.1	89
06...	1335	20.0	304	8.1	8.5	9.8	86
06...	1337	30.0	286	8.0	8.5	9.6	84
06...	1340	43.0	280	8.0	8.5	9.2	80
MAY							
27...	1210	1.00	309	8.3	22.5	7.5	89
27...	1212	10.0	311	8.3	22.5	7.4	88
27...	1214	20.0	326	8.2	22.5	7.0	83
27...	1216	30.0	325	8.1	22.0	6.7	79
27...	1218	37.0	337	7.5	20.5	1.0	11
AUG							
13...	1416	1.00	339	8.5	29.0	6.4	85
13...	1419	10.0	333	8.4	28.5	5.8	76
13...	1422	20.0	318	8.2	28.5	5.3	70
13...	1425	30.0	324	7.8	28.0	3.7	48
13...	1428	36.0	354	7.6	27.0	0	0

330606097025601 - LEWISVILLE LAKE SITE CC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB								
06...	1301	1.00	260	7.9	9.0	0.30	9.0	80
06...	1303	10.0	257	7.9	9.0	--	9.0	80
06...	1306	20.0	261	7.9	9.0	--	9.0	80
06...	1308	30.0	262	7.9	9.0	--	8.8	78
06...	1311	35.0	259	8.0	9.0	--	8.8	78
MAY								
27...	1518	1.00	314	8.1	23.5	0.49	6.4	77
27...	1521	10.0	315	8.0	23.5	--	5.8	70
27...	1524	20.0	320	7.8	23.0	--	4.6	55
27...	1526	27.0	324	7.4	22.5	--	0	0
AUG								
13...	1731	1.00	318	8.5	30.0	0.80	6.0	81
13...	1735	10.0	318	8.4	29.5	--	5.5	73
13...	1739	15.0	320	8.2	29.5	--	4.9	65
13...	1743	20.0	322	8.0	29.0	--	4.3	57
13...	1747	28.0	340	7.6	28.5	--	0	0

330755096572001 - LEWISVILLE LAKE SITE DC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)
FEB									
06...	1500	1.00	259	8.0	9.0	9.6	85	0.600	0.020
06...	1502	10.0	260	8.0	9.0	9.6	85	--	--
06...	1504	20.0	258	8.0	9.0	9.5	84	--	--
06...	1506	30.0	257	8.0	9.0	9.5	84	--	--
06...	1509	40.0	257	8.1	9.0	9.5	84	--	--
06...	1512	47.0	260	8.1	8.5	9.4	82	0.630	0.020
MAY									
27...	1241	1.00	313	8.1	22.5	6.6	78	0.330	0.020
27...	1244	10.0	311	8.1	22.0	6.5	76	--	--
27...	1247	20.0	317	7.9	22.0	5.8	68	--	--
27...	1250	30.0	321	7.5	20.5	1.8	20	--	--
27...	1253	41.0	322	7.5	20.5	1.8	20	0.480	0.070
AUG									
13...	1451	1.00	316	8.3	29.0	5.5	73	--	<0.010
13...	1454	10.0	317	8.0	28.5	4.4	58	--	--
13...	1458	20.0	319	7.8	28.0	3.7	48	--	--
13...	1503	30.0	331	7.6	27.5	0	0	--	--
13...	1507	37.0	338	7.6	27.5	0	0	--	<0.010

08052800 LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330755096572001 - LEWISVILLE LAKE SITE DC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB								
06...	0.620	0.030	0.37	0.40	0.060	0.050	20	<10
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
06...	0.650	0.030	0.37	0.40	0.080	0.050	20	<10
MAY								
27...	0.350	0.020	0.38	0.40	0.020	<0.010	<10	20
27...	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--
27...	0.550	0.100	0.30	0.40	0.080	0.060	<10	110
AUG								
13...	<0.050	0.020	0.38	0.40	0.020	<0.010	10	40
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	<0.050	0.280	0.92	1.2	0.350	0.020	400	740

330959096565301 - LEWISVILLE LAKE SITE EC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
FEB											
06...	1525	1.00	242	7.9	9.0	--	9.4	83	K14	48	100
06...	1528	10.0	242	7.9	9.0	--	9.4	83	--	--	--
06...	1532	20.0	242	7.9	9.0	--	9.4	83	--	--	--
06...	1535	30.0	245	8.0	8.5	--	9.3	81	--	--	--
06...	1538	35.0	244	8.0	8.5	--	9.2	80	--	--	100
MAY											
27...	1310	1.00	323	7.9	22.5	0.40	5.8	69	K2	K5	130
27...	1313	10.0	324	7.9	22.5	--	5.7	67	--	--	--
27...	1317	20.0	322	7.5	21.5	--	1.9	22	--	--	--
27...	1320	27.0	321	7.5	21.5	--	1.5	17	--	--	130
AUG											
13...	1526	1.00	315	8.6	30.0	0.50	6.8	92	K3	K1	110
13...	1530	10.0	317	8.2	29.0	--	5.4	72	--	--	--
13...	1534	15.0	322	7.7	28.5	--	3.1	41	--	--	--
13...	1538	20.0	328	7.6	28.0	--	0	0	--	--	--
13...	1542	25.0	328	7.7	28.0	--	0	0	--	--	110

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
FEB											
06...	19	36	2.8	10	0.4	3.4	82	30	7.9	0.20	6.3
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	19	37	2.8	10	0.4	3.5	85	31	7.4	0.20	6.4
MAY											
27...	22	45	4.0	16	0.6	3.8	110	31	16	0.30	2.6
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	13	45	3.9	16	0.6	3.8	120	26	17	0.30	3.8
AUG											
13...	13	37	4.1	17	0.7	4.3	96	31	19	0.30	3.5
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	7	39	4.1	17	0.7	4.2	110	27	20	0.30	3.9

08052800 LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330959096565301 - LEWISVILLE LAKE SITE EC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB											
06...	146	0.660	0.030	0.690	0.060	0.34	0.40	0.090	0.080	21	2
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	149	0.670	0.060	0.730	0.070	0.43	0.50	0.120	0.080	24	<1
MAY											
27...	183	0.820	0.060	0.880	0.030	0.37	0.40	0.080	<0.010	5	20
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	185	0.390	0.030	0.420	0.090	0.41	0.50	0.050	<0.010	4	190
AUG											
13...	174	--	0.010	<0.050	0.030	0.67	0.70	0.060	0.020	<3	15
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	180	--	0.030	<0.050	0.130	0.57	0.70	0.110	0.040	24	360

330722096592201 - LEWISVILLE LAKE SITE FC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)
FEB									
06...	1433	1.00	282	8.2	8.5	9.9	87	0.480	0.010
06...	1435	10.0	295	8.2	8.5	9.8	86	--	--
06...	1438	20.0	294	8.2	8.5	9.9	87	--	--
06...	1440	30.0	294	8.2	8.5	9.9	87	--	--
06...	1443	40.0	298	8.2	8.5	9.9	87	--	--
06...	1446	52.0	294	8.2	8.5	9.8	86	0.480	0.020
MAY									
27...	1336	1.00	331	8.2	23.5	6.8	82	0.080	0.020
27...	1339	10.0	321	8.2	23.0	6.4	76	--	--
27...	1342	20.0	313	8.1	22.5	6.4	76	--	--
27...	1344	30.0	316	7.6	21.5	3.6	42	--	--
27...	1346	40.0	320	7.5	21.0	1.9	22	--	--
27...	1349	45.0	319	7.5	21.0	2.2	25	0.420	0.020
AUG									
13...	1600	1.00	328	8.5	29.5	5.7	76	--	<0.010
13...	1603	10.0	332	8.4	29.0	5.4	72	--	--
13...	1607	20.0	331	7.9	28.5	3.2	42	--	--
13...	1610	25.0	326	7.6	28.0	1.0	13	--	--
13...	1614	30.0	327	7.6	27.5	0	0	--	--
13...	1618	40.0	329	7.7	28.0	0	0	--	--
13...	1623	43.0	332	7.6	27.5	0	0	--	<0.010

08052800 LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330722096592201 - LEWISVILLE LAKE SITE FC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB								
06...	0.490	0.040	0.36	0.40	0.060	0.030	<10	<10
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
06...	0.500	0.040	0.46	0.50	0.040	0.030	<10	<10
MAY								
27...	0.100	0.040	0.46	0.50	0.070	0.010	<10	<10
27...	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--
27...	0.440	0.050	0.35	0.40	0.050	<0.010	<10	40
AUG								
13...	<0.050	0.020	0.48	0.50	0.070	0.040	20	110
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	<0.050	0.100	1.1	1.2	0.380	0.010	20	190

330944097003601 - LEWISVILLE LAKE SITE GC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
FEB											
06...	1409	1.00	295	8.2	8.5	0.37	9.7	85	61	K4	130
06...	1412	10.0	296	8.2	8.5	--	9.7	85	--	--	--
06...	1416	23.0	295	8.2	9.0	--	9.6	85	--	--	130
MAY											
27...	1403	1.00	348	8.3	23.0	0.50	7.2	86	K6	K1	130
27...	1408	10.0	348	8.2	23.0	--	7.0	84	--	--	--
27...	1412	19.0	350	8.1	23.0	--	6.4	76	--	--	130
AUG											
13...	1638	1.00	345	8.6	29.5	0.50	6.2	83	K1	K1	120
13...	1643	5.00	346	8.5	29.5	--	5.6	75	--	--	--
13...	1647	10.0	346	8.3	29.0	--	4.7	62	--	--	--
13...	1651	17.0	341	8.0	29.0	--	3.9	52	--	--	120

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
FEB											
06...	11	45	3.7	13	0.5	4.1	120	18	17	0.20	5.6
06...	--	--	--	--	--	--	--	--	--	--	--
06...	11	45	3.7	13	0.5	3.9	120	17	15	0.20	5.7
MAY											
27...	8	46	4.5	19	0.7	4.0	120	23	23	0.30	3.9
27...	--	--	--	--	--	--	--	--	--	--	--
27...	4	45	4.5	19	0.7	3.9	130	23	23	0.30	4.1
AUG											
13...	9	41	4.4	20	0.8	4.5	110	24	25	0.30	5.1
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	11	41	4.4	19	0.8	4.4	110	24	23	0.30	4.7

08052800 LEWISVILLE LAKE NEAR LEWISVILLE, TX--Continued

330944097003601 - LEWISVILLE LAKE SITE GC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB											
06...	177	0.500	0.050	0.550	0.040	0.36	0.40	0.050	0.030	8	<1
06...	--	--	--	--	--	--	--	--	--	--	--
06...	174	0.480	0.020	0.500	0.030	0.47	0.50	0.060	0.030	9	<1
MAY											
27...	199	0.190	0.030	0.220	0.030	0.37	0.40	0.060	0.040	6	3
27...	--	--	--	--	--	--	--	--	--	--	--
27...	199	0.190	0.040	0.230	0.050	0.45	0.50	0.060	0.050	<3	12
AUG											
13...	191	--	<0.010	<0.050	0.030	0.57	0.60	0.100	0.060	11	4
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	187	--	<0.010	<0.050	0.050	0.45	0.50	0.140	0.050	<3	43

Lewisville Lake AC (330419096575401)

Phytoplankton Analyses October 1991 to September 1992

Date	2-6-92
Time	1154
TOTAL CELLS/mL	2,096,452
NUMBER OF SPECIES	11
DEPTH COLLECTED (ft.)	0.9

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	5215
Melosira varians	10430
Order Pennales	
Asterionella formosa	7,823
Surirella linearis	7,823
CHLOROPHYTA	
Chlamydomonas sp.	78,226
Chlorella ellipsoidea	15,645
Selenastrum minutum	15,645
CHRYSOPHYTA	
Unknown flagellate	109,516
CYANOPHYTA	
Aphanocapsa delicatissima	1,736,613
Chroococcus sp.	93,871
CRYPTOPHYTA	
Rhodomonas minuta	15,645

Lewisville Lake GC (330944097003601)

Phytoplankton Analyses October 1991 to September 1992

Date	2-6-92
Time	1410
TOTAL CELLS/mL	2,894,354
NUMBER OF SPECIES	18
DEPTH COLLECTED (ft.)	0.6

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Centrales	
Cyclotella meneghiniana	5,834
Melosira varians	7,690
Stephanodiscus astraea var. *minutula*	2,121
Order Pennales	
Achnanthes minutissima	6,258
Nitzschia acicularis	3,129
Nitzschia dissipata	3,129
Nitzschia palea	3,129
CHLOROPHYTA	
Chlamydomonas sp.	93,871
Chlorella ellipsoidea	125,161
Chlorococcum humicola	93,871
Selenastrum minutum	31,290
CHRYSOPHYTA	
Unknown flagellate	187,742
Mallomonas sp.	15645
CYANOPHYTA	
Aphanocapsa delicatissima	2,033,871
Chroococcus sp.	172,097
EUGLENOPHYTA	
Euglena sp.	15,645
CRYPTOPHYTA	
Cryptomonas erosa	62,581
Rhodomonas minuta	31,290

Lewisville Lake AC (330419096575401)

Phytoplankton Analyses October 1991 to September 1992

Date	5-27-92
Time	1112
TOTAL CELLS/mL	219,907
NUMBER OF SPECIES	18
DEPTH COLLECTED (ft.)	2.5

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	3,328
Stephanodiscus astraea	683
Order Pennales	
Achnanthes sp.	42
Cymbella cymbiformis	125
Diatoma vulgare	292
Fragilaria crotonensis	84
Gomphonema brasiliense	42
Navicula sp.	84
CHLOROPHYTA	
Chlamydomonas sp.	2,005
Scenedesmus quadricauda	668
Selenestrum westii	1,337
CYANOPHYTA	
Aphanocapsa delicatissima	133,682
Aphanizomenon flos-aquae	20,052
Chroococcus limneticus	2,005
Merismopedia tenuissima	41,441
EUGLENOPHYTA	
Trachelomonas spp.	668
PYRRHOPHYTA	
Ceratium hirundinella	2,674
CRYPTOPHYTA	
Cryptomonas erosa	10,695

Lewisville Lake GC (330944097003601)

Phytoplankton Analyses October 1991 to September 1992

Date	5-27-92
Time	1402
TOTAL CELLS/mL	420,430
NUMBER OF SPECIES	17
DEPTH COLLECTED (ft.)	0.8

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
Cyclotella ocellata	4,215
Stephanodiscus astraea	253
Melosira varians	211
Order Pennales	
Fragilaria crotonensis	2,674
CHLOROPHYTA	
Ankistrodesmus falcatus	2,005
Chlamydomonas sp.	4,679
Pediastrum duplex	668
Scenedesmus quadricauda	668
CYANOPHYTA	
Anabaena affinis	14,037
Aphanocapsa delicatissima	126,998
Aphanizomenon flos-aquae	6,684
Chroococcus limneticus	2,674
Chroococcus minimus	2,674
Merismopedia tenuissima	247,312
CHRYSOPHYTA	
Dinobryon sociale	668
PYRRHOPHYTA	
Glenodinium palustre	668
CRYPTOPHYTA	
Cryptomonas erosa	3,342

Lewisville Lake AC (330419096575401)

Phytoplankton Analyses October 1991 to September 1992

Date	8-13-92
Time	1313
TOTAL CELLS/mL	247,982
NUMBER OF SPECIES	13
DEPTH COLLECTED (ft.)	2.1

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Pennales	
Fragilaria crotenensis	4,679
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	2,674
Ankistrodesmus spiralis	7,353
Chlamydomonas sp.	2,005
Scenedesmus quadricauda	1,337
Selenestrum westii	2,674
CYANOPHYTA (Blue-green algae)	
Anabaena spiroides	36,763
Aphanizomenon flos-aquae	30,078
Aphanocapsa delicatissim	113,630
Chroococcus limneticus	5,347
Merismopedia tenuissima	37,431
EUGLENOPHYTA (Euglenoids)	
Trachelomonas spp.	1,337
CRYPTOPHYTA (Cryptomonads)	
Cryptomonas erosa	2,674

Lewisville Lake GC (330944097003601)

Phytoplankton Analyses October 1991 to September 1992

Date	8-13-92
Time	1638
TOTAL CELLS/mL	383,668
NUMBER OF SPECIES	15
DEPTH COLLECTED (ft.)	0.9

Organisms	Cells/mL
BACILLARIOPHYTA (Diatoms)	
Order Pennales	
Fragilaria crotenensis	3,342
CHLOROPHYTA (Green algae)	
Ankistrodesmus falcatus	12,031
Ankistrodesmus spiralis	4,679
Chlamydomonas sp.	1,337
Cosmarium sp.	4,679
Scenedesmus quadricauda	2,005
CYANOPHYTA (Blue-green algae)	
Anabaena sp.	8,021
Anabaena spiroides	21,389
Aphanizomenon flos-aquae	46,789
Aphanocapsa delicatissima	66,841
Chroococcus limneticus	10,695
Merismopedia chondroidea	29,410
Merismopedia tenuissima	165,766
EUGLENOPHYTA (Euglenoids)	
Euglena sp.	1,337
Trachelomonas spp.	5,347

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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1949 to current year.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 432.39 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Jan. 6, 1950, nonrecording gage 0.6 mi upstream at datum 3.26 ft lower.

REMARKS.--Records fair including those for periods of estimated stage record. Flow regulated by Lewisville Lake (station 08052800) 1.9 mi upstream since November 1954. Most of low flow is used by the city of Dallas for municipal supply (see station 08055500). Gage height telemeter at station.

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

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1950-54).--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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188	1030	447	3610	6100	4400	2480	265	1820	527	254	298
2	212	1810	525	3670	6160	4400	2470	e185	1330	903	279	238
3	194	2570	284	3800	6190	e4350	2470	e193	1070	905	274	231
4	181	3640	166	4810	6170	e4460	2460	e236	1770	908	258	216
5	140	4290	418	5200	5620	e4470	2450	e202	1590	905	278	260
6	132	4470	494	5270	5380	e3810	2590	e241	1790	783	296	257
7	138	4500	492	5300	5910	e4150	2890	225	1790	457	319	258
8	188	4450	496	5300	6360	e4490	1340	279	2090	341	365	258
9	202	3810	1180	5290	6510	e5010	2050	357	2730	335	356	256
10	164	3250	2380	5290	6540	e3380	2140	347	2900	317	343	400
11	162	3140	2690	5360	6540	e3350	573	275	2750	309	343	198
12	162	3150	2710	5420	6530	4020	713	304	2400	309	342	206
13	161	3320	2630	5390	5730	4240	757	380	2360	309	340	215
14	165	2800	2600	5440	4140	4440	813	475	1350	309	322	189
15	167	2640	2590	5490	3610	4440	975	422	225	308	324	230
16	169	2510	2620	5420	3370	4400	1210	418	243	353	322	200
17	167	2510	2710	5290	3120	4010	1220	471	247	408	369	170
18	168	2500	2720	5370	2890	4040	1220	567	323	295	341	261
19	166	2520	2530	5410	3080	4050	1060	272	323	305	250	319
20	159	2520	2350	5310	3320	4040	738	238	317	294	243	239
21	167	2500	1400	5360	3480	4040	497	477	250	279	240	198
22	157	2490	248	5740	3880	4030	188	628	196	278	296	171
23	148	2370	129	5640	3970	4030	275	623	244	278	349	194
24	156	2040	60	5970	3970	4020	251	620	257	278	364	214
25	84	1640	42	6810	3630	3930	236	625	257	290	302	259
26	298	1410	37	6740	861	3410	233	607	251	326	218	369
27	271	1190	217	6780	2320	2640	219	563	290	349	198	286
28	591	992	1190	4870	4000	2500	171	853	415	314	265	277
29	579	732	2230	3260	4340	2490	137	1410	269	267	359	237
30	78	443	3000	4800	---	2480	197	1800	315	251	404	241
31	241	---	3270	5870	---	2480	---	1810	---	312	353	---
TOTAL	6155	77237	44855	163280	133721	120000	35023	16368	32162	12802	9566	7345
MEAN	199	2575	1447	5267	4611	3871	1167	528	1072	413	309	245
MAX	591	4500	3270	6810	6540	5010	2890	1810	2900	908	404	400
MIN	78	443	37	3260	861	2480	137	185	196	251	198	170
AC-FT	12210	153200	88970	323900	265200	238000	69470	32470	63790	25390	18970	14570

e Estimated

08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 92#, BY WATER YEAR (WY)

MEAN	404	641	610	519	585	674	651	1262	1430	785	504	339
MAX	3628	6300	4681	5267	4611	3871	3547	8391	5222	4479	4101	2480
(WY)	1982	1982	1982	1992	1992	1992	1977	1990	1957	1989	1982	1962
MIN	23.1	37.3	35.0	15.2	23.6	37.7	14.0	84.4	109	157	54.7	65.0
(WY)	1959	1955	1955	1955	1955	1955	1989	1981	1955	1961	1963	1958

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1955 - 1992#	
ANNUAL TOTAL	187372		658514			
ANNUAL MEAN	513		1799		700	
HIGHEST ANNUAL MEAN					3062	1982
LOWEST ANNUAL MEAN					94.2	1955
HIGHEST DAILY MEAN	4500	Nov 7	6810	Jan 25	19000	May 4 1990
LOWEST DAILY MEAN	16	Jan 20	37	Dec 26	.28	Nov 1 1983
ANNUAL SEVEN-DAY MINIMUM	61	Jan 8	148	Oct 19	.29	Nov 3 1983
INSTANTANEOUS PEAK FLOW			7300	Jan 27	19600	May 4 1990
INSTANTANEOUS PEAK STAGE			23.55	Jan 27	30.15	May 4 1990
ANNUAL RUNOFF (AC-FT)	371700		1306000		507400	
10 PERCENT EXCEEDS	1900		5220		2940	
50 PERCENT EXCEEDS	186		613		196	
90 PERCENT EXCEEDS	84		194		74	

Period of regulated streamflow.

08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January 1981 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1981 to September 1990.
WATER TEMPERATURE: November 1976 to September 1990.

INSTRUMENTATION.--From November 1976 to October 1981, water temperature was continuously recorded at this station.

REMARKS.--Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,050 microsiemens Feb. 5, 8, 1989; minimum daily, 200 microsiemens May 13, 1982.
WATER TEMPERATURES (1976-89): Maximum, 33.5°C July 16, Aug. 18, 1988, Sept. 14, 15, 1989; minimum, 0.0°C Jan. 31, Feb. 9, 1979.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT											
17...	1530	161	337	8.0	22.0	14	7.3	9.3	109	1.6	120
FEB											
06...	1250	4840	273	8.3	9.0	45	13	13.0	114	0.7	110
APR											
01...	1645	2480	313	8.1	14.0	--	--	11.0	107	1.3	120
MAY											
27...	0930	570	326	8.1	21.0	10	6.5	6.8	78	0.9	130
JUL											
10...	1407	304	343	7.8	27.0	5	3.3	5.4	69	0.4	120
AUG											
13...	1038	364	334	8.4	28.0	12	5.6	6.9	90	1.0	110

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT											
17...	14	40	4.1	25	1	5.2	100	32	20	0.40	4.7
FEB											
06...	6	37	3.2	13	0.6	4.0	100	23	14	0.20	5.6
APR											
01...	12	42	3.7	15	0.6	3.9	110	25	15	0.30	3.8
MAY											
27...	20	45	3.8	17	0.7	3.8	110	31	18	0.30	2.8
JUL											
10...	21	42	4.1	21	0.8	4.2	100	34	23	0.20	3.2
AUG											
13...	8	38	4.2	21	0.9	4.2	100	36	37	0.30	3.4

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
OCT											
17...	193	10	10	0	0.920	0.010	0.930	0.050	0.55	0.60	0.390
FEB											
06...	160	28	11	17	0.580	0.020	0.600	0.030	0.37	0.40	0.070
APR											
01...	173	--	--	--	0.460	0.070	0.530	0.040	0.46	0.50	0.110
MAY											
27...	187	16	21	0	0.400	0.030	0.430	0.090	0.41	0.50	0.080
JUL											
10...	192	6	10	0	0.360	0.040	0.400	0.320	0.58	0.90	0.220
AUG											
13...	207	14	10	4	0.260	0.020	0.280	0.240	0.46	0.70	0.100

08053000 ELM FORK TRINITY RIVER NEAR LEWISVILLE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT											
17...	0.340	4.4	--	--	--	--	--	--	--	--	--
FEB											
06...	0.070	5.1	2	37	<0.5	<1.0	<5	<3	<10	20	<10
APR											
01...	0.080	--	--	--	--	--	--	--	--	--	--
MAY											
27...	0.070	4.0	1	39	<0.5	<1.0	<5	<3	<10	6	<10
JUL											
10...	0.210	5.3	--	--	--	--	--	--	--	--	--
AUG											
13...	0.060	6.1	3	35	<0.5	<1.0	<5	<3	<10	10	10

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
17...	--	--	--	--	--	--	--	--	--	--
FEB										
06...	<4	<1	<0.1	<10	<10	<1	<1.0	190	<6	8
APR										
01...	--	--	--	--	--	--	--	--	--	--
MAY										
27...	5	5	<0.1	<10	<10	<1	<1.0	250	<6	11
JUL										
10...	--	--	--	--	--	--	--	--	--	--
AUG										
13...	6	90	<0.1	<10	<10	<1	<1.0	250	<6	5

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.

PERIOD OF RECORD.--October 1949 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1980 to September 1982.

REVISED RECORDS.--WSP 1732: 1950(M). WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 606.66 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. There are several small diversions above station. Flow is affected at times by discharge from the flood-detention pools of 84 floodwater-retarding structures with a combined detention capacity of 52,750 acre-ft. These structures control runoff from 197 mi² in the Denton Creek watershed. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--31 years (water years 1950-80) 77.4 ft³/s (56,080 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1950-80).--Maximum discharge, 29,800 ft³/s May 24 1957 (gage height, 17.64 ft); no flow at times in 1949-65, 1967-74, 1976-80.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1935 was the highest since 1908 and reached a stage of 20.6 ft at site about 1,500 ft upstream, from information by local resident. Flood in May 1908 reached a stage about 1.0 ft higher than flood in May 1935, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	2030	40	579	326	254	130	94	254	185	66	10
2	7.4	769	190	485	294	225	120	79	318	107	38	18
3	7.2	433	311	405	273	211	114	70	448	70	169	19
4	7.1	268	188	330	262	554	112	65	259	112	75	19
5	7.1	181	111	279	242	835	111	84	156	118	37	15
6	7.1	120	94	257	228	459	110	65	156	70	30	11
7	7.1	82	86	239	214	309	110	59	407	46	25	11
8	7.1	59	304	236	199	247	110	53	242	38	22	20
9	7.1	50	2060	212	192	806	111	50	509	33	20	16
10	7.1	44	493	193	185	483	109	49	712	30	18	46
11	7.2	41	526	183	194	300	105	47	294	28	16	160
12	8.3	38	1410	182	195	246	101	46	175	26	16	54
13	9.5	35	904	221	194	218	99	44	116	25	15	27
14	10	35	439	612	192	205	99	42	87	23	14	20
15	10	35	257	465	183	190	97	41	71	23	12	17
16	10	39	194	327	169	180	92	39	59	22	10	16
17	10	267	166	258	165	293	90	43	51	22	8.8	14
18	10	191	132	476	161	342	91	77	44	26	7.9	14
19	10	122	1950	625	148	236	91	192	41	25	8.7	14
20	10	102	7200	490	139	181	90	199	47	23	11	13
21	10	70	6150	417	135	163	85	125	83	22	12	16
22	11	59	4320	660	133	161	83	126	67	22	12	45
23	11	55	3690	620	153	156	82	364	50	22	11	29
24	13	46	2240	389	242	149	76	313	100	21	10	21
25	18	42	1670	302	1970	156	71	249	189	20	9.9	18
26	2790	41	1430	265	1380	178	68	155	162	18	9.8	17
27	1310	41	1240	1210	663	160	67	120	128	19	10	16
28	2400	41	1010	1080	430	158	66	154	102	18	10	14
29	1630	41	828	669	316	159	93	589	385	21	11	13
30	906	40	697	486	---	154	117	399	392	19	10	13
31	2200	---	624	381	---	133	---	213	---	85	9.8	---
TOTAL	11465.8	5417	40954	13533	9577	8501	2900	4245	6104	1339	734.9	736
MEAN	370	181	1321	437	330	274	96.7	137	203	43.2	23.7	24.5
MAX	2790	2030	7200	1210	1970	835	130	589	712	185	169	160
MIN	7.1	35	40	182	133	133	66	39	41	18	7.9	10
AC-FT	22740	10740	81230	26840	19000	16860	5750	8420	12110	2660	1460	1460

08053500 DENTON CREEK NEAR JUSTIN, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1992#, BY WATER YEAR (WY)

MEAN	312	75.9	149	89.9	137	190	245	524	369	49.3	9.34	30.6
MAX	2828	524	1321	437	411	522	2095	2036	1815	260	24.9	242
(WY)	1982	1982	1992	1992	1987	1990	1990	1982	1989	1982	1982	1986
MIN	.000	.29	3.84	4.30	14.1	29.5	20.4	8.24	14.4	.000	.000	.000
(WY)	1989	1981	1981	1981	1981	1986	1981	1984	1988	1984	1981	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1981 - 1992#	
ANNUAL TOTAL	78048.5		105506.7			
ANNUAL MEAN	214		288		182	
HIGHEST ANNUAL MEAN					577	1982
LOWEST ANNUAL MEAN					21.9	1983
HIGHEST DAILY MEAN	7200	Dec 20	7200	Dec 20	18600	Oct 14 1981
LOWEST DAILY MEAN	1.8	Aug 11	7.1	Oct 4	.00	Oct 9 1980
ANNUAL SEVEN-DAY MINIMUM	4.0	Aug 6	7.1	Oct 4	.00	Oct 9 1980
INSTANTANEOUS PEAK FLOW			10800	Dec 20	34700	Oct 13 1981
INSTANTANEOUS PEAK STAGE			15.95	Dec 20	18.68	Oct 13 1981
INSTANTANEOUS LOW FLOW			7.1	Oct 3	.00	*
ANNUAL RUNOFF (AC-FT)	154800		209300		131900	
10 PERCENT EXCEEDS	322		614		269	
50 PERCENT EXCEEDS	40		103		28	
90 PERCENT EXCEEDS	9.1		11		.00	

Period of regulated streamflow.
* No flow at times most years.

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.

PERIOD OF RECORD.--July 1952 to current year. Prior to October 1970, published as Grapevine Reservoir.
Water-quality records.--Chemical and biochemical analyses: October 1969 to August 1986.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 16, 1953, non-recording gage at site 1,000 ft upstream at present datum.

REMARKS.--The lake is formed by a rolled earthfill dam 12,850 ft long, including a 500-foot uncontrolled off-channel concrete-gravity spillway with an ogee weir section. The dam was completed in June 1952, and deliberate impoundment began July 3, 1952. The controlled outlet works consist of a 13.0-foot-diameter concrete conduit that is controlled by two 6.5- by 13.0-foot broome-type gates and two 30-inch steel pipes with service valves. The capacity table, used since April 1972, is based on a survey made in October 1966. The lake was built for flood control, navigation, and water conservation. The city of Dallas uses part of this water for their municipal supply. An unknown amount of water is diverted for industrial and municipal uses. Inflow is affected at times by discharge from the flood-detention pools of 87 floodwater-retarding structures with a combined detention capacity of 57,850 acre-ft. These structures control runoff from 217 mi² in the Denton Creek watershed. Gage-height telemeter at station. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	588.0	-
Crest of spillway	560.0	425,500
Top of conservation pool	535.0	181,100
Lowest intake to wet wells (invert)	500.5	22,140
Invert of two broome-type gates	475.0	100

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

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

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 334,300 acre-ft Dec. 28 (elevation, 552.12 ft); minimum daily, 156,600 acre-ft Oct. 24, 25 (elevation, 531.50 ft).

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

531.0	153,300	542.0	236,500	549.0	302,000
535.0	181,100	545.0	263,300	551.0	322,400
539.0	211,500	547.0	282,300	553.0	343,800

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	162800	220800	182600	332300	275200	227800	194400	182900	183200	186200	178600	171800
2	162600	222300	183900	331000	272300	227100	190800	183000	185300	185100	178600	171500
3	162200	223100	184600	329300	269700	226600	187700	183000	186100	183800	178900	171300
4	162000	223300	184700	326900	267500	229000	185800	182900	186100	182700	178900	171100
5	161500	223300	184600	324000	264600	231900	183900	182700	185600	182100	178900	170800
6	161200	223300	184500	320600	261900	232900	183100	182500	186100	181800	178600	170600
7	160900	223200	184300	317200	258800	232300	183000	182300	186200	181500	178400	170300
8	160600	222000	185100	313900	255900	231900	182700	182300	185500	181300	178100	170100
9	160400	219900	192300	310300	253200	234900	182300	182100	184700	181100	177800	169800
10	160200	217300	191400	306600	250600	235300	182300	182100	184300	180700	177500	172400
11	160000	214400	191100	302800	248200	235100	182400	181900	183300	180400	177100	172500
12	159800	211500	193700	299300	246000	234200	182600	181900	182700	180000	177100	172500
13	159500	208500	193800	296100	243000	233400	182700	181800	182700	179700	176800	172300
14	159200	205800	192500	293100	239700	232400	182700	182100	182600	179400	176500	172100
15	159000	203100	190800	290400	235800	231300	182800	181900	182500	179100	176100	172000
16	158500	200600	189000	287200	232000	230500	182800	182600	182300	179100	175700	171800
17	158300	198600	187100	283900	228300	229500	183200	182900	182100	178900	175300	171600
18	158100	196300	185800	283400	224500	229700	182900	183900	181800	179500	175100	171400
19	157800	194500	195000	282300	221300	228100	182900	185400	181600	179400	175400	171200
20	157500	191700	247700	279700	218200	226500	182500	185800	181600	179100	175000	171000
21	157300	188900	287500	277300	215900	224900	182100	185800	181600	178900	174800	171000
22	157000	187100	305200	275800	214200	223300	181800	185400	181500	178600	174500	170800
23	156800	185100	316000	274000	212500	221400	181800	185600	181800	178400	174200	170600
24	156600	183400	321900	272100	212700	220100	181900	185700	181700	178200	173900	170300
25	156600	182400	326300	270200	225600	218400	181800	185900	181900	177800	173600	170000
26	170300	182400	330200	269300	229500	215900	181700	185600	182000	177600	173500	169900
27	181800	182400	333100	277100	230100	212600	181600	185200	181900	177800	173000	169600
28	195700	182400	334300	281000	229500	209100	181800	186500	183600	177600	172600	169400
29	203800	182600	333900	282000	228600	205600	182700	186400	186200	177300	172300	169100
30	207000	182600	332800	280600	---	201700	182800	185200	186800	176900	172000	168800
31	215100	---	331700	278000	---	197700	---	183700	---	178600	171800	---
MAX	215100	223300	334300	332300	275200	235300	194400	186500	186800	186200	178900	172500
MIN	156600	182400	182600	269300	212500	197700	181600	181800	181500	176900	171800	168800
(†)	539.45	535.20	551.88	546.55	541.08	537.23	535.23	535.35	535.77	534.65	533.71	533.28
(ϕ)	+52000	-32500	+149100	-53700	-49400	-30900	-14900	+900	+3100	-8200	-6800	-3000

CAL YR 1991 MAX 334300 MIN 156600 (ϕ) +170200
WTR YR 1992 MAX 334300 MIN 156600 (ϕ) +5700

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

08055500 ELM FORK TRINITY RIVER NEAR CARROLLTON, TX

LOCATION.--Lat 32°57'57", long 96°56'39", Dallas County, Hydrologic Unit 12030103, near left bank at downstream side of bridge on Sandy Lake Road, 40 ft upstream from Carrollton Dam, 0.3 mi downstream from Denton Creek, 1.0 mi upstream from St. Louis Southwestern Railway Lines bridge, 2.3 mi northwest of Carrollton, and 18.2 mi upstream from mouth.

DRAINAGE AREA.--2,459 mi².

PERIOD OF RECORD.--January 1907 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to November 1923, published as "near Dallas".

REVISED RECORDS.--WSP 788: 1924. WSP 1148: Drainage area at former site. WSP 1632: 1908(M). WSP 1922: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 431.40 ft above National Geodetic Vertical Datum of 1929. Prior to November 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 present site and 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 present site and at datum 2.00 ft higher.

REMARKS.--Records fair including those for estimated daily discharges. Flow largely regulated by Lewisville Lake (station 08052800) since November 1954, and by Grapevine Lake (station 08054500) since July 1952. The city of Dallas diverts water from the pool at gage and from the river 14 mi downstream for municipal use. A water treatment plant returns water to the river below the station. In addition, Dallas Power and Light Co. diverts water from the pool at gage into North Lake for cooling water at their electric generating plant. Several observations of water temperature were made during the year. Gage-height telemeters at station

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, 1908-54).--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 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	1480	324	5340	7130	5160	4400	216	2820	753	215	209
2	37	2060	764	5290	7160	5030	4410	184	2320	1360	253	109
3	53	2720	403	5290	7160	4980	4290	240	1050	1390	204	153
4	75	3580	285	6050	7100	5440	3650	273	2100	1330	133	73
5	5.1	4120	449	6580	6880	4800	3520	157	1920	1080	163	120
6	13	4270	521	6840	6700	3770	3560	202	2450	902	207	133
7	.00	4290	502	6890	6820	4500	3250	165	2210	399	204	88
8	19	4350	542	6880	7070	4940	1730	162	2440	266	235	96
9	65	4520	1850	6910	7140	6280	2170	191	3480	175	231	81
10	18	4270	3270	6960	7070	3940	2460	179	3720	164	189	663
11	26	4320	4010	7020	7060	3690	512	120	3790	203	213	471
12	29	4310	4230	7060	7070	4590	603	167	3040	247	257	70
13	15	4520	3960	7050	6910	4910	788	215	2380	200	262	120
14	16	4040	3870	7060	6280	5090	850	1200	1620	215	228	101
15	27	3860	3860	7110	5920	5100	927	e421	192	212	223	196
16	24	3730	3880	6950	5680	5130	1230	e370	160	209	210	171
17	31	3750	4000	7030	5420	4880	1270	e477	182	339	225	128
18	72	3700	4030	7240	5080	5110	1260	e2170	296	220	252	184
19	105	3840	4320	6640	4920	5090	1150	e537	280	263	188	263
20	62	3780	6850	6850	5130	5070	836	e393	321	224	114	191
21	228	3700	6000	6970	5080	5070	761	e542	247	198	73	212
22	293	3620	1400	7160	5000	5050	297	e778	129	193	85	121
23	271	3100	771	6940	5090	5060	282	e779	197	170	214	153
24	265	2690	306	6640	5210	5170	248	e799	205	155	255	165
25	228	2170	195	6950	6080	5210	210	e799	263	132	265	167
26	1570	1210	167	7100	1570	4950	180	e793	254	180	138	318
27	1710	999	260	8050	2690	4470	204	762	258	307	107	227
28	3180	752	1370	5710	4620	4510	178	1300	1360	347	107	174
29	2730	596	3210	3900	5120	4490	291	1940	1010	214	231	93
30	632	293	4330	5710	---	4630	93	2810	329	148	221	47
31	1130	---	4730	6850	---	4490	---	2880	---	484	189	---
TOTAL	12944.10	94640	74659	205020	170160	150600	45610	22221	41023	12679	6091	5297
MEAN	418	3155	2408	6614	5868	4858	1520	717	1367	409	196	177
MAX	3180	4520	6850	8050	7160	6280	4410	2880	3790	1390	265	663
MIN	.00	293	167	3900	1570	3690	93	120	129	132	73	47
AC-FT	25670	187700	148100	406700	337500	298700	90470	44080	81370	25150	12080	10510

e Estimated

08055500 ELM FORK TRINITY RIVER NEAR CARROLLTON, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1992#, BY WATER YEAR (WY)

MEAN	396	718	748	632	691	775	851	1483	1714	928	582	314
MAX	3554	8830	6785	6614	5868	4858	4126	10920	6757	6224	6003	3406
(WY)	1982	1982	1982	1992	1992	1992	1977	1990	1990	1989	1982	1962
MIN	27.8	4.21	.78	.80	2.06	3.30	43.5	38.4	80.0	94.9	58.2	14.8
(WY)	1981	1957	1978	1957	1957	1957	1955	1980	1959	1979	1979	1985

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1955 - 1992#	
ANNUAL TOTAL	238361.10		840944.10			
ANNUAL MEAN	653		2298		819	
HIGHEST ANNUAL MEAN					4289	1982
LOWEST ANNUAL MEAN					76.0	1978
HIGHEST DAILY MEAN	6850	Dec 20	8050	Jan 27	25300	May 5 1990
LOWEST DAILY MEAN	.00	Oct 7	.00	Oct 7	.00	Dec 2 1954
ANNUAL SEVEN-DAY MINIMUM	21	Oct 5	21	Oct 5	.00	Jan 7 1959
INSTANTANEOUS PEAK FLOW			11500	Dec 20	33000	Sep 21 1964
INSTANTANEOUS PEAK STAGE			10.32	Dec 20	13.48	May 5 1990
INSTANTANEOUS LOW FLOW			.00	Oct 7	.00	at times
ANNUAL RUNOFF (AC-FT)	472800		1668000		593700	
10 PERCENT EXCEEDS	2880		6640		3600	
50 PERCENT EXCEEDS	167		876		139	
90 PERCENT EXCEEDS	51		120		33	

Period of regulated streamflow.

08055570 HEREFORD ROAD OUTFALL AT WALNUT HILL ROAD, IRVING, TX

LOCATION.--Lat 32°52'11", long 96°56'07", Dallas County, Hydrologic Unit 12030102, on the east side of Walnut Hill Road, near the intersection of Hereford Road, and 2.75 miles north of Irving.

DRAINAGE AREA.--0.05 mi².

PERIOD OF RECORD.-- Chemical and biochemical analyses: July 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
AUG 24-24	2035	0.35	2.5	0.29	186	125	7.5	7.2	27.0	40	8.3	5100
SEP 03-03	0120	0.26	2.3	0.20	107	218	8.4	7.7	25.0	78	8.7	130000

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
AUG 24-24	9300	33	11	22	62	119	64	12	0.82	3.4	17	0.3
SEP 03-03	180000	26	6	20	76	304	48	9.2	0.62	2.7	17	0.2

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)
AUG 24-24	1.9	12	3.3	0.020	0.610	0.160	0.90	0.240	0.190	<10.0	2	<10
SEP 03-03	2.2	5.7	2.0	0.030	0.500	0.180	0.70	0.140	0.130	<20.0	2	<10

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	THAL-LIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
AUG 24-24	<1	8	17	<0.010	68	<0.10	4	<1	<1	<5	280	18
SEP 03-03	<1	27	18	<0.010	120	--	9	<2	<1	<5	230	27

08055570 HEREFORD ROAD OUTFALL AT WALNUT HILL ROAD, IRVING, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACRO-LEIN TOTAL (UG/L)	ACRYLO-NITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
AUG 24-24	<1	2	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
SEP 03-03	<1	4	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMO CHLORO-PROPANE WATER WHOLE TOT.REC (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)
AUG 24-24	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
SEP 03-03	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2

DATE	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT, WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)
AUG 24-24	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SEP 03-03	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)
AUG 24-24	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
SEP 03-03	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2

08055570 HEREFORD ROAD OUTFALL AT WALNUT HILL ROAD, IRVING, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,2,3-TRI-CHLORO BENZENE WAT, WH REC (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	PSEUDO-CUMENE WATER UNFLTRD REC (UG/L)	MESIT-YLENE WATER UNFLTRD REC (UG/L)
AUG 24-24	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
SEP 03-03	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20

DATE	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)
AUG 24-24	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
SEP 03-03	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0

DATE	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6 -DIBENZ -ANTHRA -CENE TOTAL (UG/L)	3,3'-DI-CHLORO-BENZI-DINE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)
AUG 24-24	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
SEP 03-03	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0

DATE	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)
AUG 24-24	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
SEP 03-03	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	17.0

08055570 HEREFORD ROAD OUTFALL AT WALNUT HILL ROAD, IRVING, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)
AUG 24-24	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
SEP 03-03	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0

DATE	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L)
AUG 24-24	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
SEP 03-03	<5.0	<30.0	8.0	<5.0	15.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

DATE	CHLOR-DANE TRANS WATER WHOLE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN-I WATER WHOLE REC (UG/L)	ENDO-SULFAN BETA TOTAL (UG/L)	ENDO-SULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDE-HYDE TOTAL (UG/L)
AUG 24-24	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
SEP 03-03	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
AUG 24-24	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
SEP 03-03	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10

08055590 JOE'S CREEK OUTFALL AT DENTON DRIVE, DALLAS, TX

LOCATION.--Lat 32°53'17", long 96°40'26", Dallas County, Hydrologic Unit 12030105, on south side of Reward Lane near intersection of Denton Drive, 1.5 miles south of Interstate Highway 635, and 15.2 miles northeast of Dallas.

DRAINAGE AREA.--0.01 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: February 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
MAR 03-04	2037	0.83	4.9	0.19	58	87	7.7	8.1	21.0	63	3.5	9700
MAR 17-17	1600	0.30	7.5	0.05	106	124	8.0	7.7	14.5	100	7.5	3200
APR 17-17	1400	0.35	3.0	0.08	166	123	8.1	7.7	25.0	95	7.2	10000
JUN 06-06	0239	0.64	4.8	0.15	136	66	8.0	8.1	22.0	42	5.0	36000
JUN 20-20	0639	0.26	3.4	0.05	119	--	7.9	--	24.5	<10	13	27000
JUL 27-27	1721	0.47	2.6	0.10	96	132	7.8	7.5	27.0	80	8.4	1500
SEP 21-21	0140	0.53	3.3	0.12	64	127	8.0	7.4	24.5	58	6.5	K9700

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
MAR 03-04	37000	24	3	21	51	125	31	9.2	0.20	1.5	12	0.1
MAR 17-17	10000	39	3	36	62	172	70	15	0.39	3.0	14	0.2
APR 17-17	>18000	31	8	23	60	221	65	12	0.26	3.0	16	0.2
JUN 06-06	15000	18	0	18	34	98	27	7.0	0.12	1.0	10	0.1
JUN 20-20	2800	--	--	--	--	--	--	--	--	--	--	--
JUL 27-27	3000	39	3	36	65	90	92	15	0.32	3.3	15	0.2
SEP 21-21	8000	24	1	23	49	62	46	9.3	0.22	1.6	12	0.1

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)
MAR 03-04	0.90	3.2	1.0	0.050	0.320	0.080	0.70	0.170	0.060	<10.0	1	<10
MAR 17-17	1.4	6.8	2.0	0.110	0.600	0.310	0.90	0.330	0.200	<10.0	2	<10
APR 17-17	1.6	7.3	2.4	0.070	0.820	0.190	1.0	0.490	0.390	<20.0	2	<10
JUN 06-06	0.70	2.2	0.80	0.020	0.300	0.120	0.30	0.080	0.070	<20.0	<1	<10
JUN 20-20	--	--	--	0.070	0.790	0.310	1.4	0.310	0.190	<20.0	1	<10
JUL 27-27	1.8	7.4	3.7	0.070	0.840	0.290	1.3	0.450	0.360	<10.0	2	<10
SEP 21-21	1.7	4.0	1.5	0.030	0.350	0.110	1.0	0.300	0.230	<10.0	<1	<10

08055590 JOE'S CREEK OUTFALL AT DENTON DRIVE, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	THAL-LIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR 03-04	<1	8	11	<0.010	39	<0.10	6	<2	<1	<10	100	14
MAR 17-17	<1	8	10	<0.010	33	<0.10	9	<2	<1	<5	110	27
APR 17-17	1	12	14	<0.010	44	<0.10	10	<2	<1	<5	170	24
JUN 06-06	8	5	8	<0.010	20	<0.10	3	<2	<1	<5	70	10
JUN 20-20	<1	2	12	<0.010	15	<0.10	3	<2	<1	<10	70	29
JUL 27-27	2	3	16	<0.010	25	0.40	5	<1	<1	<5	140	27
SEP 21-21	<1	4	4	<0.010	<1	<0.10	2	<2	<1	<10	110	16

DATE	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACRO-LEIN TOTAL (UG/L)	ACRYLO-NITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
MAR 03-04	2	2	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
MAR 17-17	1	2	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
APR 17-17	<1	4	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
JUN 06-06	<1	4	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
JUN 20-20	<1	4	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
JUL 27-27	<1	9	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
SEP 21-21	<1	1	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMO CHLORO-PROPANE WATER WHOLE TOT.REC (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)
MAR 03-04	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
MAR 17-17	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
APR 17-17	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
JUN 06-06	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
JUN 20-20	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
JUL 27-27	<0.2	<0.2	<1.0	0.5	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
SEP 21-21	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2

DATE	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT, WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)
MAR 03-04	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MAR 17-17	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
APR 17-17	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
JUN 06-06	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
JUN 20-20	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
JUL 27-27	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SEP 21-21	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

08055590 JOE'S CREEK OUTFALL AT DENTON DRIVE, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)
MAR 03-04	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
MAR 17-17	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
APR 17-17	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
JUN 06-06	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.3	<5.0	<0.20	<0.2	<0.2
JUN 20-20	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
JUL 27-27	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
SEP 21-21	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2

DATE	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,2,3-TRI-CHLORO BENZENE WAT, WH REC (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	PSEUDO-CUMENE WATER UNFLTRD REC (UG/L)	MESIT-YLENE WATER UNFLTRD REC (UG/L)
MAR 03-04	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
MAR 17-17	<0.2	1.9	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
APR 17-17	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
JUN 06-06	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
JUN 20-20	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
JUL 27-27	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
SEP 21-21	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20

DATE	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)
MAR 03-04	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
MAR 17-17	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
APR 17-17	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUN 06-06	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUN 20-20	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUL 27-27	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
SEP 21-21	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0

DATE	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6 -DIBENZ -ANTHRA -CENE TOTAL (UG/L)	3,3'-DI-CHLORO-BENZI-DINE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)
MAR 03-04	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
MAR 17-17	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
APR 17-17	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
JUN 20-20	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
JUL 27-27	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0

08055590 JOE'S CREEK OUTFALL AT DENTON DRIVE, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)
MAR 03-04	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
MAR 17-17	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
APR 17-17	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	7.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
JUN 20-20	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
JUL 27-27	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0

DATE	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)
MAR 03-04	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
MAR 17-17	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
APR 17-17	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
JUN 20-20	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
JUL 27-27	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0

DATE	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L)
MAR 03-04	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
MAR 17-17	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
APR 17-17	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
JUN 06-06	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
JUN 20-20	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
JUL 27-27	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
SEP 21-21	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

DATE	CHLOR-DANE TRANS WATER WHOLE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN-I WATER WHOLE REC (UG/L)	ENDO-SULFAN BETA TOTAL (UG/L)	ENDO-SULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDE-HYDE TOTAL (UG/L)
MAR 03-04	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
MAR 17-17	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
APR 17-17	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
JUN 06-06	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
JUN 20-20	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
JUL 27-27	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
SEP 21-21	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20

08055590 JOE'S CREEK OUTFALL AT DENTON DRIVE, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)
MAR 03-04	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.03
MAR 17-17	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.20
APR 17-17	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
JUN 06-06	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
JUN 20-20	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
JUL 27-27	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
SEP 21-21	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10

08056100 TRIBUTARY TO ELM FORK TRINITY RIVER AT CASCADE STREET, IRVING, TX

LOCATION.--Lat 32°48'54", long 96°54'44", Dallas County, Hydrologic Unit 12030102, at southwest coner of Vanco and Cascade Streets, 0.2 miles east of Wildwood Drive, and 3.9 miles southeast of Irving.

DRAINAGE AREA.--0.09 mi².

PERIOD OF RECORD.-- Chemical and biochemical analyses: July 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
SEP 21-21	0128	0.78	3.8	0.51	50	153	8.1	7.8	24.0	32	4.2	K10000

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
SEP 21-21	2500	36	6	30	63	72	42	13	0.92	3.3	16	0.2

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)
SEP 21-21	1.0	11	3.0	0.060	0.410	0.100	0.50	0.260	0.170	<10.0	1	<10

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV ERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	THAL-LIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
SEP 21-21	<1	5	7	<0.010	15	<0.10	7	<2	<1	<10	140	9.6

08056100 TRIBUTARY TO ELM FORK TRINITY RIVER AT CASCADE STREET, IRVING, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACRO-LEIN TOTAL (UG/L)	ACRYLO-NITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
SEP 21-21	3	4	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMO CHLORO-PROPANE WATER WHOLE TOT.REC (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)
SEP 21-21	<0.2	<0.2	<1.0	0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2

DATE	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)
SEP 21-21	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)
SEP 21-21	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2

DATE	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,2,3-TRI-CHLORO BENZENE WAT, WH REC (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	PSEUDO-CUMENE WATER UNFLTRD REC (UG/L)	MESIT-YLENE WATER UNFLTRD REC (UG/L)
SEP 21-21	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20

DATE	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12-BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)
SEP 21-21	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0

DATE	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6-DIBENZ-ANTHRA-CENE TOTAL (UG/L)	3,3'-DI-CHLORO-BENZI-DINE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0

DATE	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0

08056100 TRIBUTARY TO ELM FORK TRINITY RIVER AT CASCADE STREET, IRVING, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	FLUORENE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	2-NITROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0

DATE	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXACHLORIDE TOTAL (UG/L)	DELTA BENZENE HEXACHLORIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE CIS WATER WHOLE TOTAL (UG/L)
SEP 21-21	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

DATE	CHLORDANE TRANS WATER WHOLE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN-I WATER WHOLE REC (UG/L)	ENDOSULFAN BETA TOTAL (UG/L)	ENDOSULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDEHYDE TOTAL (UG/L)
SEP 21-21	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)
SEP 21-21	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10

08056390 BASTILLE STREET OUTFALL AT LA REUNION PARKWAY, DALLAS, TX

LOCATION.--Lat 32°46'12", long 96°53'25", Dallas County, Hydrologic Unit 12030105, on right bank at downstream side of bridge on Bastille Street at La Reunion Parkway, 0.25 miles north of Interstate Highway 30, and about 5.0 miles east of Dallas.

DRAINAGE AREA.--0.08 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: February 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
MAR 03-04	2031	0.58	5.0	0.70	131	221	8.6	7.9	15.5	65	8.6	1200
MAR 09-09	0145	0.56	1.9	0.64	234	136	9.0	8.2	17.0	30	3.9	2500
APR 19-19	1212	0.25	7.3	0.27	124	--	8.3	--	18.5	--	8.4	2400
MAY 14-14	1235	0.49	1.9	0.56	402	146	8.0	8.2	23.5	56	6.3	19000
JUN 01-01	2000	0.90	4.0	1.1	232	120	8.0	7.9	22.5	43	3.6	22000
JUN 06-06	0250	0.49	4.7	0.63	270	119	8.4	7.6	30.0	25	4.8	13000
JUL 27-27	1437	1.2	1.4	1.2	91	144	8.3	7.6	25.0	33	6.8	8000

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
MAR 03-04	7800	48	13	35	100	191	84	18	0.68	7.1	23	0.4
MAR 09-09	17000	37	11	26	64	48	63	14	0.44	4.2	19	0.3
APR 19-19	--	--	--	34	--	--	--	--	--	--	--	--
MAY 14-14	20000	34	--	E28	61	68	94	13	0.35	2.4	13	0.2
JUN 01-01	32000	39	10	29	68	189	69	15	0.49	3.2	14	0.2
JUN 06-06	8900	37	8	29	59	36	58	14	0.42	3.7	17	0.3
JUL 27-27	1600	38	15	23	74	177	72	14	0.73	4.0	18	0.3

08056390 BASTILLE STREET OUTFALL AT LA REUNION PARKWAY, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)
MAR 03-04	3.2	23	3.5	0.120	0.730	0.120	0.50	0.110	0.040	<10.0	2	<10
MAR 09-09	1.6	16	2.2	0.060	0.480	0.110	0.70	0.110	0.030	<20.0	1	<10
APR 19-19	--	--	--	0.110	1.40	0.140	1.1	0.130	0.040	<20.0	--	<10
MAY 14-14	1.7	9.8	2.2	0.050	0.700	0.210	0.40	0.060	0.060	<10.0	2	<10
JUN 01-01	1.7	15	2.2	0.070	0.660	0.150	0.60	0.130	0.040	<10.0	1	<10
JUN 06-06	1.7	13	2.6	0.060	0.680	0.140	0.50	0.060	0.050	<20.0	1	<10
JUL 27-27	1.3	20	4.0	0.030	0.490	0.180	0.50	0.050	0.050	<10.0	1	<10

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	THALLIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR 03-04	<1	9	16	<0.010	28	<0.10	8	<2	<1	<50	110	15
MAR 09-09	<1	4	10	<0.010	14	<0.10	4	<2	<1	<50	50	7.6
APR 19-19	<1	--	--	<0.010	--	<0.10	--	<2	<1	<5	--	24
MAY 14-14	<1	3	23	<0.010	23	<0.10	5	<2	<1	<5	120	13
JUN 01-01	<1	20	21	--	44	<0.10	35	<2	<1	<5	90	9.2
JUN 06-06	<1	2	13	<0.010	12	0.20	2	<2	<1	<5	50	8.0
JUL 27-27	<1	8	30	<0.010	47	<0.10	5	<1	<1	<5	130	11

DATE	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACROLEIN TOTAL (UG/L)	ACRYLONITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMOBENZENE WATER, WHOLE, TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L)	CARBON-TETRACHLORIDE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)
MAR 03-04	<1	2	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
MAR 09-09	<1	3	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
APR 19-19	<1	3	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
MAY 14-14	<1	7	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
JUN 01-01	<1	4	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
JUN 06-06	<1	4	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
JUL 27-27	<1	6	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20

DATE	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	METHYLCHLORIDE TOTAL (UG/L)	O-CHLOROTOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMOCHLOROPROPANE WATER WHOLE TOT.REC (UG/L)	DIBROMOMETHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMOETHANE WATER WHOLE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)
MAR 03-04	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
MAR 09-09	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
APR 19-19	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
MAY 14-14	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
JUN 01-01	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
JUN 06-06	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
JUL 27-27	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2

08056390 BASTILLE STREET OUTFALL AT LA REUNION PARKWAY, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)
MAR 03-04	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MAR 09-09	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
APR 19-19	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MAY 14-14	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
JUN 01-01	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
JUN 06-06	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
JUL 27-27	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)
MAR 03-04	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
MAR 09-09	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
APR 19-19	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
MAY 14-14	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
JUN 01-01	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
JUN 06-06	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.4	<5.0	<0.20	<0.2	<0.2
JUL 27-27	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2

DATE	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,2,3-TRI-CHLORO BENZENE WAT, WH REC (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	PSEUDO-CUMENE WATER UNFLTRD REC (UG/L)	MESIT-YLENE WATER UNFLTRD REC (UG/L)
MAR 03-04	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
MAR 09-09	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
APR 19-19	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
MAY 14-14	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
JUN 01-01	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
JUN 06-06	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
JUL 27-27	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20

DATE	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)
MAR 03-04	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
MAR 09-09	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
APR 19-19	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
MAY 14-14	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUN 01-01	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUN 06-06	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUL 27-27	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0

08056390 BASTILLE STREET OUTFALL AT LA REUNION PARKWAY, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	1,2,5,6-DIBENZANTHRACENE TOTAL (UG/L)	3,3'-DICHLOROBENZIDINE TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)
MAR 03-04	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
MAR 09-09	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
APR 19-19	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
MAY 14-14	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
JUN 01-01	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
JUL 27-27	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0

DATE	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)
MAR 03-04	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
MAR 09-09	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
APR 19-19	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
MAY 14-14	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
JUN 01-01	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	14.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
JUL 27-27	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	18.0

DATE	FLUORENE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	2-NITROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)
MAR 03-04	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
MAR 09-09	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
APR 19-19	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
MAY 14-14	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
JUN 01-01	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
JUL 27-27	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0

DATE	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXACHLORIDE TOTAL (UG/L)	DELTA BENZENE HEXACHLORIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE CIS WATER WHOLE TOTAL (UG/L)
MAR 03-04	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
MAR 09-09	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
APR 19-19	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
MAY 14-14	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
JUN 01-01	<5.0	<30.0	6.0	<5.0	12.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
JUN 06-06	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
JUL 27-27	<5.0	<30.0	11.0	<5.0	14.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

08056390 BASTILLE STREET OUTFALL AT LA REUNION PARKWAY, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CHLOR-DANE TRANS WATER WHOLE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN-I WATER WHOLE REC (UG/L)	ENDO-SULFAN BETA TOTAL (UG/L)	ENDO-SULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDE-HYDE TOTAL (UG/L)
MAR 03-04	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
MAR 09-09	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
APR 19-19	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
MAY 14-14	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
JUN 01-01	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
JUN 06-06	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
JUL 27-27	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
MAR 03-04	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.05
MAR 09-09	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
APR 19-19	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.10
MAY 14-14	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
JUN 01-01	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
JUN 06-06	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.10
JUL 27-27	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10

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.--October 1898 to December 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.

REVISED RECORDS.--WSP 850: 1903-6 (monthly and annual means). WSP 1732: 1937(M). WSP 1922: Drainage area. WDR TX-73-1: 1972.

GAGE.--Water-stage recorder. Datum of gage is 368.02 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1898, to Dec. 31, 1899, nonrecording gage at site 2 mi upstream at different datum. July 1, 1903, to July 20, 1930, non-recording gage at present site and datum. July 21, 1930, to Sept. 30, 1932, nonrecording gage at site 6 mi downstream at datum 3.08 ft lower.

REMARKS.--No estimated daily discharges. Records good. At times, flow is affected by storage in seven major upstream reservoirs, with a combined capacity of 1,703,000 acre-ft of which 846,200 acre-ft is for flood control. The city of Dallas diverts water for municipal use from the Elm Fork, Lake Ray Hubbard (on the East Fork), and from Lake Tawakoni (on the Sabine River), and purchases water from North Texas Municipal Water District (from the East Fork). Sewage effluent is returned to the river downstream from this station. The Trinity River Authority discharges sewage effluent into the river upstream from this station. For additional information on diversions and effluent returns for this station, see stations 08048000, 08049200, and 08049500. Several observations of water temperature were made during the year. Gage-height telemeters at station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--31 years (water years 1903-33) prior to regulation by upstream reservoirs, 1,330 ft³/s (963,500 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1903-33).--Maximum discharge, 184,000 ft³/s May 25, 1908 (gage height, 52.6 ft), from rating curve extended above 109,000 ft³/s; minimum observed for periods 1903-6, 1920-75, 1.2 ft³/s July 4, 1953, result of storage behind temporary dam 4 mi upstream.
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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	428	17200	1490	13400	12200	11200	5730	888	6820	8440	3350	646
2	415	12500	3410	14000	12400	10900	5660	790	10700	5750	1560	597
3	426	9590	4360	13400	12400	10600	5560	767	8170	5450	1870	2150
4	434	8750	1830	13000	12900	12200	5140	845	6070	3650	744	692
5	409	9720	1440	12900	13200	13300	4440	877	6350	3760	603	501
6	378	11000	1480	13100	12600	12400	4440	721	7100	2850	565	455
7	380	11300	2190	13500	11900	10300	4410	685	6460	1440	528	439
8	371	10800	2080	13400	11200	10000	3660	630	5960	1270	518	433
9	367	10800	7680	13200	10300	12300	2260	599	6580	1050	528	426
10	377	11100	6160	13000	10400	13300	3010	594	7500	912	515	607
11	369	10900	6290	12900	11100	10300	2470	602	8190	829	512	4840
12	364	11100	9710	13000	11100	8130	1410	598	7420	681	577	1670
13	366	11000	9410	13000	10700	8380	1420	592	6850	605	933	624
14	368	10500	7620	13000	10200	8510	1530	1830	6650	556	718	508
15	361	9230	7550	12800	9640	8350	1490	4570	5910	551	600	452
16	358	8350	7180	12700	8500	7680	1660	1610	4980	527	556	457
17	358	8960	6610	12800	8040	7420	2590	4700	4660	549	510	446
18	360	9320	6710	13900	7480	7860	3250	11000	4500	558	463	424
19	366	9140	9220	15000	6730	7400	2130	9890	3920	730	1250	437
20	388	9480	20600	13300	6330	7170	2190	6010	3450	647	1390	540
21	369	7130	54300	12700	6240	6880	1690	2810	2960	557	737	1870
22	382	6270	47600	13300	6380	6920	1360	3850	3260	599	560	1560
23	409	5670	32200	13300	6900	6910	977	3830	2000	580	499	574
24	451	5220	25600	12700	7510	6180	866	3690	3320	502	492	442
25	465	4850	21800	12200	14400	6610	767	4280	2000	457	586	461
26	2410	3910	19400	11600	18200	6580	681	5710	5120	455	558	420
27	16800	3120	17700	16400	12000	6180	645	5000	3740	483	486	457
28	25300	2090	16100	19200	9730	5930	626	5880	7540	2150	467	425
29	33600	1680	14600	13900	11200	5990	3490	8500	15600	2020	436	445
30	30200	1450	13400	11500	---	5850	2230	7750	17200	795	432	423
31	21900	---	13000	11600	---	5850	---	7260	---	3090	432	---
TOTAL	139929	252130	398720	413700	301880	267580	77782	107358	190980	52493	23975	24421
MEAN	4514	8404	12860	13350	10410	8632	2593	3463	6366	1693	773	814
MAX	33600	17200	54300	19200	18200	13300	5730	11000	17200	8440	3350	4840
MIN	358	1450	1440	11500	6240	5850	626	592	2000	455	432	420
AC-FT	277500	500100	790900	820600	598800	530700	154300	212900	378800	104100	47550	48440

08057000 TRINITY RIVER AT DALLAS, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1992#, BY WATER YEAR (WY)

MEAN	1121	1256	1323	1165	1759	1883	2457	3954	3214	1215	723	794
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

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1934 - 1992#	
ANNUAL TOTAL	1119840		2250948			
ANNUAL MEAN	3068		6150		1736	
HIGHEST ANNUAL MEAN					7154	1982
LOWEST ANNUAL MEAN					115	1956
HIGHEST DAILY MEAN	54300	Dec 21	54300	Dec 21	103000	Apr 26 1942
LOWEST DAILY MEAN	325	Jul 14	358	Oct 16	10	Oct 1 1953
ANNUAL SEVEN-DAY MINIMUM	337	Jul 19	362	Oct 12	26	Apr 12 1935
INSTANTANEOUS PEAK FLOW			62200	Dec 21	111000	Apr 26 1942
INSTANTANEOUS PEAK STAGE			44.44	Dec 21	47.10	May 3 1990
INSTANTANEOUS LOW FLOW			340	Oct 13	1.2	Jul 4 1953
ANNUAL RUNOFF (AC-FT)	2221000		4465000		1258000	
10 PERCENT EXCEEDS	9210		13200		5020	
50 PERCENT EXCEEDS	720		4610		368	
90 PERCENT EXCEEDS	369		446		102	

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 Blvd. bridge, 1.8 mi southeast of Dallas City Hall, 2.1 mi downstream from Coombs Creek, and 2.7 mi downstream from Commerce Street Bridge (station 08057000).

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

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1984 to current year.
pH: February 1984 to current year.
WATER TEMPERATURES: February 1984 to current year.
DISSOLVED OXYGEN: February 1984 to current year.

INSTRUMENTATION.--Since February 1984, a four-parameter water-quality monitor records temperature, DO, pH, and specific conductance continuously at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request. Records of discharge are given for gaging station 08057000. No appreciable inflow between the two stations.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,030 microsiemens Feb. 12, 1988; minimum, 93 microsiemens Oct. 20, 1984.
pH: Maximum, 8.6 units Oct. 20, 1984; minimum, 6.8 units Sept. 6, 1988.
WATER TEMPERATURE: Maximum, 33.5°C Aug. 12, 1987; minimum, 5.0°C Feb. 7, 8, 1989.
DISSOLVED OXYGEN: Maximum, 13.7 mg/L Feb. 8, 1989; minimum, 0.0 mg/L July 21, 1985.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 886 microsiemens July 19; minimum, 110 microsiemens Sept. 3.
pH: Maximum, 8.4 units Mar. 31, Apr. 1; minimum, 7.2 units Sept. 30.
WATER TEMPERATURE: Maximum, 32.0°C July 25, 26; minimum, 6.5°C Jan. 19.
DISSOLVED OXYGEN: Maximum, 11.7 mg/L Jan. 24, 25; minimum, 2.2 mg/L July 28.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
NOV										
06...	1220	11000	354	8.1	12.0	10.7	100	2.2	130	20
JAN										
21...	1350	12700	370	8.0	8.0	11.4	98	0.9	140	20
APR										
27...	1355	645	832	8.2	22.5	9.0	105	1.2	210	45
JUN										
11...	1230	8190	431	8.0	26.0	7.4	94	1.4	150	33
JUL										
22...	1259	599	843	7.9	30.0	7.6	103	1.6	210	72
SEP										
08...	0910	433	812	7.5	27.5	7.0	90	1.9	190	48

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV										
06...	43	4.8	21	0.8	5.8	110	40	23	0.30	6.5
JAN										
21...	47	4.5	19	0.7	4.5	120	38	19	0.30	7.6
APR										
27...	72	8.2	75	2	9.0	170	96	81	0.80	8.8
JUN										
11...	52	5.8	25	0.9	5.0	120	52	30	0.20	4.4
JUL										
22...	70	8.8	82	2	9.2	140	95	80	0.90	8.5
SEP										
08...	64	7.7	88	3	9.7	140	79	89	0.80	10

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
NOV									
06...	209	0.700	0.010	0.710	0.190	0.71	0.90	0.160	0.110
JAN									
21...	209	0.820	0.020	0.840	0.060	0.44	0.50	0.160	0.130
APR									
27...	452	8.69	0.110	8.80	0.170	1.0	1.2	2.30	2.10
JUN									
11...	247	0.560	0.040	0.600	0.060	0.64	0.70	0.220	0.160
JUL									
22...	438	9.36	0.040	9.40	0.070	1.0	1.1	2.60	2.20
SEP									
08...	435	9.17	0.030	9.20	0.040	1.1	1.1	2.60	2.30

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	139929	316	185	70100	19	7240	41	15400	110
NOV.	1991	252130	376	220	150000	23	15700	48	32900	130
DEC.	1991	398720	330	194	209000	19	20800	43	45800	120
JAN.	1992	413700	366	215	240000	22	24500	47	52600	130
FEB.	1992	301880	384	225	183000	24	19300	49	40200	130
MAR.	1992	267580	411	240	173000	26	19100	53	38000	140
APR.	1992	77782	493	284	59700	36	7520	62	13100	150
MAY	1992	107358	475	274	79400	34	9900	60	17400	150
JUNE	1992	190980	446	259	133000	30	15700	57	29200	140
JULY	1992	52493	530	303	42900	41	5850	66	9380	150
AUG.	1992	23975	621	351	22700	53	3450	77	4960	160
SEPT	1992	24421	562	320	21100	45	2990	70	4600	160
TOTAL		2250948	**	**	1385000	**	152000	**	303000	**
WTD.AVG.		6150	390	228	**	25	**	50	**	130

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	e690	337	318	323	575	546	559	351	335	341
2	---	---	e680	386	341	362	566	438	490	344	338	341
3	---	---	e700	393	377	386	487	437	453	363	336	350
4	---	---	e730	379	365	375	576	493	534	361	355	359
5	---	---	e700	360	343	354	603	579	590	359	355	358
6	---	---	e700	362	343	354	608	584	601	361	357	359
7	---	---	e720	360	357	359	624	534	565	366	356	360
8	---	---	e720	369	358	363	586	354	563	368	363	365
9	859	818	840	367	361	365	446	341	401	366	361	364
10	855	829	843	371	362	368	450	391	419	364	362	363
11	845	830	840	368	364	366	443	413	426	363	360	361
12	861	828	842	371	363	368	427	412	421	366	361	363
13	859	837	847	373	368	371	418	412	414	368	361	364
14	849	829	837	372	365	368	419	407	410	373	367	370
15	841	805	822	372	368	370	415	407	412	369	364	367
16	841	805	819	386	365	369	416	407	410	365	362	364
17	808	782	794	394	374	383	408	394	401	370	362	364
18	845	810	826	386	376	383	397	385	392	387	370	380
19	844	804	837	381	364	374	425	367	394	383	379	380
20	795	765	776	401	381	395	362	237	314	379	370	373
21	816	770	780	399	394	397	263	205	236	373	369	371
22	833	777	819	404	400	402	265	205	233	384	374	378
23	774	723	747	408	399	402	305	266	286	374	370	372
24	761	694	713	412	407	409	328	305	318	375	370	372
25	719	707	713	423	412	416	339	328	334	371	364	368
26	729	400	579	462	424	441	349	340	343	366	360	362
27	407	231	280	474	461	466	347	343	345	373	347	362
28	277	238	253	531	477	515	346	340	343	365	343	353
29	276	261	267	529	507	519	366	344	354	402	366	378
30	297	259	278	557	529	541	353	343	349	415	389	402
31	322	295	315	---	---	---	344	336	340	398	377	385
MONTH	861	231	687	557	318	395	624	205	408	415	335	366

e Estimated

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	378	372	374	417	409	412	422	417	420	641	574	614
2	373	370	371	415	399	405	423	417	420	730	641	681
3	373	369	371	406	399	403	422	414	419	788	738	776
4	387	372	380	428	400	410	425	417	422	790	601	752
5	386	378	381	411	390	402	431	422	427	731	603	673
6	377	374	375	418	387	402	464	423	443	788	731	750
7	377	374	375	422	416	420	473	425	452	814	787	799
8	375	370	373	415	408	412	483	425	447	811	800	808
9	370	365	368	421	388	405	548	490	520	838	808	820
10	377	365	369	408	383	393	497	442	466	862	827	849
11	377	370	373	427	410	419	607	444	521	859	829	843
12	380	366	375	428	421	425	628	591	615	875	839	857
13	408	376	386	422	417	419	641	593	619	863	843	854
14	391	375	382	419	414	417	610	561	593	878	489	742
15	398	390	393	418	410	414	597	562	583	516	368	445
16	392	387	389	411	406	409	575	526	556	586	508	543
17	393	385	389	426	401	408	555	520	531	544	349	466
18	391	387	389	431	404	417	546	474	518	396	312	358
19	394	386	391	433	410	425	523	487	504	429	339	377
20	395	383	389	411	407	409	559	477	529	413	348	377
21	391	383	387	411	404	408	552	533	538	537	422	484
22	415	386	397	426	405	409	622	554	584	519	492	509
23	456	412	430	405	391	401	692	627	667	515	493	504
24	416	376	398	406	393	399	717	686	701	513	492	504
25	417	350	380	439	401	423	744	714	728	523	462	504
26	386	346	360	428	406	413	801	741	777	495	450	475
27	439	392	420	425	413	419	852	803	826	504	477	486
28	436	415	425	429	420	424	841	791	832	508	424	475
29	422	413	415	434	421	428	623	396	515	445	386	412
30	---	---	---	426	416	420	567	452	486	460	440	455
31	---	---	---	424	419	421	---	---	---	459	454	457
MONTH	456	346	386	439	383	413	852	396	555	878	312	602

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	466	446	461	---	---	e380	426	327	372	839	579	739
2	449	394	423	499	441	470	514	404	475	775	618	695
3	490	408	445	449	440	444	495	423	451	778	110	399
4	509	486	497	520	450	481	643	496	592	641	479	577
5	503	452	480	460	453	456	718	641	687	783	646	740
6	512	448	466	572	458	482	755	700	733	780	768	773
7	472	452	461	591	574	584	811	757	790	789	737	757
8	476	465	473	624	591	611	834	797	817	840	780	809
9	477	459	468	665	613	642	814	784	800	842	793	813
10	507	444	460	689	653	675	799	756	777	803	561	730
11	457	443	448	727	674	710	810	795	800	681	294	425
12	461	448	456	760	712	740	806	682	783	436	364	401
13	486	473	480	774	729	746	673	546	614	559	444	518
14	490	478	480	789	774	781	686	632	663	634	555	601
15	586	485	528	810	747	792	688	668	680	701	637	675
16	568	533	543	857	757	815	715	673	695	739	683	712
17	559	528	543	842	791	819	759	707	728	767	724	742
18	538	531	533	823	782	798	800	762	785	777	749	763
19	547	533	542	886	708	798	784	494	635	823	764	783
20	588	526	554	779	589	741	658	494	562	822	712	761
21	610	569	588	824	634	758	572	500	544	711	356	507
22	575	497	540	830	622	787	675	577	626	472	345	393
23	592	502	559	809	745	776	753	679	724	560	440	509
24	584	430	506	806	790	799	782	736	760	632	563	596
25	553	381	477	842	797	817	781	683	755	691	627	665
26	475	366	406	848	832	841	724	655	685	763	679	731
27	467	299	416	845	804	833	784	709	750	746	668	693
28	442	244	353	804	400	655	823	684	762	742	684	717
29	---	---	e320	462	375	419	835	818	826	737	713	726
30	---	---	e310	555	454	517	851	834	844	744	701	716
31	---	---	---	556	338	440	848	840	843	---	---	---
MONTH	610	244	474	886	338	665	851	327	695	842	110	656
YEAR	886	110	526									

e Estimated

0805/055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

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

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	13.5	11.5	12.0	14.5	13.0	13.5	10.0	10.0	10.0
2	---	---	---	12.5	11.5	12.0	13.0	9.5	11.0	10.5	10.0	10.0
3	---	---	---	12.5	12.0	12.0	10.0	9.0	9.5	10.5	9.5	10.0
4	---	---	---	12.5	11.5	12.0	11.0	10.0	10.5	10.5	10.0	10.0
5	---	---	---	12.0	11.0	11.5	12.0	10.5	11.5	11.0	10.5	10.5
6	---	---	---	12.0	11.5	11.5	12.5	11.5	12.0	11.0	10.5	11.0
7	---	---	---	12.0	11.0	11.5	13.5	12.5	13.0	11.0	10.5	11.0
8	---	---	---	11.5	10.0	11.5	17.0	13.5	15.0	11.0	10.5	11.0
9	25.0	22.0	23.5	---	---	---	16.5	15.0	15.5	10.5	10.0	10.5
10	26.0	23.0	24.0	---	---	---	15.0	14.0	15.0	10.5	9.5	10.0
11	26.5	23.5	25.0	---	---	---	14.5	13.5	14.0	10.0	9.5	10.0
12	26.5	24.0	25.5	---	---	---	15.0	14.0	14.5	10.0	9.5	10.0
13	26.5	24.0	25.5	---	---	---	14.5	14.0	14.5	10.0	9.5	10.0
14	25.5	24.0	25.0	---	---	---	14.0	13.0	13.5	9.5	9.0	9.0
15	25.5	23.0	24.0	---	---	---	13.0	12.5	12.5	9.0	8.0	8.5
16	23.5	21.0	22.5	13.5	11.5	12.5	12.5	12.0	12.0	8.0	7.5	7.5
17	23.0	21.0	21.5	---	---	---	12.5	11.5	12.0	7.5	7.5	7.5
18	23.5	21.0	22.0	---	---	---	12.5	12.0	12.0	7.5	7.0	7.5
19	22.0	20.5	21.5	14.5	14.0	14.0	12.0	10.5	11.0	7.5	6.5	7.0
20	22.0	20.0	21.0	14.0	13.5	14.0	10.5	10.0	10.5	8.0	7.0	7.5
21	22.0	20.0	21.0	---	---	---	10.5	9.5	10.0	8.0	7.5	8.0
22	22.5	20.0	21.0	13.0	12.5	13.0	10.0	9.5	10.0	9.0	8.0	8.5
23	22.5	21.0	21.5	13.0	12.0	12.5	10.0	9.5	10.0	9.0	8.0	8.5
24	22.5	21.5	22.0	11.5	11.5	11.5	10.0	9.5	10.0	8.5	8.0	8.5
25	22.5	22.0	22.0	11.5	11.0	11.5	9.5	9.5	9.5	9.0	8.0	8.5
26	22.0	19.0	20.5	11.5	11.0	11.5	9.5	9.5	9.5	9.0	8.5	8.5
27	19.0	17.5	17.5	12.5	12.0	12.0	9.5	9.5	9.5	9.0	8.5	9.0
28	17.5	17.0	17.5	15.5	13.0	14.5	9.5	9.0	9.5	9.0	9.0	9.0
29	18.0	17.0	17.5	16.0	15.5	15.5	9.5	9.0	9.5	9.5	9.0	9.5
30	16.5	15.5	16.0	16.0	14.0	15.5	10.0	9.0	9.5	10.5	9.5	10.0
31	15.5	13.5	15.0	---	---	---	10.0	9.5	10.0	10.5	9.5	10.0
MONTH	26.5	13.5	21.5	16.0	10.0	12.5	17.0	9.0	11.5	11.0	6.5	9.0

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.0	21.0	21.5	28.5	26.5	27.5	---	---	---	27.5	26.0	27.0
2	22.5	21.5	22.0	29.5	28.0	28.5	---	---	---	28.5	26.0	27.0
3	23.5	22.0	23.0	29.0	28.0	28.5	---	---	---	28.0	23.5	25.5
4	24.5	23.0	23.5	29.0	27.5	28.0	---	---	---	27.5	26.5	27.0
5	25.0	23.5	24.0	29.0	28.0	28.5	---	---	---	28.5	27.0	27.5
6	25.0	24.0	24.5	29.0	27.5	28.5	---	---	---	28.0	27.0	27.5
7	25.0	24.0	24.5	29.0	27.0	28.0	---	---	---	29.5	27.0	28.0
8	25.0	24.0	24.5	29.5	27.5	28.5	---	---	---	30.0	27.5	29.0
9	25.5	24.0	24.5	29.5	27.5	28.5	---	---	---	30.0	28.0	28.5
10	25.5	24.0	25.0	30.0	28.0	29.0	---	---	---	29.0	25.0	27.5
11	26.0	25.0	25.5	30.0	28.0	29.0	31.5	30.0	30.5	27.0	23.5	25.0
12	26.0	25.0	25.5	30.0	28.0	29.0	30.0	28.5	29.5	25.0	24.0	24.5
13	26.5	25.5	26.0	30.0	28.0	29.0	29.0	27.5	28.5	27.0	25.0	25.5
14	27.0	26.0	26.5	30.5	28.0	29.0	29.0	27.5	28.5	27.5	26.0	26.5
15	28.0	26.0	27.0	30.5	28.5	29.5	28.5	27.0	28.0	28.0	26.0	27.0
16	28.5	27.0	28.0	30.0	29.0	29.5	28.5	27.0	27.5	28.0	26.0	27.0
17	29.0	27.5	28.0	29.0	28.0	28.5	28.5	26.5	27.5	28.0	26.5	27.0
18	29.0	27.5	28.5	28.0	27.5	28.0	27.5	26.5	27.0	29.0	26.5	27.5
19	29.5	28.0	28.5	28.5	27.0	28.0	26.5	24.0	25.0	29.0	27.0	28.0
20	29.0	27.0	28.5	28.5	28.0	28.0	25.5	23.0	25.0	28.5	27.0	28.0
21	29.0	27.5	28.0	29.5	28.0	28.5	---	---	---	27.5	24.5	26.5
22	27.5	26.0	27.0	30.0	28.0	29.0	---	---	---	26.5	25.0	26.0
23	28.5	25.5	27.0	30.5	28.5	29.5	---	---	---	26.0	24.5	25.5
24	28.5	27.0	28.0	31.5	29.0	30.0	27.5	26.0	27.0	25.5	24.0	24.5
25	28.5	26.0	27.5	32.0	29.5	30.5	29.5	24.5	27.5	25.5	23.5	24.5
26	28.0	22.5	26.0	32.0	29.5	31.0	29.5	27.5	28.5	26.5	24.5	25.0
27	28.0	26.0	27.0	31.5	30.0	30.5	28.0	27.0	27.5	26.0	24.5	25.0
28	---	---	---	30.0	27.5	29.0	28.0	25.5	27.0	26.0	24.0	25.0
29	---	---	---	---	---	---	28.0	26.0	27.0	25.5	23.5	24.5
30	---	---	---	---	---	---	28.0	26.0	27.0	24.5	23.0	24.0
31	---	---	---	---	---	---	28.5	26.5	27.5	---	---	---
MONTH	29.5	21.0	26.0	32.0	26.5	29.0	31.5	23.0	27.5	30.0	23.0	26.5
YEAR	32.0	6.5	19.0									

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	8.6	7.8	8.4	9.3	8.6	9.1	10.6	10.4	10.5
2	---	---	---	9.2	8.6	8.8	10.5	9.2	9.9	10.4	10.3	10.3
3	---	---	---	9.8	9.2	9.6	10.4	10.1	10.2	11.1	10.2	10.5
4	---	---	---	10.1	9.8	10.0	10.1	9.9	10.0	10.5	10.2	10.4
5	---	---	---	10.2	10.0	10.2	9.9	9.6	9.8	10.5	10.3	10.4
6	---	---	---	10.7	10.0	10.4	9.6	9.5	9.6	10.3	10.2	10.3
7	---	---	---	10.8	10.2	10.4	9.7	9.3	9.5	10.3	10.1	10.2
8	---	---	---	10.6	10.3	10.4	9.4	8.7	9.1	10.4	10.1	10.2
9	7.8	7.2	7.5	10.6	10.5	10.6	8.9	8.2	8.6	10.5	10.2	10.3
10	7.7	7.2	7.5	10.5	10.3	10.4	9.2	8.0	8.5	10.6	10.4	10.5
11	7.9	7.3	7.5	10.4	10.3	10.4	9.5	9.2	9.3	10.7	10.6	10.7
12	7.9	7.2	7.5	10.4	10.3	10.3	9.2	8.8	9.0	10.7	10.6	10.6
13	7.9	7.2	7.5	10.3	10.2	10.3	---	---	---	10.6	10.3	10.5
14	7.8	7.0	7.5	10.2	10.0	10.1	---	---	---	10.9	10.5	10.7
15	8.0	7.2	7.6	10.0	9.8	9.9	---	---	---	11.4	10.8	10.9
16	7.9	7.0	7.4	10.0	9.6	9.9	---	---	---	11.5	11.0	11.2
17	7.9	7.2	7.5	9.8	9.4	9.6	---	---	---	11.4	11.3	11.3
18	7.6	7.1	7.3	10.0	9.5	9.7	10.2	10.0	10.1	11.3	11.1	11.2
19	7.8	6.9	7.3	10.0	9.1	9.6	10.1	9.6	9.9	11.5	11.2	11.3
20	7.7	7.1	7.5	9.4	8.9	9.2	9.7	9.5	9.5	11.6	11.2	11.5
21	8.0	7.3	7.6	10.0	9.5	9.8	9.5	8.8	9.1	11.5	11.1	11.4
22	7.8	7.1	7.5	10.2	9.9	10.1	9.0	8.9	9.0	11.4	10.8	11.1
23	7.5	7.1	7.4	10.5	10.2	10.3	9.3	8.9	9.1	11.4	11.0	11.2
24	7.4	7.1	7.3	10.6	10.4	10.5	9.5	9.3	9.4	11.7	11.2	11.4
25	7.2	7.1	7.2	10.7	10.5	10.6	9.8	9.5	9.7	11.7	11.3	11.5
26	7.4	5.7	6.9	10.6	10.3	10.4	10.0	9.7	9.9	11.5	11.1	11.3
27	6.0	5.1	5.7	10.3	10.1	10.2	10.0	10.0	10.0	11.1	10.3	10.6
28	5.8	5.2	5.5	10.1	9.4	9.6	10.0	9.9	9.9	10.4	10.3	10.3
29	6.5	5.8	6.2	9.4	9.1	9.3	10.2	9.9	10.0	10.7	10.4	10.5
30	6.8	6.2	6.4	9.1	8.7	9.0	10.4	10.2	10.3	11.0	10.5	10.7
31	7.7	6.6	7.0	---	---	---	10.6	10.4	10.5	11.1	10.7	10.9
MONTH	8.0	5.1	7.1	10.8	7.8	9.9	10.6	8.0	9.6	11.7	10.1	10.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.4	10.8	10.9	10.5	10.2	10.3	10.0	9.8	9.9	7.4	6.9	7.1
2	11.1	10.7	10.8	11.0	10.2	10.4	10.0	9.9	9.9	7.5	7.4	7.4
3	10.9	10.7	10.8	10.4	10.0	10.3	10.1	9.9	10.0	8.1	7.5	7.7
4	10.8	10.6	10.7	10.1	9.5	9.8	10.0	9.8	9.9	8.7	7.8	8.2
5	10.9	10.6	10.7	9.6	9.1	9.4	9.8	9.7	9.7	9.1	8.2	8.6
6	11.2	10.8	11.0	9.9	9.3	9.6	9.7	9.5	9.5	10.3	9.0	9.4
7	11.3	10.9	11.1	10.0	9.6	9.8	9.5	9.1	9.4	10.2	8.9	9.8
8	11.4	10.9	11.1	9.9	9.7	9.8	---	---	---	9.6	8.6	9.3
9	11.5	11.1	11.2	9.7	8.9	9.3	---	---	---	10.0	8.1	9.0
10	11.3	11.1	11.2	9.7	9.0	9.4	---	---	---	8.9	8.1	8.5
11	11.5	10.9	11.3	10.2	9.7	9.9	---	---	---	8.4	7.2	7.9
12	11.4	11.1	11.2	10.5	10.1	10.3	---	---	---	8.2	7.1	7.6
13	11.0	10.7	10.9	10.7	10.4	10.5	---	---	---	8.1	7.0	7.5
14	11.2	10.5	10.8	10.6	10.3	10.4	---	---	---	7.6	6.0	6.9
15	11.0	10.6	10.8	10.6	10.3	10.4	---	---	---	6.2	5.6	5.8
16	11.0	10.8	10.9	10.6	10.4	10.5	8.6	6.8	7.6	6.1	5.6	5.8
17	11.0	10.7	10.8	10.5	9.7	10.2	9.0	7.2	8.0	6.6	5.7	6.1
18	11.4	10.8	10.9	9.7	9.4	9.6	8.4	8.1	8.3	6.9	6.1	6.5
19	11.2	10.9	11.0	9.8	9.4	9.6	8.8	8.4	8.5	6.1	5.3	5.5
20	11.3	10.9	11.1	10.4	9.7	10.0	8.9	8.6	8.8	5.8	5.2	5.5
21	11.3	11.0	11.1	10.4	10.2	10.3	9.1	8.9	9.0	6.7	5.8	6.1
22	11.1	10.5	10.8	10.5	10.2	10.3	9.1	8.8	8.9	7.1	6.7	6.8
23	10.6	10.3	10.5	10.7	10.4	10.5	8.8	8.3	8.5	7.3	6.7	6.9
24	10.6	9.8	10.4	10.7	10.3	10.6	8.6	7.9	8.2	7.4	6.9	7.1
25	9.7	9.3	9.5	10.5	10.2	10.4	8.6	8.4	8.5	7.3	6.7	7.0
26	10.0	9.6	9.8	10.4	9.9	10.1	9.0	8.0	8.7	7.0	6.4	6.7
27	9.8	9.6	9.7	10.3	10.0	10.1	8.9	7.6	8.2	7.4	6.8	7.1
28	10.3	9.9	10.1	10.1	9.9	9.9	8.4	7.7	8.0	7.4	7.0	7.2
29	10.4	10.0	10.2	10.2	9.8	10.0	7.6	5.9	6.9	7.5	7.1	7.2
30	---	---	---	10.1	9.8	10.0	6.8	5.2	6.0	8.0	7.5	7.8
31	---	---	---	10.0	9.4	9.9	---	---	---	8.0	7.8	7.9
MONTH	11.5	9.3	10.7	11.0	8.9	10.1	10.1	5.2	8.7	10.3	5.2	7.4

08057055 TRINITY RIVER AT CEDAR CREST BOULEVARD, DALLAS, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.9	7.5	7.8	---	---	---	5.9	4.5	5.2	---	---	---
2	9.5	7.6	8.9	---	---	---	6.1	5.7	5.8	---	---	---
3	9.5	8.6	9.2	---	---	---	6.4	5.7	6.1	---	---	---
4	8.7	8.1	8.4	---	---	---	6.3	5.9	6.0	---	---	---
5	8.1	7.6	7.8	---	---	---	6.5	6.2	6.3	---	---	---
6	8.1	7.3	7.8	---	---	---	7.2	6.2	6.6	---	---	---
7	7.8	7.2	7.4	---	---	---	7.4	6.4	6.7	---	---	---
8	8.5	7.0	7.7	---	---	---	7.3	6.5	6.8	---	---	---
9	8.7	8.1	8.4	---	---	---	7.0	6.2	6.6	8.2	6.6	7.3
10	---	---	---	---	---	---	6.8	5.9	6.3	7.4	6.1	6.7
11	---	---	---	---	---	---	6.8	5.8	6.2	6.7	3.9	5.2
12	---	---	---	---	---	---	6.4	5.3	6.2	6.4	5.4	5.8
13	---	---	---	---	---	---	6.0	5.3	5.6	6.8	6.4	6.6
14	---	---	---	---	---	---	6.6	6.0	6.1	7.0	6.7	6.8
15	---	---	---	---	---	---	7.1	6.5	6.7	7.2	6.7	6.9
16	---	---	---	---	---	---	7.5	6.7	7.2	7.6	7.0	7.2
17	---	---	---	---	---	---	7.7	7.2	7.4	7.5	6.9	7.2
18	---	---	---	---	---	---	7.7	6.9	7.3	8.2	6.9	7.4
19	---	---	---	---	---	---	7.0	6.3	6.7	8.6	6.9	7.5
20	---	---	---	---	---	---	6.5	6.3	6.4	7.7	7.0	7.3
21	---	---	---	---	---	---	6.9	6.4	6.6	7.2	5.1	6.0
22	---	---	---	---	---	---	7.0	6.8	6.9	5.5	4.1	4.8
23	---	---	---	6.8	6.0	6.4	7.4	6.7	7.1	6.4	5.5	6.0
24	---	---	---	7.2	6.2	6.7	7.6	6.9	7.3	7.4	6.2	6.6
25	---	---	---	7.7	6.3	6.9	7.8	7.0	7.4	7.5	6.4	6.9
26	---	---	---	7.6	6.3	6.9	---	---	---	7.8	6.5	7.1
27	---	---	---	7.6	5.7	6.5	---	---	---	8.5	6.7	7.4
28	---	---	---	5.8	2.2	4.4	---	---	---	8.9	6.8	7.6
29	---	---	---	4.9	3.2	4.3	---	---	---	8.3	6.7	7.4
30	---	---	---	5.7	5.0	5.4	---	---	---	8.1	6.9	7.4
31	---	---	---	6.0	4.7	5.5	---	---	---	---	---	---
MONTH	9.5	7.0	8.2	7.7	2.2	5.9	7.8	4.5	6.5	8.9	3.9	6.8
YEAR	11.7	2.2	8.8									

08057135 WHITE ROCK CREEK OUTFALL AT PRESTON ROAD, DALLAS, TX

LOCATION.--Lat 32°55'59", long 96°48'12", Dallas County, Hydrologic Unit 12030105, on west side of Preston Road, 1.0 mile north of Interstate Highway 635, and 11.75 miles north of Dallas.

DRAINAGE AREA.--0.09 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: February 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
FEB												
22-22	1139	0.55	6.4	0.65	91	--	7.7	--	17.0	80	17	970
MAR												
24-24	1908	0.52	2.9	0.58	80	85	7.7	7.2	13.0	45	11	2300
APR												
06-06	0210	0.37	3.3	0.51	76	87	7.7	7.5	15.5	38	7.6	310

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
FEB												
22-22	9100	--	--	45	--	--	--	--	--	--	--	--
MAR												
24-24	11000	29	8	21	34	<1	38	11	0.27	0.90	6	0.1
APR												
06-06	8500	33	4	29	40	30	43	13	0.21	0.90	5	0.1

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)
FEB												
22-22	--	--	--	0.080	0.580	0.110	0.60	0.120	0.070	<10.0	--	--
MAR												
24-24	0.90	5.6	1.3	0.070	0.880	0.550	1.3	0.150	0.060	<10.0	<1	<10
APR												
06-06	1.1	4.9	1.1	0.070	0.690	0.460	0.90	0.080	0.070	<20.0	<1	<10

08057135 WHITE ROCK CREEK OUTFALL AT PRESTON ROAD, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	THAL-LIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 22-22	--	--	--	<0.010	--	--	--	--	--	<5	--	17
MAR 24-24	<1	<1	--	<0.010	7	<0.10	2	<2	<1	<5	50	9.3
APR 06-06	<1	2	13	<0.010	7	<0.10	<1	<2	<1	<10	50	9.6

DATE	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACRO-LEIN TOTAL (UG/L)	ACRYLO-NITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)
FEB 22-22	2	3	<20	<20	<0.2	<0.2	<0.2	<0.2	<0.20	<0.2	<0.2	<1.0
MAR 24-24	<1	5	<20	<20	<0.2	<0.2	<0.2	<0.2	<0.20	<0.2	<0.2	<1.0
APR 06-06	2	4	<20	<20	<0.2	<0.2	<0.2	<0.2	<0.20	<0.2	<0.2	<1.0

DATE	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMO CHLORO-PROPANE WATER WHOLE TOT.REC (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)
FEB 22-22	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2	<0.2	<5.0	<5.0
MAR 24-24	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2	<0.2	<5.0	<5.0
APR 06-06	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2	<0.2	<5.0	<5.0

DATE	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)
FEB 22-22	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MAR 24-24	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
APR 06-06	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)
FEB 22-22	<5.0	<0.2	<0.2	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<5.0	0.2	<0.2
MAR 24-24	<5.0	<0.2	<0.2	<5.0	<0.2	<0.2	<0.2	<0.2	0.2	<5.0	<0.2	<0.2
APR 06-06	<5.0	<0.2	<0.2	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<5.0	<0.2	<0.2

DATE	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)
FEB 22-22	<0.2	<0.2	<0.2	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0
MAR 24-24	<0.2	<0.2	<0.2	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0
APR 06-06	<0.2	<0.2	<0.2	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0

08057135 WHITE ROCK CREEK OUTFALL AT PRESTON ROAD, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)
FEB 22-22	<10.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0
MAR 24-24	<10.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0
APR 06-06	<10.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0

DATE	1,2,5,6 -DIBENZ -ANTHRA -CENE TOTAL (UG/L)	3,3'-DI-CHLORO-BENZI-DINE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)
FEB 22-22	<10.0	<20.0	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0
MAR 24-24	<10.0	<20.0	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0
APR 06-06	<10.0	<20.0	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0

DATE	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO -SODI-METHY-LAMINE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)
FEB 22-22	8.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0
MAR 24-24	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0
APR 06-06	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0

DATE	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO -SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L)
FEB 22-22	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
MAR 24-24	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
APR 06-06	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

DATE	CHLOR-DANE TRANS WATER WHOLE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN-I WATER WHOLE REC (UG/L)	ENDO-SULFAN BETA TOTAL (UG/L)	ENDO-SULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDE-HYDE TOTAL (UG/L)
FEB 22-22	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
MAR 24-24	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
APR 06-06	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
FEB 22-22	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.13
MAR 24-24	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.20
APR 06-06	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.30

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.

PERIOD OF RECORD.--August 1961 to September 1980, April 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 24, 1961, non-recording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. There is some regulation of low flow by diversions from small on channel dams upstream from station. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since at least 1886, that of May 2, 1990.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges above base discharge of 2,900 ft³/s:

Date	Time	Discharge (ft³/s)	Elevation (ft)	Date	Time	Discharge (ft³/s)	Elevation (ft)
Oct. 26	1130	8,420	485.54	May 14	1445	18,600	488.07
Oct. 27	1145	3,100	482.47	May 17	1515	8,000	485.39
Oct. 29	0045	20,400	488.39	May 18	0945	14,000	487.13
Oct. 29	1600	6,730	484.88	June 27	1600	3,020	481.93
Dec. 9	0130	17,800	487.93	June 28	0745	20,500	488.00
Dec. 20	1530	24,100	488.99	Aug. 1	2115	3,070	482.43
Mar. 9	0515	12,400	486.73				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	171	104	223	84	55	31	31	132	100	e485	41
2	11	109	360	105	74	53	27	25	213	72	e368	e22
3	13	92	95	87	77	56	29	27	102	60	151	e554
4	11	80	72	71	80	530	28	20	80	52	108	e47
5	10	74	67	84	69	178	26	14	55	46	93	e19
6	11	69	62	71	62	90	131	11	398	39	75	e12
7	10	61	55	72	56	69	34	11	99	35	65	e12
8	9.6	52	296	68	53	57	31	9.1	120	31	55	e10
9	9.0	45	3020	62	51	1880	26	7.7	91	42	46	e8.7
10	8.8	45	123	56	47	104	21	8.9	42	28	38	e63
11	9.9	43	508	63	46	80	20	8.7	39	25	37	e71
12	10	41	246	74	74	70	22	6.6	30	17	95	e17
13	12	40	115	106	56	62	22	5.9	27	12	88	e12
14	11	41	92	76	48	54	17	2270	22	13	43	e12
15	9.3	39	77	58	43	50	16	107	20	11	36	8.8
16	8.7	165	70	53	42	49	14	144	17	9.5	36	12
17	7.9	161	64	71	40	215	97	1360	17	13	32	9.6
18	8.3	68	77	255	35	142	46	3280	15	12	29	8.7
19	7.6	420	832	112	29	63	148	379	15	13	98	8.0
20	7.8	123	9500	86	31	48	62	355	129	e76	46	9.9
21	9.3	84	1810	136	31	40	39	291	25	e34	34	158
22	8.8	76	648	168	223	38	34	193	18	e46	27	16
23	9.7	64	237	94	75	38	33	102	14	e24	24	10
24	10	61	151	80	274	123	30	81	9.5	e16	17	7.9
25	9.6	58	126	74	507	92	22	217	278	e12	18	6.7
26	2280	54	136	172	109	44	15	93	127	e12	15	4.7
27	1330	48	128	885	86	38	11	86	420	e105	14	4.9
28	5540	48	105	242	74	55	44	309	2600	e159	10	3.8
29	3760	46	95	140	65	39	194	121	513	e115	7.9	3.6
30	218	67	89	114	---	34	43	96	136	e15	9.6	3.8
31	537	---	79	95	---	30	---	89	---	e590	8.9	---
TOTAL	13934.3	2545	19439	4053	2541	4476	1313	9758.9	5803.5	1834.5	2209.4	1177.1
MEAN	449	84.8	627	131	87.6	144	43.8	315	193	59.2	71.3	39.2
MAX	5540	420	9500	885	507	1880	194	3280	2600	590	485	554
MIN	7.6	39	55	53	29	30	11	5.9	9.5	9.5	7.9	3.6
AC-FT	27640	5050	38560	8040	5040	8880	2600	19360	11510	3640	4380	2330

e Estimated

08057200 WHITE ROCK CREEK AT GREENVILLE AVENUE, DALLAS, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1992, BY WATER YEAR (WY)

MEAN	70.9	46.4	74.5	41.8	76.0	92.1	124	151	89.8	32.6	23.3	63.9
MAX	449	167	627	131	330	405	690	460	800	252	71.3	624
(WY)	1992	1965	1992	1992	1990	1990	1966	1990	1989	1962	1992	1964
MIN	.83	2.96	4.35	5.85	6.19	12.0	16.6	15.8	7.25	.78	1.26	.92
(WY)	1964	1964	1964	1976	1967	1971	1971	1972	1980	1964	1963	1963

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1962 - 1992	
ANNUAL TOTAL	67500.2		69084.7			
ANNUAL MEAN	185		189		74.7	
HIGHEST ANNUAL MEAN					189	1992
LOWEST ANNUAL MEAN					20.8	1971
HIGHEST DAILY MEAN	9500	Dec 20	9500	Dec 20	14700	Sep 21 1964
LOWEST DAILY MEAN	4.9	Jul 19	3.6	Sep 29	.01	Jul 8 1970
ANNUAL SEVEN-DAY MINIMUM	5.2	Jul 14	5.1	Sep 24	.41	Jul 12 1971
INSTANTANEOUS PEAK FLOW			24100	Dec 20	39200	May 2 1990
INSTANTANEOUS PEAK STAGE			488.99	Dec 20	490.59	May 2 1990
INSTANTANEOUS LOW FLOW			.05	Sep 28		
ANNUAL RUNOFF (AC-FT)	133900		137000		54110	
10 PERCENT EXCEEDS	223		249		102	
50 PERCENT EXCEEDS	50		54		17	
90 PERCENT EXCEEDS	9.0		9.8		3.5	

08057310 ASH CREEK OUTFALL AT WHITTER STREET, DALLAS, TX

LOCATION.--Lat 32°48'56", long 96°42'37", Dallas County, Hydrologic Unit 12030105, on south side of Whitter Street, 1.0 mile east of U.S. Highway 78, and about 7.0 miles northeast of Dallas.

DRAINAGE AREA.--0.11 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: February 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
FEB 12-12	1610	0.40	2.8	0.13	208	--	7.8	--	16.5	260	7.9	30000
FEB 22-22	1129	0.49	9.5	0.27	256	215	7.9	7.8	16.0	84	7.0	2300
MAR 17-18	1700	0.44	9.5	0.27	416	204	7.7	7.6	18.5	160	19	K62000
APR 06-06	0120	0.61	5.2	0.12	120	160	9.9	7.7	15.0	90	8.1	13000
MAY 14-14	1200	0.48	2.5	0.13	196	227	6.4	7.7	22.0	190	7.6	140000
JUN 06-06	0252	0.72	4.0	0.38	305	126	6.7	8.2	21.5	64	7.5	K170000
SEP 21-21	0142	0.98	2.5	0.20	130	157	7.5	7.5	23.5	47	6.8	K14000

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
FEB 12-12	250000	--	--	--	--	--	--	--	--	--	--	--
FEB 22-22	18000	50	18	32	81	320	89	19	0.69	1.9	7	0.1
MAR 17-18	K350000	56	7	49	97	103	100	21	0.79	2.0	6	0.1
APR 06-06	45000	60	6	54	82	65	100	23	0.65	1.8	5	0.1
MAY 14-14	100000	45	11	34	104	284	103	17	0.71	2.1	7	0.1
JUN 06-06	K510000	27	1	26	60	352	54	10	0.38	1.1	7	0.1
SEP 21-21	K35000	29	3	26	61	55	51	11	0.46	1.3	7	0.1

08057310 ASH CREEK OUTFALL AT WHITTER STREET, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)
FEB 12-12	--	--	--	0.050	0.830	0.270	1.2	0.460	0.460	<10.0	--	<10
FEB 22-22	2.0	8.6	2.6	0.110	0.500	0.130	0.90	0.270	0.190	<10.0	3	<10
MAR 17-18	5.5	7.8	3.5	0.120	0.630	0.390	1.8	0.470	0.290	<20.0	4	<10
APR 06-06	6.5	8.2	2.5	0.090	0.760	0.470	1.9	0.390	0.350	<20.0	4	<10
MAY 14-14	8.6	11	2.9	0.080	1.00	0.540	2.5	0.480	0.360	<10.0	4	<10
JUN 06-06	4.5	4.4	1.7	0.070	0.580	0.180	0.80	0.250	0.240	<20.0	4	<10
SEP 21-21	4.9	5.5	2.9	0.030	0.370	0.090	1.4	0.450	0.270	<10.0	2	<10

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	THALLIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 12-12	<1	--	--	<0.010	--	<0.10	--	--	<1	<10	--	66
FEB 22-22	<1	8	10	<0.010	33	<0.10	12	<2	<1	<5	70	27
MAR 17-18	<1	16	10	<0.010	51	<0.10	16	<2	<1	<10	110	43
APR 06-06	<1	2	8	<0.010	19	<0.10	3	<2	<1	<10	50	22
MAY 14-14	<1	13	16	<0.010	89	<0.10	17	<2	<1	<10	140	51
JUN 06-06	<1	8	12	<0.010	66	<0.10	9	<2	<1	<10	100	24
SEP 21-21	<1	4	8	<0.010	21	<0.10	5	<2	<1	<10	40	18

DATE	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACROLEIN TOTAL (UG/L)	ACRYLONITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMOBENZENE WATER, WHOLE, TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L)	CARBON-TETRACHLORIDE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)
FEB 12-12	<1	3	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
FEB 22-22	<1	5	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
MAR 17-18	<1	2	<20	<20	0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
APR 06-06	1	3	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
MAY 14-14	<1	6	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
JUN 06-06	<1	6	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
SEP 21-21	<1	1	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20

DATE	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	METHYLCHLORIDE TOTAL (UG/L)	O-CHLOROTOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMOCHLOROPROPANE WATER WHOLE TOT.REC (UG/L)	DIBROMOMETHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMOETHANE WATER WHOLE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)
FEB 12-12	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
FEB 22-22	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
MAR 17-18	<0.2	<0.2	<1.0	0.7	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
APR 06-06	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
MAY 14-14	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
JUN 06-06	<0.2	<0.2	<1.0	0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
SEP 21-21	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2

08057310 ASH CREEK OUTFALL AT WHITTER STREET, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)
FEB 12-12	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
FEB 22-22	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MAR 17-18	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
APR 06-06	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MAY 14-14	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
JUN 06-06	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SEP 21-21	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)
FEB 12-12	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
FEB 22-22	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
MAR 17-18	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
APR 06-06	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
MAY 14-14	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
JUN 06-06	<0.2	<0.2	<0.2	5.0	<0.20	<0.20	<0.2	<0.4	<5.0	<0.20	<0.2	<0.2
SEP 21-21	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2

DATE	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,2,3-TRI-CHLORO BENZENE WAT, WH REC (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	PSEUDO-CUMENE WATER UNFLTRD REC (UG/L)	MESIT-YLENE WATER UNFLTRD REC (UG/L)
FEB 12-12	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
FEB 22-22	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
MAR 17-18	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
APR 06-06	<0.2	<0.2	<0.2	<0.20	<5.0	0.3	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
MAY 14-14	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
JUN 06-06	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
SEP 21-21	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20

DATE	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)
FEB 12-12	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
FEB 22-22	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
MAR 17-18	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
APR 06-06	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
MAY 14-14	<0.2	0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUN 06-06	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
SEP 21-21	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0

08057310 ASH CREEK OUTFALL AT WHITTER STREET, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6-DIBENZ-ANTHRA-CENE TOTAL (UG/L)	3,3'-DI-CHLORO-BENZI-DINE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)
FEB 12-12	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
FEB 22-22	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
MAR 17-18	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
APR 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
MAY 14-14	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0

DATE	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)
FEB 12-12	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	7.0	<5.0
FEB 22-22	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
MAR 17-18	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
APR 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
MAY 14-14	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0

DATE	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)
FEB 12-12	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
FEB 22-22	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
MAR 17-18	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
APR 06-06	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
MAY 14-14	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
JUN 06-06	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0

DATE	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L)
FEB 12-12	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
FEB 22-22	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
MAR 17-18	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
APR 06-06	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
MAY 14-14	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
JUN 06-06	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	0.080	<0.10
SEP 21-21	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

0805/310 ASH CREEK OUTFALL AT WHITTER STREET, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CHLORDANE TRANS WATER WHOLE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN-I WATER WHOLE REC (UG/L)	ENDOSULFAN BETA TOTAL (UG/L)	ENDOSULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDEHYDE TOTAL (UG/L)
FEB 12-12	<0.10	<0.1	<0.10	<0.04	<0.10	0.030	<0.10	<0.04	<0.60	<0.060	<0.20
FEB 22-22	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
MAR 17-18	<0.10	<0.1	<0.10	<0.04	<0.10	0.020	<0.10	<0.04	<0.60	<0.060	<0.20
APR 06-06	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
MAY 14-14	<0.10	<0.1	<0.10	<0.04	<0.10	0.020	<0.10	<0.04	<0.60	<0.060	<0.20
JUN 06-06	<0.10	<0.1	<0.10	<0.04	<0.10	0.050	<0.10	<0.04	<0.60	<0.060	<0.20
SEP 21-21	<0.10	<0.1	<0.10	<0.04	<0.10	0.020	<0.10	<0.04	<0.60	<0.060	<0.20

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)
FEB 12-12	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	--
FEB 22-22	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.66
MAR 17-18	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	1.2
APR 06-06	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.70
MAY 14-14	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.60
JUN 06-06	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	3.3
SEP 21-21	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	2.0

08057410 TRINITY RIVER BELOW DALLAS, TX

LOCATION.--Lat 32°42'26", long 96°44'08", Dallas County, Hydrologic Unit 12030105, on right 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.--November 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 365.89 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharge. Records fair. Flow affected at times by eight upstream reservoirs with a combined capacity of 1,714,400 acre-ft, of which 846,200 acre-ft is for flood control. Several cities within the Dallas-Fort Worth metroplex divert water for municipal use and return it to the river as sewage effluents above this station. Low flows are sustained by sewage effluents.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	687	22100	1830	15100	13600	12800	5500	1230	7210	15100	4040	946
2	681	17900	3150	15700	13900	12600	5340	1030	9740	8490	2090	979
3	682	14100	4910	15500	14000	12400	5240	968	10600	5880	2700	2780
4	653	11700	2540	15200	14200	13300	4900	990	7440	3610	1310	1770
5	711	11000	1770	14800	14800	15000	4190	1110	6380	3470	957	962
6	622	11600	1760	14800	14700	15200	4120	926	7500	2990	877	808
7	610	12200	2240	15100	14200	13500	4270	868	7420	1760	815	770
8	587	12300	2350	15200	13400	12100	3610	812	6010	1540	783	758
9	583	12000	7720	15200	12400	13400	2460	766	6300	1350	777	753
10	589	12100	9070	15000	11800	15700	2830	752	7820	1200	778	844
11	578	12100	7210	14900	12100	14100	2690	758	8700	1110	778	4000
12	568	12100	9860	14800	12400	11100	1560	763	8580	975	818	2500
13	569	12100	11300	14900	12400	9930	1550	753	7620	910	1270	962
14	562	11900	10100	15000	12000	9760	1650	1450	6910	867	1050	761
15	570	11300	9010	14800	11600	9650	1620	4980	6030	853	919	681
16	556	10100	8400	14600	10500	8960	1690	2330	4650	840	857	678
17	556	9850	7410	14600	9400	8300	2270	3950	4210	852	809	662
18	540	10400	7460	15300	8450	9050	3290	11000	4070	882	779	651
19	527	10300	8610	16500	7220	8700	2280	14100	3690	1070	1470	649
20	555	11100	16600	16200	6280	8050	2460	9490	3390	921	1870	759
21	540	9430	44400	15200	5940	7450	1960	4550	3100	911	1160	2110
22	539	7430	54500	15200	6390	7250	1590	3980	3240	880	928	2270
23	579	6010	41700	15600	7420	7420	1190	3860	2380	949	829	963
24	628	5090	28900	15200	7840	6460	1050	3580	3140	838	816	684
25	644	4760	23800	14600	12600	6860	975	3880	2600	766	884	679
26	1940	4000	21200	14000	18400	7060	864	5330	4950	732	921	618
27	12500	3270	19800	16300	17100	6470	820	4750	4430	728	799	653
28	23400	2420	18300	20200	13100	5870	806	5290	7420	1910	795	622
29	34100	1870	17100	18300	12500	5870	3110	8830	14300	2490	731	634
30	36300	1680	16000	15100	---	5700	2960	8930	18700	1290	725	621
31	26800	---	15300	13700	---	5610	---	8200	---	2700	730	---
TOTAL	149956	294210	434300	476600	340640	305620	78845	120206	198530	68864	35065	33527
MEAN	4837	9807	14010	15370	11750	9859	2628	3878	6618	2221	1131	1118
MAX	36300	22100	54500	20200	18400	15700	5500	14100	18700	15100	4040	4000
MIN	527	1680	1760	13700	5940	5610	806	752	2380	728	725	618
AC-FT	297400	583600	861400	945300	675700	606200	156400	238400	393800	136600	69550	66500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1992#, BY WATER YEAR (WY)

MEAN	1595	1860	1856	1672	1969	2303	2478	4596	3690	1562	1008	1101
MAX	10220	14350	14010	15370	11750	9859	10010	29980	17720	9145	5963	7521
(WY)	1982	1982	1992	1992	1992	1992	1990	1990	1989	1989	1982	1962
MIN	268	255	263	285	310	316	373	432	316	330	228	259
(WY)	1964	1964	1964	1959	1964	1959	1959	1961	1960	1964	1959	1959

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1958 - 1992#	
ANNUAL TOTAL	131063		2536363			
ANNUAL MEAN	3608		6930		2141	
HIGHEST ANNUAL MEAN					7319	1982
LOWEST ANNUAL MEAN					383	1959
HIGHEST DAILY MEAN	54500	Dec 22	54500	Dec 22	79200	May 4 1990
LOWEST DAILY MEAN	527	Oct 19	527	Oct 19	142	Jun 19 1959
ANNUAL SEVEN-DAY MINIMUM	545	Oct 16	545	Oct 16	162	Jun 13 1959
INSTANTANEOUS PEAK FLOW			56900	Dec 22	87000	May 4 1990
INSTANTANEOUS PEAK STAGE			31.52	Dec 22	34.79	May 4 1990
INSTANTANEOUS LOW FLOW			476	Oct 22		
ANNUAL RUNOFF (AC-FT)	2612000		5031000		1551000	
10 PERCENT EXCEEDS	11000		15200		5890	
50 PERCENT EXCEEDS	1050		4490		677	
90 PERCENT EXCEEDS	595		704		345	

Period of regulated streamflow.

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1967 to current year. Pesticide analyses: October 1970 to July 1981. Sediment analyses: April 1972 to April 1975.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to current year.
pH: January 1977 to current year.
WATER TEMPERATURE: October 1967 to current year.
DISSOLVED OXYGEN: January 1977 to current year.

INSTRUMENTATION.--Since October 1976, a four-parameter water-quality monitor continuously records specific conductance, pH, water temperature, and dissolved oxygen at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument and pump, plugged intake, and pump failures. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,130 microsiemens Dec. 17, 1977; minimum, 112 microsiemens Oct. 20, 1984.
pH: Maximum, 8.8 units Jan. 23, 1980; minimum, 6.7 units Mar. 25, 1991.
WATER TEMPERATURES: Maximum, 35.0°C Aug. 20, 25, 28, 31, 1972; minimum, 1.0°C Jan. 29, 1968.
DISSOLVED OXYGEN (1977-90): Maximum, 12.8 mg/L Mar. 19, 1990; minimum, 0.0 mg/L on many days during spring and summer of 1977-81.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 830 microsiemens May 12; minimum, 228 microsiemens Sept. 3.
WATER TEMPERATURE: Maximum, 31.5°C July 26, Aug. 10-11; minimum, 7.0°C Jan. 19-20.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
DEC 13...	1425	11500	404	7.7	15.0	9.0	90	0.9	140	24
JAN 27...	1310	16500	370	7.7	9.5	10.6	93	1.9	130	26
APR 20...	1025	2490	501	7.7	19.0	8.0	88	1.2	160	35
JUN 26...	1300	5700	342	7.5	26.0	5.9	74	1.8	110	28
AUG 06...	1405	887	662	7.5	29.5	5.8	77	1.6	160	57
SEP 01...	1525	1010	751	7.2	27.5	6.1	78	0.9	160	52

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
DEC 13...	49	4.7	24	0.9	5.3	120	51	26	0.30	6.9
JAN 27...	46	4.0	18	0.7	4.0	100	39	14	0.30	6.2
APR 20...	56	5.5	34	1	5.0	130	62	36	0.60	5.9
JUN 26...	38	3.6	21	0.9	4.9	82	39	22	0.30	5.8
AUG 06...	56	5.8	60	2	9.3	110	83	60	0.90	8.3
SEP 01...	54	7.0	81	3	11	110	85	81	1.1	9.9

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
DEC 13...	238	1.18	0.020	1.20	0.050	0.55	0.60	0.260	0.180
JAN 27...	194	0.940	0.030	0.970	0.130	0.37	0.50	0.210	0.180
APR 20...	282	2.76	0.040	2.80	0.090	0.51	0.60	0.700	0.700
JUN 26...	184	1.56	0.040	1.60	0.070	0.53	0.60	0.450	0.450
AUG 06...	347	8.05	0.050	8.10	0.110	0.79	0.90	2.40	2.10
SEP 01...	397	11.0	0.040	11.0	0.100	0.90	1.0	8.00	3.30

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	149956	339	196	79200	22	8710	39	16000	110
NOV.	1991	294210	375	217	172000	23	18400	43	34500	130
DEC.	1991	434300	341	197	232000	20	23800	39	46100	120
JAN.	1992	476600	355	206	265000	21	27400	41	52800	130
FEB.	1992	340640	381	220	203000	24	21800	44	40700	130
MAR.	1992	305620	416	240	198000	27	22500	49	40100	140
APR.	1992	78845	502	286	60900	38	7990	60	12700	150
MAY	1992	120206	457	261	84800	33	10600	54	17600	140
JUNE	1992	198530	439	252	135000	30	16200	52	27700	140
JULY	1992	68864	517	294	54700	40	7510	62	11600	150
AUG.	1992	35065	604	341	32200	52	4900	74	6980	150
SEPT	1992	33527	563	319	28900	46	4160	68	6170	150
TOTAL		2536363	**	**	1545000	**	174000	**	313000	**
WTD.AVG.		6930	391	226	**	25	**	46	**	130

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	716	681	700	337	327	330	553	530	540	355	343	348
2	714	681	697	375	340	356	544	421	492	351	348	350
3	725	699	714	387	378	384	443	420	429	359	346	350
4	765	731	744	383	374	380	524	448	491	349	345	348
5	764	682	717	382	359	366	563	526	549	347	344	345
6	733	683	712	361	356	358	567	539	557	348	345	346
7	746	720	733	360	356	358	570	503	534	351	345	347
8	756	723	735	367	358	362	544	509	524	355	349	352
9	784	746	768	366	361	364	536	325	394	351	347	349
10	778	760	769	367	360	364	426	380	400	350	347	348
11	778	759	769	367	361	363	430	404	414	349	342	345
12	776	759	768	367	360	364	413	396	403	348	344	345
13	780	758	770	371	364	368	407	391	400	349	344	346
14	764	738	754	370	363	366	404	397	400	353	349	351
15	748	733	741	371	366	369	409	398	401	353	348	350
16	768	742	756	380	363	367	405	397	401	351	346	347
17	760	726	741	389	371	379	411	393	401	350	344	346
18	763	736	751	383	374	380	406	398	404	365	350	358
19	784	753	771	381	369	374	426	397	406	366	362	363
20	782	729	757	397	378	391	393	280	349	362	354	357
21	740	721	730	398	391	395	279	231	263	356	353	354
22	760	727	744	403	397	401	274	228	245	366	356	363
23	773	694	728	408	400	403	311	275	292	365	360	362
24	726	677	701	412	407	410	333	312	322	363	359	361
25	693	677	686	421	411	414	347	334	340	362	356	358
26	692	405	586	461	420	438	356	347	350	357	351	353
27	433	259	299	474	463	469	362	352	357	361	350	355
28	288	260	272	537	474	509	361	358	359	366	348	356
29	286	277	282	528	509	520	373	361	366	388	366	376
30	301	282	289	540	514	531	370	363	367	400	392	395
31	330	302	317	---	---	---	363	345	355	398	381	386
MONTH	784	259	661	540	327	394	570	228	403	400	342	355

0805/410 TRINITY RIVER BELOW DALLAS, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	381	372	375	417	412	415	428	421	425	621	519	580
2	374	368	370	416	409	413	427	422	424	679	622	644
3	370	366	368	418	410	415	430	422	426	744	682	716
4	382	369	373	434	414	422	435	422	429	754	735	742
5	383	375	378	421	409	416	439	430	434	746	605	659
6	375	370	372	408	369	388	470	430	445	719	681	702
7	373	370	372	408	401	406	474	446	459	797	725	768
8	372	368	370	424	392	413	474	431	447	805	775	788
9	368	362	364	424	405	417	546	476	515	788	775	779
10	370	360	363	413	397	402	515	464	488	814	775	791
11	368	363	366	434	414	425	591	457	501	808	784	796
12	368	364	366	437	424	430	633	596	620	830	790	802
13	390	369	377	428	417	422	640	592	618	829	813	820
14	380	364	372	423	418	420	626	593	609	827	381	741
15	386	378	382	421	405	416	605	574	589	578	375	444
16	384	379	382	416	409	412	600	554	576	542	474	507
17	384	376	380	426	406	411	592	531	544	560	356	481
18	390	379	384	434	411	420	556	485	536	395	312	345
19	394	388	390	433	413	427	530	487	509	358	342	349
20	393	383	389	424	414	418	552	485	521	377	341	355
21	390	382	386	420	409	414	549	531	539	479	366	429
22	411	384	395	433	410	417	609	545	575	496	445	477
23	444	410	423	413	405	410	674	610	644	497	473	486
24	411	376	394	416	402	407	689	674	682	499	473	485
25	401	363	380	442	410	427	710	690	695	518	467	494
26	381	349	362	432	412	420	747	701	721	486	448	469
27	436	384	412	429	418	424	786	745	758	483	474	476
28	437	420	429	432	427	430	786	763	775	487	444	476
29	428	415	418	437	428	433	781	382	542	444	384	415
30	---	---	---	430	418	424	535	456	487	451	408	439
31	---	---	---	425	420	423	---	---	---	451	446	449
MONTH	444	349	382	442	369	417	786	382	551	830	312	578

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	463	449	455	406	352	381	416	338	375	---	---	e724
2	464	400	428	471	409	434	484	411	441	---	---	e632
3	457	395	426	455	431	444	464	406	427	701	228	413
4	489	460	478	517	451	485	583	435	508	518	354	432
5	497	476	480	463	457	460	650	581	620	672	526	607
6	479	444	460	514	459	471	709	653	678	704	676	691
7	457	437	445	590	532	576	747	704	720	697	663	685
8	475	457	465	622	582	606	758	735	751	740	672	709
9	477	460	465	657	612	633	764	733	749	769	718	739
10	464	446	455	672	637	657	745	698	720	748	586	718
11	456	441	447	702	659	681	755	726	739	707	317	471
12	457	444	449	716	690	702	753	686	730	457	378	417
13	477	457	466	714	686	699	754	541	629	568	457	510
14	480	476	478	739	711	726	663	560	622	619	570	588
15	524	479	503	757	732	745	672	641	658	676	622	645
16	541	525	534	792	713	746	681	661	671	712	678	686
17	546	534	540	801	751	773	699	679	685	723	703	715
18	539	531	536	768	664	732	760	703	728	746	662	712
19	551	537	545	800	700	745	769	483	655	740	682	721
20	557	501	540	766	650	714	---	---	e578	795	710	753
21	554	533	543	750	592	686	---	---	e552	714	250	509
22	553	495	529	782	729	756	647	575	610	548	371	432
23	575	494	549	733	603	696	717	648	680	551	424	493
24	579	439	504	740	728	733	732	701	712	614	554	582
25	528	368	470	765	722	736	743	723	731	676	619	646
26	472	347	399	788	765	776	745	654	679	718	672	688
27	466	320	420	815	736	774	738	683	709	727	650	698
28	421	273	349	769	500	673	753	677	706	700	650	670
29	356	289	319	470	395	429	794	743	776	722	700	711
30	347	282	302	550	461	501	802	769	785	712	689	700
31	---	---	---	557	356	461	---	---	e787	---	---	---
MONTH	579	273	466	815	352	633	802	338	658	795	228	623
YEAR	830	228	511									

e Estimated

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

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

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	7.8	7.7	7.7	7.9	7.5	7.7	---	---	---
2	---	---	---	7.9	7.7	7.8	7.8	7.4	7.6	---	---	---
3	---	---	---	---	---	---	7.8	7.6	7.8	7.6	7.1	7.3
4	---	---	---	---	---	---	7.8	7.5	7.6	7.2	6.9	7.1
5	---	---	---	---	---	---	7.8	7.5	7.7	7.5	6.9	7.3
6	7.9	7.8	7.8	---	---	---	7.7	7.4	7.6	7.4	7.2	7.3
7	7.8	7.7	7.7	---	---	---	7.7	7.4	7.5	7.4	7.2	7.3
8	7.9	7.7	7.8	---	---	---	7.8	7.6	7.7	7.5	7.3	7.4
9	7.9	7.8	7.9	---	---	---	7.7	7.6	7.7	7.4	7.3	7.4
10	7.9	7.8	7.8	---	---	---	7.7	7.6	7.7	7.5	7.3	7.4
11	7.9	7.8	7.9	---	---	---	7.7	7.5	7.6	7.8	7.2	7.5
12	7.9	7.9	7.9	---	---	---	7.6	7.4	7.5	7.5	7.4	7.5
13	7.9	7.9	7.9	---	---	---	---	---	---	7.6	7.3	7.5
14	8.0	7.9	8.0	---	---	---	---	---	---	7.5	7.3	7.4
15	---	---	---	---	---	---	---	---	---	7.4	7.2	7.3
16	---	---	---	---	---	---	---	---	---	7.4	7.3	7.3
17	---	---	---	---	---	---	---	---	---	7.3	7.1	7.3
18	---	---	---	---	---	---	---	---	---	7.5	7.1	7.3
19	---	---	---	---	---	---	---	---	---	7.7	7.2	7.4
20	---	---	---	---	---	---	---	---	---	7.7	7.3	7.5
21	---	---	---	---	---	---	---	---	---	8.0	7.5	7.6
22	---	---	---	---	---	---	7.2	7.1	7.2	7.7	7.5	7.6
23	---	---	---	---	---	---	7.3	7.1	7.2	7.5	7.1	7.4
24	---	---	---	---	---	---	---	---	---	7.4	7.2	7.3
25	---	---	---	---	---	---	---	---	---	7.4	7.2	7.3
26	---	---	---	---	---	---	---	---	---	7.4	7.2	7.3
27	7.7	7.5	7.6	---	---	---	---	---	---	7.5	7.2	7.4
28	7.8	7.6	7.7	---	---	---	---	---	---	7.5	7.3	7.4
29	7.8	7.7	7.7	7.4	7.2	7.3	---	---	---	7.5	7.2	7.3
30	7.8	7.7	7.7	7.3	7.1	7.2	---	---	---	7.7	7.2	7.4
31	---	---	---	7.7	7.2	7.5	---	---	---	---	---	---
MONTH	8.0	7.5	7.8	7.9	7.1	7.5	7.9	7.1	7.6	8.0	6.9	7.4
YEAR	8.3	6.9	7.7									

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	26.5	25.0	25.5	---	---	---	15.5	13.5	14.5	10.5	10.0	10.5
2	26.5	25.0	26.0	13.0	12.0	12.5	13.5	10.5	12.0	10.5	10.0	10.5
3	27.0	25.5	26.5	12.5	12.0	12.5	11.0	10.0	10.5	10.5	10.0	10.0
4	27.0	25.5	26.5	12.5	12.0	12.5	12.0	10.5	11.5	11.0	10.0	10.5
5	26.5	24.0	25.0	12.5	12.0	12.0	13.0	12.0	12.5	11.0	10.5	11.0
6	24.5	22.5	23.5	13.0	12.0	12.5	13.5	12.5	13.0	11.5	11.0	11.0
7	24.0	22.5	23.5	13.0	12.0	13.0	14.5	13.5	14.0	11.5	11.0	11.0
8	24.0	22.5	23.5	12.0	11.5	12.0	17.0	14.5	15.5	11.5	11.0	11.0
9	24.0	22.5	23.5	11.5	11.0	11.5	17.5	15.5	16.0	11.0	10.5	10.5
10	24.5	23.0	24.0	12.0	11.0	11.5	15.5	15.0	15.5	10.5	10.0	10.0
11	25.5	24.0	24.5	12.5	11.5	12.0	15.0	14.5	14.5	10.5	10.0	10.0
12	26.0	24.5	25.5	13.0	12.0	12.5	15.5	15.0	15.0	10.0	9.5	10.0
13	26.0	24.5	25.0	13.0	12.5	13.0	15.5	15.0	15.5	10.0	9.5	10.0
14	26.0	24.5	25.5	13.5	13.0	13.5	15.0	13.5	14.0	9.5	9.0	9.0
15	25.0	23.0	24.0	14.5	13.5	14.0	13.5	13.0	13.5	9.0	8.0	9.0
16	24.0	22.5	23.0	15.0	14.5	14.5	13.0	12.5	13.0	8.0	7.5	8.0
17	24.0	22.5	23.0	15.0	14.5	15.0	13.0	12.0	12.5	8.0	7.5	7.5
18	24.5	23.0	24.0	15.0	14.0	14.5	13.0	12.5	13.0	8.0	7.5	7.5
19	24.5	23.5	24.0	15.0	14.5	15.0	12.5	11.0	12.0	7.5	7.0	7.5
20	24.0	22.5	23.5	15.0	14.0	14.5	11.0	10.5	11.0	8.0	7.0	7.5
21	23.5	22.0	23.0	14.0	13.5	13.5	11.0	10.5	10.5	8.5	8.0	8.0
22	25.5	23.0	24.0	14.0	13.5	13.5	10.5	10.0	10.5	9.0	8.0	8.5
23	25.5	24.5	25.0	13.5	12.5	13.0	10.5	10.0	10.5	9.0	8.5	8.5
24	26.0	25.0	25.5	12.5	12.0	12.5	10.5	10.0	10.0	9.0	8.0	8.5
25	26.0	25.5	26.0	12.0	11.5	12.0	10.0	10.0	10.0	9.0	8.5	9.0
26	---	---	---	12.5	12.0	12.0	10.0	10.0	10.0	9.0	8.5	9.0
27	---	---	---	13.5	12.5	13.0	---	---	---	9.5	9.0	9.5
28	---	---	---	16.0	13.5	15.0	---	---	---	9.5	9.5	9.5
29	---	---	---	17.0	16.0	16.5	---	---	---	10.0	9.5	10.0
30	---	---	---	17.0	15.5	16.5	---	---	---	10.5	10.0	10.0
31	---	---	---	---	---	---	---	---	---	11.0	10.0	10.5
MONTH	27.0	22.0	24.5	17.0	11.0	13.5	17.5	10.0	12.5	11.5	7.0	9.5

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.5	21.0	21.0	28.0	26.0	26.5	28.5	27.0	28.0	---	---	---
2	22.0	21.0	21.5	29.0	27.5	28.0	29.0	28.0	28.5	---	---	---
3	23.0	21.5	22.0	29.0	28.0	28.5	29.5	28.0	28.5	28.5	23.5	25.5
4	24.0	22.5	23.0	28.5	27.5	28.0	30.0	28.5	29.0	27.0	25.5	26.0
5	24.0	23.0	23.5	29.0	28.0	28.5	30.5	28.5	29.5	28.5	26.5	27.5
6	24.5	23.5	24.0	28.5	27.5	28.0	30.5	29.0	30.0	28.5	27.5	28.0
7	24.5	23.5	24.0	28.5	27.0	28.0	30.5	29.5	30.0	29.0	27.5	28.0
8	25.0	24.0	24.5	29.0	27.5	28.5	31.0	29.5	30.0	29.5	28.0	29.0
9	25.0	24.0	24.5	29.0	28.0	28.5	31.0	29.5	30.5	29.5	28.5	29.0
10	25.5	24.0	25.0	29.5	28.5	29.0	31.5	29.5	30.5	29.5	26.0	28.5
11	26.0	24.5	25.5	29.5	28.5	29.0	31.5	30.0	30.5	26.5	24.5	25.0
12	26.0	25.0	25.5	29.5	28.0	29.0	31.0	29.5	30.0	26.0	25.0	25.5
13	26.5	25.5	26.0	29.5	28.0	29.0	29.5	28.0	28.5	27.5	26.0	26.5
14	27.0	26.0	26.5	30.0	28.0	29.0	29.0	28.5	28.5	28.0	26.5	27.5
15	28.0	26.0	27.0	30.0	28.5	29.5	29.0	28.0	28.5	28.5	27.0	28.0
16	28.5	27.0	28.0	29.5	29.0	29.5	28.5	27.0	28.0	28.5	27.0	28.0
17	28.5	27.5	28.0	29.0	28.5	28.5	28.5	27.0	27.5	28.5	27.5	28.0
18	29.0	27.5	28.5	28.5	27.5	28.0	28.0	26.5	27.5	29.5	27.5	28.5
19	29.5	28.0	28.5	28.5	27.0	28.0	27.0	24.5	26.0	29.5	28.0	29.0
20	29.0	27.5	28.5	29.0	27.5	28.5	---	---	---	29.5	28.5	29.0
21	28.5	27.5	28.0	29.5	27.5	28.5	---	---	---	29.0	24.5	27.0
22	27.5	27.0	27.0	29.5	28.5	29.0	28.5	27.0	27.5	27.5	26.5	27.0
23	28.0	26.5	27.0	30.0	28.5	29.5	29.0	27.0	28.0	26.5	25.0	26.0
24	28.5	27.0	28.0	31.0	29.0	30.0	29.0	28.0	28.5	26.0	24.5	25.5
25	28.5	25.5	27.0	31.0	29.5	30.5	29.5	28.0	28.5	26.0	24.0	25.0
26	27.5	26.0	26.5	31.5	30.0	30.5	29.5	28.5	29.0	26.5	25.0	26.0
27	28.0	26.5	27.5	31.0	29.5	30.5	29.0	27.5	28.0	26.5	25.0	26.0
28	27.5	24.5	26.0	30.0	28.5	29.0	28.0	26.5	27.0	26.0	24.5	25.5
29	25.5	25.0	25.0	29.0	27.5	28.5	28.5	26.5	27.5	26.0	24.5	25.5
30	26.0	24.5	25.0	30.0	28.5	29.0	28.0	26.5	27.5	25.5	23.5	24.5
31	---	---	---	29.5	26.5	28.0	---	---	---	---	---	---
MONTH	29.5	21.0	26.0	31.5	26.0	29.0	31.5	24.5	28.5	29.5	23.5	27.0
YEAR	31.5	7.0	20.0									

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.1	7.1	7.4	---	---	---	---	---	---	11.7	10.4	10.7
2	7.3	6.6	6.9	7.0	6.0	6.5	---	---	---	10.8	10.2	10.4
3	7.4	6.5	6.9	7.0	6.0	6.5	---	---	---	---	---	---
4	7.1	6.6	6.8	7.6	6.5	7.0	---	---	---	---	---	---
5	7.4	6.5	6.8	8.4	6.9	7.3	---	---	---	---	---	---
6	7.5	6.9	7.1	9.0	6.9	7.4	---	---	---	---	---	---
7	7.6	6.9	7.3	7.1	6.9	7.0	13.8	11.2	12.7	---	---	---
8	7.5	6.9	7.2	7.3	6.9	7.2	11.6	10.2	10.8	---	---	---
9	7.5	7.0	7.3	7.5	7.1	7.3	10.9	9.6	10.2	10.5	9.7	10.1
10	7.6	6.8	7.2	8.8	7.4	7.9	10.2	9.0	9.8	---	---	---
11	7.6	6.8	7.2	---	---	---	---	---	---	---	---	---
12	7.3	6.6	7.0	---	---	---	---	---	---	---	---	---
13	7.5	6.7	7.0	---	---	---	---	---	---	---	---	---
14	7.3	6.5	6.9	9.0	6.8	8.1	---	---	---	---	---	---
15	7.5	6.7	7.0	9.1	5.9	7.2	---	---	---	11.5	11.1	11.4
16	7.5	6.9	7.2	9.3	6.1	8.2	---	---	---	11.9	11.2	11.6
17	7.5	6.8	7.2	8.6	8.0	8.4	---	---	---	12.0	11.6	11.8
18	7.4	6.7	7.0	10.1	8.1	8.8	---	---	---	11.8	11.5	11.6
19	7.3	6.4	6.9	---	---	---	---	---	---	12.4	11.7	12.0
20	7.7	6.8	7.1	11.8	8.7	10.8	---	---	---	13.1	11.6	12.6
21	7.6	7.0	7.3	---	---	---	10.9	9.7	10.4	12.9	12.0	12.5
22	7.5	6.7	7.0	---	---	---	10.1	9.7	9.9	12.6	11.6	12.1
23	6.8	6.3	6.6	---	---	---	10.1	9.7	9.9	12.5	11.8	12.1
24	6.7	6.2	6.4	12.9	11.4	12.1	10.3	10.0	10.2	12.9	9.9	12.0
25	6.5	6.1	6.3	11.7	10.8	11.3	11.7	10.4	10.9	---	---	---
26	---	---	---	11.2	9.9	10.5	---	---	---	---	---	---
27	---	---	---	11.6	8.8	9.7	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	10.2	9.9	10.0	---	---	---
30	---	---	---	---	---	---	10.3	9.9	10.1	---	---	---
31	---	---	---	---	---	---	11.4	10.1	10.5	---	---	---
MONTH	8.1	6.1	7.0	12.9	5.9	8.4	13.8	9.0	10.4	13.1	9.7	11.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	12.5	11.9	12.1	---	---	---	---	---	---
2	---	---	---	12.3	11.0	11.8	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	7.8	6.5	7.1
19	10.3	8.4	9.4	---	---	---	---	---	---	6.6	6.2	6.3
20	9.3	8.2	8.6	---	---	---	---	---	---	6.3	6.0	6.2
21	9.0	8.1	8.5	---	---	---	---	---	---	6.6	6.2	6.4
22	8.5	7.9	8.3	---	---	---	---	---	---	6.8	5.9	6.5
23	8.5	7.6	7.8	---	---	---	---	---	---	7.0	6.6	6.8
24	9.1	7.5	8.3	---	---	---	---	---	---	7.0	6.8	6.9
25	9.4	7.2	8.0	---	---	---	---	---	---	7.1	6.8	7.0
26	10.9	8.8	10.0	---	---	---	---	---	---	---	---	---
27	11.4	9.9	10.5	---	---	---	---	---	---	---	---	---
28	12.7	10.4	11.7	---	---	---	---	---	---	---	---	---
29	12.4	10.5	11.4	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	12.7	7.2	9.3	12.5	11.0	11.9	---	---	---	7.8	5.9	6.6

08057410 TRINITY RIVER BELOW DALLAS, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	5.7	4.6	5.2	---	---	---
2	---	---	---	---	---	---	6.0	5.1	5.5	---	---	---
3	---	---	---	---	---	---	6.3	4.9	5.8	6.2	5.1	5.5
4	---	---	---	---	---	---	5.9	3.4	5.3	5.7	4.8	5.2
5	---	---	---	---	---	---	5.7	4.1	5.0	6.1	5.7	5.8
6	7.7	6.9	7.2	---	---	---	6.6	5.6	6.0	6.4	5.7	6.0
7	7.4	6.6	7.0	---	---	---	7.2	6.2	6.6	6.2	5.4	5.7
8	7.7	7.4	7.5	---	---	---	7.2	6.2	6.6	5.3	4.3	4.8
9	7.9	7.4	7.6	---	---	---	7.3	6.3	6.8	5.6	4.1	4.6
10	7.7	7.4	7.5	---	---	---	6.8	5.8	6.3	4.9	3.0	4.3
11	7.6	7.1	7.3	---	---	---	6.3	4.7	5.7	4.9	2.8	4.0
12	7.4	6.6	7.2	---	---	---	5.5	4.5	5.0	6.0	5.1	5.4
13	7.4	6.4	7.0	---	---	---	5.0	3.8	4.6	6.2	5.7	6.0
14	6.8	6.3	6.6	---	---	---	5.2	4.5	4.7	6.0	5.9	5.9
15	---	---	---	---	---	---	5.8	5.0	5.5	6.1	5.8	6.0
16	---	---	---	---	---	---	6.5	5.7	6.0	6.6	5.9	6.1
17	---	---	---	---	---	---	6.8	5.9	6.3	6.7	6.1	6.5
18	---	---	---	---	---	---	6.5	6.0	6.2	7.4	6.4	6.8
19	---	---	---	---	---	---	6.3	5.4	6.0	8.1	6.6	7.2
20	---	---	---	---	---	---	---	---	---	7.8	7.0	7.4
21	---	---	---	---	---	---	---	---	---	7.3	3.9	5.5
22	---	---	---	---	---	---	6.4	6.2	6.3	4.6	2.2	3.2
23	---	---	---	---	---	---	6.8	6.1	6.4	6.1	4.3	5.4
24	---	---	---	---	---	---	7.0	6.2	6.6	6.5	6.1	6.2
25	---	---	---	---	---	---	6.5	5.9	6.2	6.4	6.1	6.3
26	---	---	---	---	---	---	6.5	5.6	6.0	6.2	5.9	6.1
27	6.0	4.7	5.5	---	---	---	5.8	5.2	5.5	7.1	5.9	6.4
28	6.6	5.1	6.0	---	---	---	5.5	5.2	5.4	---	---	---
29	5.8	5.4	5.5	5.0	2.3	3.9	5.4	5.0	5.2	---	---	---
30	---	---	---	5.7	4.8	5.2	5.7	5.2	5.4	---	---	---
31	---	---	---	6.1	4.5	5.6	---	---	---	---	---	---
MONTH	7.9	4.7	6.8	6.1	2.3	4.9	7.3	3.4	5.8	8.1	2.2	5.7
YEAR	13.8	2.2	7.5									

08057441 NEWTON CREEK OUTALL AT TIOGA STREET, DALLAS, TX

LOCATION.--Lat 32°39'57", long 96°45'08", Dallas County, Hydrologic Unit 12030105, on Tioga Street, 0.5 mile east of Bonnie View Road, about 1.0 mile north of Interstate Highway 20, and about 9.0 miles southeast of Dallas.

DRAINAGE AREA.--0.06 mi².

PERIOD OF RECORD.-- Chemical and biochemical analyses: Febuary 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
FEB 22-22	0118	0.70	2.5	0.18	480	196	7.4	8.0	16.0	92	6.5	2200
MAR 09-09	0255	0.47	0.80	0.14	48	215	8.5	7.9	18.0	110	8.1	220000
APR 06-06	0051	0.41	5.4	0.09	77	109	7.4	7.3	16.5	1300	8.0	7000
APR 28-29	2355	0.30	0.90	0.09	72	152	8.3	7.9	19.5	140	3.9	>200000
JUL 18-18	1344	0.56	2.0	0.12	78	102	8.2	7.6	27.0	59	--	46000
SEP 01-01	1324	0.34	0.60	0.08	70	235	8.1	7.5	27.0	110	12	490000
SEP 21-21	0155	0.91	2.1	0.24	110	58	7.4	6.7	24.5	100	6.8	K260000

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
FEB 22-22	25000	28	1	27	73	209	53	11	0.23	0.90	6	0.1
MAR 09-09	220000	28	4	24	62	230	40	11	0.24	1.6	10	0.1
APR 06-06	29000	33	0	33	54	59	61	13	0.21	1.4	8	0.1
APR 28-29	>330000	26	6	20	66	228	66	10	0.24	1.0	7	0.1
JUL 18-18	16000	29	6	23	55	100	60	11	0.26	1.2	8	0.1
SEP 01-01	260000	22	6	16	82	365	35	8.3	0.22	0.90	7	0.1
SEP 21-21	K300000	21	1	20	32	5	959	8.1	0.23	0.90	7	0.1

08057441 NEWTON CREEK OUTALL AT TIOGA STREET, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)
FEB 22-22	1.9	4.0	1.4	0.040	0.330	0.120	1.9	0.500	0.200	<10.0	1	<10
MAR 09-09	1.9	5.2	1.6	0.040	0.390	0.140	1.7	0.350	0.120	<20.0	2	<10
APR 06-06	2.6	3.7	0.90	0.040	0.380	0.300	1.1	0.280	0.190	<10.0	1	<10
APR 28-29	2.8	4.6	0.70	0.030	0.470	0.290	1.5	0.300	0.200	<10.0	<1	<10
JUL 18-18	2.8	2.8	1.2	0.030	0.390	0.120	1.7	0.370	0.200	<10.0	3	<10
SEP 01-01	2.7	2.4	0.60	0.020	0.270	0.110	1.1	0.290	0.170	<20.0	2	<10
SEP 21-21	3.2	3.5	2.6	0.020	0.340	0.130	2.0	0.530	0.230	<10.0	2	<10

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	THALLIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 22-22	<1	3	12	<0.010	48	<0.10	8	<2	<1	<5	100	20
MAR 09-09	<1	7	14	<0.010	46	<0.10	9	<2	<1	<10	180	27
APR 06-06	<1	3	11	<0.010	17	<0.10	2	<2	<1	<10	70	370
APR 28-29	<1	5	13	<0.010	48	<0.10	12	<2	<1	<5	130	28
JUL 18-18	<1	1	7	<0.010	41	<0.10	5	<2	<1	<5	60	26
SEP 01-01	<1	7	13	<0.010	39	<0.10	13	<2	<1	<5	140	40
SEP 21-21	<1	10	14	<0.010	57	<0.10	18	<2	<1	<10	170	37

DATE	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACROLEIN TOTAL (UG/L)	ACRYLONITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMOBENZENE WATER, WHOLE, TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L)	CARBON-TETRACHLORIDE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)
FEB 22-22	1	1	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
MAR 09-09	<1	3	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
APR 06-06	4	6	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
APR 28-29	8	3	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
JUL 18-18	6	4	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
SEP 01-01	10	4	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
SEP 21-21	5	8	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20

DATE	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	METHYLCHLORIDE TOTAL (UG/L)	O-CHLOROTOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMO CHLOROPROPANE WATER WHOLE TOT,REC (UG/L)	DIBROMOMETHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)
FEB 22-22	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
MAR 09-09	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
APR 06-06	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
APR 28-29	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
JUL 18-18	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
SEP 01-01	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
SEP 21-21	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2

08057441 NEWTON CREEK OUTALL AT TIOGA STREET, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)
FEB 22-22	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MAR 09-09	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
APR 06-06	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
APR 28-29	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
JUL 18-18	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SEP 01-01	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SEP 21-21	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)
FEB 22-22	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
MAR 09-09	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
APR 06-06	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
APR 28-29	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
JUL 18-18	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
SEP 01-01	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
SEP 21-21	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2

DATE	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,2,3-TRI-CHLORO BENZENE WAT, WH REC (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	PSEUDO-CUMENE WATER UNFLTRD REC (UG/L)	MESIT-YLENE WATER UNFLTRD REC (UG/L)
FEB 22-22	<0.2	<0.2	<0.2	<0.20	<5.0	0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
MAR 09-09	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
APR 06-06	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
APR 28-29	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
JUL 18-18	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
SEP 01-01	<0.2	<0.2	0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	1.3	0.20
SEP 21-21	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20

DATE	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)
FEB 22-22	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
MAR 09-09	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
APR 06-06	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
APR 28-29	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
JUL 18-18	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
SEP 01-01	<0.2	0.90	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
SEP 21-21	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0

0805/441 NEWTON CREEK OUTALL AT TIOGA STREET, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6-DIBENZ-ANTHRA-CENE TOTAL (UG/L)	3,3'-DI-CHLORO-BENZI-DINE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)
FEB 22-22	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
MAR 09-09	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
APR 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
APR 28-29	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
JUL 18-18	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
SEP 01-01	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0

DATE	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)
FEB 22-22	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
MAR 09-09	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	13.0	<5.0
APR 06-06	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
APR 28-29	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	7.0	<5.0
JUL 18-18	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	8.0	<5.0
SEP 01-01	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	8.0	<5.0

DATE	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)
FEB 22-22	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
MAR 09-09	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
APR 06-06	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
APR 28-29	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
JUL 18-18	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
SEP 01-01	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0

DATE	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L)
FEB 22-22	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
MAR 09-09	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
APR 06-06	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
APR 28-29	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	0.030	<0.10
JUL 18-18	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
SEP 01-01	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
SEP 21-21	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

08057441 NEWTON CREEK OUTALL AT TIOGA STREET, DALLAS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CHLORDANE TRANS WATER WHOLE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN-I WATER WHOLE REC (UG/L)	ENDOSULFAN BETA TOTAL (UG/L)	ENDOSULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDEHYDE TOTAL (UG/L)
FEB 22-22	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
MAR 09-09	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
APR 06-06	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
APR 28-29	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
JUL 18-18	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
SEP 01-01	<0.10	0.3	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
SEP 21-21	<0.10	0.5	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)
FEB 22-22	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.13
MAR 09-09	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	2.4
APR 06-06	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.80
APR 28-29	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	3.3
JUL 18-18	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	7.4
SEP 01-01	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.40
SEP 21-21	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.50

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.--October 1975 to September 1980, April 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 390.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor including those for estimated daily discharges. Several observations of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 28	1930	e1,230	e19.98	Dec. 20	1500	e1,570	e21.25
Dec. 9	0315	e1,010	e18.88				

e Estimated

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.54	e10	12	e10	e3.2	e2.1	e1.8	1.8	4.3	2.3	2.9	.58
2	.60	e.32	49	e2.5	e3.1	e2.0	e1.6	1.3	7.3	1.5	1.2	.20
3	.63	e.14	6.4	e1.8	e2.9	e2.9	e1.4	.99	8.5	1.3	.62	122
4	.80	e.10	1.8	e1.5	e3.0	e59	e1.3	.86	7.2	.88	.52	3.0
5	2.2	e.07	1.2	e1.2	e3.2	e4.0	e1.2	.95	4.2	.81	.45	.94
6	1.0	e.35	1.1	e1.1	e2.9	e2.7	e13	.62	138	.67	.38	.34
7	.56	e.26	1.1	e1.0	e2.6	e2.4	e3.8	.46	2./	.75	.23	.24
8	.47	e.22	1.5	e3.0	e2.4	e2.1	e2.8	.39	3.5	.66	.21	.08
9	.43	e.13	175	e2.4	e2.6	e71	e2.3	.32	2.8	.56	.32	.04
10	.43	e.10	4.8	e1.8	e2.4	e5.4	e2.2	.34	.76	1.1	2.5	.04
11	.45	e.11	47	e1.6	e2.4	e2.5	e2.3	.43	1.5	1.1	.54	3.7
12	.43	e.11	23	e2.3	e5.9	e1.9	e1.8	.39	.88	.87	2.7	1.1
13	.49	e.28	6.8	e3.7	e2.7	e1.8	1.9	.42	.24	.76	5.0	.42
14	.34	.21	3.3	e3.1	e5.3	e1.8	1.2	.40	.11	.70	1.1	.30
15	.38	.19	1.8	e2.5	e2.8	e1.7	.99	69	.08	.70	.56	.18
16	.23	2.6	1.4	e2.1	e2.4	e1.6	.88	4.8	.27	.71	.34	.23
17	e.85	26	1.2	e1.8	e2.4	e63	1.2	22	.16	.58	.18	.19
18	e.60	2.3	1.2	e11	e2.7	e32	1.1	195	.09	1.4	.12	.44
19	e.45	27	103	e3.4	e3.1	e3.5	13	81	.05	4.3	6.2	.64
20	e.55	5.7	e541	e2.7	e3.4	e2.8	8.2	23	2.4	1.2	3.1	.42
21	e.60	.75	e64	e12	e3.6	e2.6	1.9	9.4	1.4	.72	1.0	79
22	e.75	.60	e58	e26	e58	e2.3	1.2	28	1.1	.61	.48	1.8
23	e.60	.52	e19	e5.6	e12	e1.9	.87	11	.71	.78	.36	.48
24	e.50	.56	e6.0	e3.4	e148	e6.3	.74	3.9	.27	.56	.30	.18
25	e.45	.52	e3.3	e3.0	e114	e18	.57	3.7	26	.38	.29	.19
26	e70	.47	e9.6	e24	e11	e3.6	.48	63	40	.25	.18	.30
27	e220	.38	e2.9	e258	e3.5	e3.7	.39	12	22	.17	.05	.12
28	e555	.39	e1.9	e14	e2.5	e3.6	.29	6.2	124	1.2	.10	.20
29	e270	.54	e1.5	e5.8	e2.4	e2.8	49	92	55	1.9	.22	.17
30	e25	5.3	e1.3	e4.1	---	e2.3	5.0	13	4.6	1.1	.09	.16
31	e65	---	e1.3	e3.5	---	e2.0	---	6.1	---	40	.11	---
TOTAL	1220.33	86.22	1152.4	419.9	416.4	315.3	124.41	652.77	460.12	70.52	32.35	217.68
MEAN	39.4	2.87	37.2	13.5	14.4	10.2	4.15	21.1	15.3	2.27	1.04	7.26
MAX	555	27	541	258	148	71	49	195	138	40	6.2	122
MIN	.23	.07	1.1	1.0	2.4	1.6	.29	.32	.05	.17	.05	.04
AC-FT	2420	171	2290	833	826	625	247	1290	913	140	64	432

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1992, BY WATER YEAR (WY)

MEAN	10.0	5.60	9.49	6.61	9.81	10.2	12.2	17.3	8.41	2.35	1.27	3.01
MAX	45.4	16.1	37.2	19.8	20.8	26.6	42.1	72.4	35.5	12.6	5.51	8.30
(WY)	1985	1991	1992	1990	1989	1977	1990	1989	1989	1989	1979	1980
MIN	.000	.33	.42	.12	.34	1.33	.66	.64	.32	.000	.000	.005
(WY)	1976	1990	1978	1976	1976	1986	1978	1977	1978	1980	1980	1984

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1976 - 1992	
ANNUAL TOTAL	4786.18		5168.40			
ANNUAL MEAN	13.1		14.1		8.25	
HIGHEST ANNUAL MEAN					15.6	1989
LOWEST ANNUAL MEAN					1.61	1978
HIGHEST DAILY MEAN	555	Oct 28	555	Oct 28	1150	May 17 1989
LOWEST DAILY MEAN	.00	Aug 5	.04	Sep 9	.00	Oct 1 1975
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 5	.14	Jun 13	.00	Oct 1 1975
INSTANTANEOUS PEAK FLOW					5660	May 17 1989
INSTANTANEOUS PEAK STAGE					29.21	May 17 1989
INSTANTANEOUS LOW FLOW			.00	Oct 25	.00	*
ANNUAL RUNOFF (AC-FT)	9490		10250		5970	
10 PERCENT EXCEEDS	18		26		8.2	
50 PERCENT EXCEEDS	1.5		1.6		.71	
90 PERCENT EXCEEDS	.11		.22		.00	

* No flow at times most years.

08058900 EAST FORK TRINITY RIVER AT MCKINNEY, TX

LOCATION.--Lat 33°14'38", long 96°36'31", Collin County, Hydrologic Unit 12030106, at downstream side of highway embankment near left end of main channel bridge on State Highways 5 and 121, 750 ft downstream from Honey Creek, 1.2 mi upstream from Southern Pacific Railway Co. bridge, 1.7 mi upstream from Clemons Creek, 3.3 mi north of McKinney, 26.1 mi upstream from Lavon Dam, and 86.5 mi upstream from mout

DRAINAGE AREA.--164 mi².

PERIOD OF RECORD.--October 1975 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1980 to August 1982, November 1985 to June 1987.

GAGE.--Water-stage recorder. Datum of gage id 528.74 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair, including those of estimated daily discharges. Flow from 89.1² above this station is affected at times by discharge from the flood-detention pools of 49 floodwater-retarding structures with a combined detention capacity of 26,000 acre-ft. Several observations of water temperature were made during the year. A nonrecording rain gage and gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1913, about 28 ft in April 1942 (discharge not determined), from information by State Department of Highways and Public Transportation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1480	146	690	e269	225	51	35	40	104	33	.00
2	.00	926	800	e538	e237	179	46	30	49	70	23	.00
3	.00	757	659	e439	e207	161	45	26	46	43	20	138
4	.00	635	363	e381	e178	525	43	23	38	33	18	59
5	.00	483	259	e337	e153	585	40	19	30	26	24	27
6	.00	409	197	310	132	317	46	15	79	20	17	21
7	.00	348	163	289	e117	230	49	13	60	17	13	19
8	.00	291	164	253	e111	190	43	13	321	14	11	17
9	.00	e245	2030	203	e106	1450	41	11	154	13	10	15
10	.00	e206	877	169	e102	650	37	11	100	12	8.9	13
11	.00	e173	826	156	102	374	33	10	121	11	7.4	14
12	.00	e147	1710	e158	151	284	347	15	77	9.3	5.7	16
13	.00	122	e732	222	125	214	237	13	54	8.2	5.1	14
14	.00	115	e509	420	116	178	135	20	42	7.3	3.9	13
15	.00	114	e407	e274	105	154	103	17	32	9.9	3.2	12
16	.00	104	349	e219	93	134	79	12	24	7.8	2.4	10
17	.00	180	287	204	93	125	95	40	19	83	1.6	9.7
18	.00	191	244	96	83	215	415	104	15	190	1.0	8.5
19	.00	217	778	e691	74	137	169	73	12	134	1.3	7.7
20	.00	352	5000	e442	70	108	151	40	14	44	1.4	6.6
21	.00	215	6280	62	68	99	110	32	15	25	1.3	12
22	.00	171	2830	623	93	94	97	28	13	20	.66	20
23	.00	139	3040	e539	235	83	96	67	12	18	.20	16
24	.00	118	e1420	e417	167	78	85	179	10	17	.04	13
25	.00	112	e1220	e364	1630	98	66	71	444	15	.01	12
26	460	106	e1080	e356	901	89	52	46	457	14	.01	10
27	924	103	962	739	525	76	43	38	208	21	.00	8.2
28	2100	109	828	673	379	71	37	53	198	50	.00	6.9
29	4230	104	e707	e478	290	72	41	52	316	23	.00	5.1
30	2000	121	e597	e381	---	61	39	39	201	19	.00	3.5
31	1530	---	503	e315	---	54	---	35	---	86	.00	---
TOTAL	11244.00	8793	35967	11438	6912	7310	2871	1180	3201	1164.5	213.12	527.20
MEAN	363	293	1160	369	238	236	95.7	38.1	107	37.6	6.87	17.6
MAX	4230	1480	6280	739	1630	1450	415	179	457	190	33	138
MIN	.00	103	146	62	68	54	33	10	10	7.3	.00	.00
AC-FT	22300	17440	71340	22690	13710	14500	5690	2340	6350	2310	423	1050

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1992, BY WATER YEAR (WY)

MEAN	89.3	65.4	121	69.8	152	195	139	287	166	18.0	3.30	3.89
MAX	1022	570	1160	369	562	598	804	1704	737	77.6	19.0	27.8
(WY)	1982	1982	1992	1992	1986	1977	1990	1982	1989	1982	1990	1980
MIN	.000	.000	.000	.000	1.37	2.30	4.08	6.08	1.28	.000	.000	.000
(WY)	1978	1978	1978	1978	1976	1976	1980	1988	1984	1984	1980	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1976 - 1992	
ANNUAL TOTAL	63302.07		90820.82			
ANNUAL MEAN	173		248		109	
HIGHEST ANNUAL MEAN					373	1982
LOWEST ANNUAL MEAN					4.65	1980
HIGHEST DAILY MEAN	6280	Dec 21	6280	Dec 21	26800	May 13 1982
LOWEST DAILY MEAN	.00	Jul 10	.00	Oct 1	.00	Aug 18 1976
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 10	.00	Oct 1	.00	Aug 18 1976
INSTANTANEOUS PEAK FLOW			12400	Dec 21	61800	May 13 1982
INSTANTANEOUS PEAK STAGE			20.16	Dec 21	22.17	May 13 1982
INSTANTANEOUS LOW FLOW			.00	Oct 1	.00	at times
ANNUAL RUNOFF (AC-FT)	125600		180100		79020	
10 PERCENT EXCEEDS	356		605		208	
50 PERCENT EXCEEDS	19		75		11	
90 PERCENT EXCEEDS	.00		.52		.00	

08059400 SISTER GROVE CREEK NEAR BLUE RIDGE, TX

LOCATION.--Lat 33°17'40", long 96°28'58", Collin County, Hydrologic Unit 12030106, on left bank at upstream side of highway embankment of bridge on Farm Road 545, 3.5 mi upstream from Hatler Branch, 4.8 mi west of Blue Ridge, 7.4 mi upstream from Stiff Creek, 14.7 mi upstream from mouth, and 24.7 mi upstream from Lavon Dam.

DRAINAGE AREA.--83.1 mi².

PERIOD OF RECORD.--July 1975 to current year.
Water-quality records.--Chemical and bilchemical analyses: November 1985 to June 1987.

GAGE.--Water-stage recorder. Datum of gage is 526.29 ft above National Geodetic Vertical Datum of 1929. Prior to June 29, 1988, at datum 10.00 ft higher at same site.

REMARKS.--No estimated daily discharges. Records good. Flow is affected at times by discharge from the flood-detention pools of 34 floodwater-retarding structures with a combined detention capacity of 12,710 acre-ft. These structures control runoff from 47.4 mi². Several observations of water temperature were made during the year. Gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 30.7 ft, present datum, probably occurred in July 1913, from information by State Department of Highways and Public Transportation. The probable date is from published records for discontinued station 08059500, located 9.7 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	736	144	288	121	139	50	31	32	79	175	1.6
2	.08	534	464	237	110	119	47	26	43	51	183	3.0
3	.04	458	404	199	103	113	44	24	49	37	173	123
4	.20	388	253	180	97	348	43	22	36	30	60	65
5	8.6	356	205	158	85	569	41	20	29	25	25	38
6	2.0	336	184	144	78	314	45	17	57	20	19	24
7	.40	297	174	135	73	219	46	15	58	17	18	17
8	.19	249	221	126	67	178	42	14	488	14	15	13
9	.14	214	1010	109	64	756	39	14	231	12	9.6	11
10	.08	179	670	94	61	363	36	13	118	11	7.0	10
11	.96	161	587	88	61	259	34	14	109	9.8	4.2	21
12	.41	149	857	100	82	208	444	34	73	8.7	4.3	19
13	.15	140	512	114	73	160	310	21	53	7.6	5.4	10
14	.06	130	378	157	68	135	195	30	37	6.9	5.6	8.7
15	5.5	125	301	117	62	120	130	27	28	9.7	5.1	6.6
16	74	136	238	96	55	103	102	21	23	8.6	4.9	6.0
17	132	210	211	94	55	141	82	32	20	29	4.9	5.9
18	141	202	175	282	50	228	210	98	17	42	4.2	5.1
19	145	234	329	310	45	124	107	94	15	51	5.6	4.5
20	147	263	1130	224	42	97	108	62	16	25	6.5	4.2
21	149	180	1350	186	40	89	78	42	19	17	5.5	8.4
22	152	155	1040	302	53	85	66	32	15	13	4.7	18
23	151	133	1010	202	111	77	53	38	14	11	4.0	9.9
24	155	118	711	140	82	73	45	63	13	9.7	2.9	7.4
25	157	112	601	121	742	99	38	45	403	41	2.5	5.9
26	265	108	523	114	455	83	32	37	354	110	2.2	5.1
27	585	105	444	329	300	73	31	28	191	152	1.9	4.6
28	859	106	381	333	227	68	28	25	133	163	1.7	4.7
29	1000	105	311	218	176	70	34	34	168	118	1.9	3.8
30	832	121	247	168	---	58	32	32	139	107	1.8	3.3
31	745	---	213	141	---	52	---	30	---	199	1.5	---
TOTAL	5707.96	6740	15278	5506	3638	5520	2592	1035	2981	1435.0	765.9	467.7
MEAN	184	225	493	178	125	178	86.4	33.4	99.4	46.3	24.7	15.6
MAX	1000	736	1350	333	742	756	444	98	488	199	183	123
MIN	.04	105	144	88	40	52	28	13	13	6.9	1.5	1.6
AC-FT	11320	13370	30300	10920	7220	10950	5140	2050	5910	2850	1520	928

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1992, BY WATER YEAR (WY)

MEAN	42.7	40.2	62.0	46.2	90.9	110	88.7	130	87.4	12.1	3.41	2.69
MAX	451	294	493	178	266	340	477	714	348	54.4	24.7	15.6
(WY)	1982	1982	1992	1992	1989	1990	1990	1982	1989	1982	1992	1992
MIN	.000	.000	.000	1.55	1.81	2.92	3.46	6.99	1.22	.000	.000	.000
(WY)	1978	1978	1978	1976	1976	1976	1980	1988	1980	1978	1978	1978

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1976 - 1992	
ANNUAL TOTAL	34709.30		51666.56			
ANNUAL MEAN	95.1		141		59.5	
HIGHEST ANNUAL MEAN					169	1982
LOWEST ANNUAL MEAN					4.22	1980
HIGHEST DAILY MEAN	1350	Dec 21	1350	Dec 21	8560	May 13 1982
LOWEST DAILY MEAN	.00	Aug 22	.04	Oct 3	.00	Oct 14 1975
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 22	.28	Oct 8	.00	Oct 14 1975
INSTANTANEOUS PEAK FLOW			1480	Dec 21	13300	May 13 1982
INSTANTANEOUS PEAK STAGE			24.35	Dec 21	32.50	May 13 1982
INSTANTANEOUS LOW FLOW					.00	*
ANNUAL RUNOFF (AC-FT)	68850		102500		43110	
10 PERCENT EXCEEDS	248		350		133	
50 PERCENT EXCEEDS	19		73		8.4	
90 PERCENT EXCEEDS	.19		5.0		.00	

* No flow at times most years.

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.--September 1953 to current year. Prior to October 1970, published as Lavon Reservoir.
Water-quality records.--Chemical analyses: October 1969 to September 1974, October 1975 to September 1982.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Jan. 20, 1954, non-recording gage in the approach channel at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam 18,860 ft long, including a 568-foot gated spillway with twelve 40.0- by 28.0-foot tainter gates. The original dam was 9,499 ft long, but conservation capacity was increased to present size in December 1975. Deliberate impoundment began Sept. 14, 1953, and the dam was completed in October 1953. Low-flow outlets consist of five 36-inch-diameter controlled sluice gates. Capacity Table No. 9, now in use, is based on Design Memo, 1970 Conditions. 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. Gage-height telemeter at station. Figures given herein represent total contents. Data regarding dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	514.0	-
Design flood	509.0	921,200
Top of tainter gates	503.5	748,200
Top of conservation pool	492.0	456,500
Crest of spillway (sill of tainter gates)	475.5	178,300
Lowest gated outlet (invert)	453.0	12,700

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 791,000 acre-ft May 3, 1990 (elevation, 504.93 ft); minimum since lake first filled in 1957, 80,150 acre-ft Apr. 17, 1976 (elevation, 465.96 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 720,300 acre-ft Jan. 2 (elevation, 502.55 ft); minimum daily, 378,200 acre-ft Oct. 24 (elevation, 488.10 ft).

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

488.0	376,200	494.0	500,600	500.0	649,400
490.0	415,200	496.0	547,400	502.0	704,700
492.0	456,500	498.0	597,000	503.0	733,500

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	393800	493300	461000	717100	696600	659200	634500	518200	464400	493900	455800	435600
2	393000	499800	465300	720300	693200	656000	630300	513600	463100	493100	456200	434600
3	392000	503600	470500	720000	692100	652400	625000	507100	461800	489000	456400	443100
4	391200	505500	471200	717100	691600	661100	618700	503000	460300	485000	456000	443100
5	391100	504800	469800	714500	686800	669300	613000	498400	459200	480500	455600	442700
6	389900	503200	468100	712500	682600	672900	609700	493500	460700	475700	454700	442300
7	388700	501100	465900	708500	678700	673400	605800	488100	461200	471800	453700	441700
8	388000	497700	470100	705300	674800	670400	600400	482300	466600	468800	452800	441000
9	387400	494800	505300	701400	670700	689600	596000	476600	470500	466400	452000	440200
10	387000	492200	520700	697700	666900	702800	592000	470900	470700	464600	451400	440600
11	386400	489000	530800	693800	662800	703600	588200	469400	470500	462700	450700	439400
12	385900	485700	542900	690400	661700	702200	590500	469000	468500	460500	450700	438700
13	385100	482300	550900	687600	657900	699400	592000	467700	465300	459000	449900	437900
14	384300	479000	553800	684000	654600	697200	589500	466800	461800	458300	449200	437300
15	383600	476600	554300	680100	650800	693800	586200	466800	459900	457300	448000	436800
16	382200	476600	552100	675100	647000	689600	582900	464900	458300	457700	446900	436000
17	381400	477000	551100	673700	643000	687400	579400	471400	458100	456800	446100	435200
18	381000	476100	548900	677300	639100	691300	576400	480800	457500	456400	445700	434600
19	380700	477700	555300	680100	635100	691000	573900	486800	457000	455800	445000	433900
20	380100	478500	598100	678900	630800	687900	572400	489000	457300	455800	444400	434200
21	379500	477000	648100	677800	626800	683400	571900	489300	456800	455100	443800	434200
22	378900	474600	669100	682300	627600	678700	564500	486800	456000	454500	442900	433500
23	378400	470100	687900	682900	630600	674200	558700	483700	455400	453900	441900	432100
24	378200	466600	696300	679500	636400	669600	553800	481000	454500	453000	441000	431100
25	378400	463600	703100	677300	651600	666100	549400	478300	466200	452200	440600	429900
26	382800	461600	709100	675600	661100	662000	544800	476600	473300	451100	441500	429900
27	389500	461000	714500	687400	664700	657000	540100	474000	473300	451600	440200	428700
28	412300	460300	718500	694900	665500	652100	535100	471600	481400	452800	438900	427800
29	447600	460700	718300	698300	662500	647800	531100	469600	491000	453500	437900	426600
30	469200	461200	715100	700300	---	643000	524600	468500	493900	453700	436800	426000
31	482800	---	712800	699700	---	639300	---	466200	---	455400	435800	---
MAX	482800	505500	718500	720300	696600	703600	634500	518200	493900	493900	456400	443100
MIN	378200	460300	461000	673700	626800	639300	524600	464900	454500	451100	435800	426000
(†)	493.19	492.20	502.27	501.81	500.47	499.61	495.03	492.43	493.69	491.93	491.00	490.52
(ϕ)	+88500	-21600	+251600	-13100	-37200	-2320	-114700	-58400	+27700	-38500	-19600	-9800

CAL YR 1991 MAX 718500 MIN 378200 (ϕ) +326800
WTR YR 1992 MAX 720300 MIN 378200 (ϕ) +31700

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

08061540 ROWLETT CREEK NEAR SACHSE, TX

LOCATION.--Lat 32°57'35", long 96°36'51", Dallas County, Hydrologic Unit 12030106, on left bank at downstream side of bridge on State Highway 78, 150 ft downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 250 ft downstream from Spring Creek, and 1.5 mi southwest of Sachse.

DRAINAGE AREA.--120 mi².

PERIOD OF RECORD.--March 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 450.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. There are no known diversions above station. The North Texas Municipal Water District returns sewage effluent into a tributary above this station. Several observations of water temperature were made during the year. Rain gage and gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1942, 35.4 ft in 1942, from information by State Department of Highways and Public Transportation.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 28	1315	6,040	24.16	Dec. 20	2000	20,300	27.79
Dec. 9	0415	5,690	23.99				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	655	280	337	216	130	67	36	197	142	239	37
2	34	346	825	287	188	120	63	31	482	106	363	39
3	33	271	296	268	169	123	62	28	175	96	147	888
4	31	239	196	256	165	765	63	30	137	87	78	84
5	28	209	171	249	145	516	59	30	121	85	70	55
6	27	190	157	236	135	191	212	27	571	80	64	45
7	32	170	166	228	125	145	72	30	164	73	57	41
8	29	151	248	210	111	125	63	32	417	64	52	41
9	26	142	2960	190	103	1970	59	30	306	64	48	38
10	26	136	505	184	99	383	55	30	153	59	46	45
11	28	130	918	204	97	245	52	30	206	56	46	81
12	26	123	1060	206	211	206	215	52	129	54	100	44
13	27	121	430	311	118	175	79	29	112	52	97	41
14	26	113	325	230	103	155	57	858	100	51	54	39
15	24	108	277	186	93	140	51	125	93	58	49	38
16	24	308	254	170	83	124	48	74	86	60	47	36
17	24	458	230	193	84	359	51	1270	76	55	43	33
18	25	218	223	740	79	414	85	1900	68	64	45	28
19	24	684	1520	340	72	135	257	517	67	55	66	27
20	26	364	7350	250	70	116	94	556	151	146	55	37
21	26	231	3960	317	69	112	59	276	69	77	42	200
22	25	196	1530	525	285	106	52	328	61	72	38	53
23	27	163	852	255	210	98	47	193	59	60	34	40
24	28	147	502	188	339	135	45	246	56	49	32	34
25	28	142	425	165	1450	198	41	314	358	47	34	30
26	1710	132	424	283	355	84	40	194	122	45	31	29
27	1680	126	445	1860	223	77	38	141	94	79	27	28
28	3150	120	367	782	174	84	40	445	902	334	26	29
29	4050	113	335	419	149	81	66	242	820	453	25	29
30	1050	132	310	301	---	72	36	161	217	70	25	28
31	1210	---	287	248	---	67	---	155	---	670	26	---
TOTAL	13537	6638	27828	10618	5720	7651	2228	8410	6569	3463	2106	2217
MEAN	437	221	898	343	197	247	74.3	271	219	112	67.9	73.9
MAX	4050	684	7350	1860	1450	1970	257	1900	902	670	363	888
MIN	24	108	157	165	69	67	36	27	56	45	25	27
AC-FT	26850	13170	55200	21060	11350	15180	4420	16680	13030	6870	4180	4400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1992, BY WATER YEAR (WY)

MEAN	112	81.0	137	87.6	136	161	152	232	143	40.6	27.9	48.3
MAX	610	291	898	343	376	431	573	1039	566	160	82.3	180
(WY)	1982	1982	1992	1992	1975	1977	1990	1982	1981	1981	1990	1974
MIN	4.88	7.63	7.52	6.72	7.83	11.9	23.8	18.8	4.60	1.91	1.78	3.75
(WY)	1979	1976	1978	1976	1976	1971	1972	1972	1971	1972	1972	1969

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1969 - 1992	
ANNUAL TOTAL	89096		96985			
ANNUAL MEAN	244		265		113	
HIGHEST ANNUAL MEAN					265	1992
LOWEST ANNUAL MEAN					22.2	1971
HIGHEST DAILY MEAN	7350	Dec 20	7350	Dec 20	14900	May 13 1982
LOWEST DAILY MEAN	13	Aug 29	24	Oct 15	.00	Aug 24 1969
ANNUAL SEVEN-DAY MINIMUM	18	Aug 2	25	Oct 14	.00	Aug 24 1969
INSTANTANEOUS PEAK FLOW			20300	Dec 20	31900	May 17 1989
INSTANTANEOUS PEAK STAGE			27.79	Dec 20	29.62	May 17 1989
INSTANTANEOUS LOW FLOW					.00	*
ANNUAL RUNOFF (AC-FT)	176700		192400		81940	
10 PERCENT EXCEEDS	450		503		174	
50 PERCENT EXCEEDS	86		113		37	
90 PERCENT EXCEEDS	27		30		6.9	

* No flow Aug. 24 to Sept. 2, 1969.

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 in Forney Dam on East Fork Trinity River, 0.5 mi upstream from Duck Creek, 1.8 mi upstream from bridge on Interstate Highway 20, 3.8 mi northwest of Forney, 24 mi downstream from Lavon Dam, and 31.8 mi upstream from mouth.

DRAINAGE AREA.--1,071 mi².

PERIOD OF RECORD.--January 1968 to current year.
Water-quality records.--Chemical analyses: October 1969 to September 1979.

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

REMARKS.--The lake is formed by a rolled earthfill dam 12,500 ft long, including a 664-foot gated spillway with fourteen 40- by 28-foot tainter gates. Closure was made in September 1967, but the gates were not closed until Mar. 22, 1978. Low-flow releases are made through three 4.5- by 6.75-foot sluiceways. The lake was built by the city of Dallas for municipal water supply. Flow is affected at times by discharge from the flood-detention pools of 14 floodwater-retarding structures with a combined detention capacity of 12,530 acre-ft. These structures control runoff from 44.5 mi² above this station and below Lavon Lake station (08060500). Gage-height telemeter at station. Area and capacity tables are based on surveys made in 1953 and 1959. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	450.0	-
Design flood	440.5	611,500
Top of tainter gates	437.5	536,700
Top of conservation pool	435.5	489,900
Crest of spillway (sill of tainter gates)	409.5	83,130
Lowest gated outlet (invert)	388.0	80

COOPERATION.--The area and capacity tables were provided by Forrest and Cotton, Consulting Engineers, for the city of Dallas.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 544,100 acre-ft May 4, 1990 (elevation, 437.81 ft); minimum since first appreciable filling following closure of gates on Mar. 22, 1970, 326,600 acre-ft Sept. 29, 30, 1978 (elevation, 427.48 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 516,300 acre-ft Dec. 21 at 0500 hours (elevation, 436.64 ft); minimum, 447,800 acre-ft Oct. 25, 26 (elevation, 433.60 ft).

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

433.0	435,000	436.0	501,400
434.0	456,500	437.0	524,700
435.0	478,600		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	461300	490800	489900	493600	490600	490600	489000	487000	489500	489500	489000	476400
2	460900	490600	491100	489900	491300	490400	486500	489200	489700	489000	489500	474800
3	459800	488800	491100	487900	489700	490600	485600	489900	488600	489200	489500	482200
4	463100	488100	489900	487700	488800	493300	486700	489000	489000	489700	489000	481800
5	459800	489200	490400	488100	487200	489500	487400	488600	488600	489200	488800	481300
6	458900	489700	490600	488100	486500	488300	490400	487200	490400	489000	488300	481600
7	458000	492700	489700	489000	486700	488100	489000	486700	490200	488800	487200	480900
8	457200	490200	493300	489200	487000	487900	488800	486500	490600	489200	486700	480700
9	457400	490200	498400	488300	486500	500200	489000	486300	491100	489500	486500	479800
10	457200	490800	493600	487400	486500	495600	488100	485400	490400	489900	486300	480900
11	457200	490800	491300	487400	486700	489000	486500	487900	491300	489700	485800	480400
12	456500	490600	492400	487700	488300	490800	487200	490600	489500	489700	486100	479500
13	455600	490400	490800	489200	489000	490200	487200	489900	488800	489500	485600	478600
14	455200	490400	486700	488600	490200	489500	490200	492200	488300	489200	485600	478600
15	454800	490600	487000	490200	490800	488600	489900	489900	488300	488300	484000	478400
16	453900	491100	488800	487400	491100	488300	490200	490400	487900	487400	483400	477700
17	452400	490200	489700	489500	490800	490400	489700	496500	488100	487900	482900	476800
18	452600	489200	489500	490800	490800	491100	489900	496300	487700	488100	482700	476600
19	452400	492000	493800	488800	490600	490400	492200	490400	487200	484500	482200	475500
20	451100	490200	513700	489200	490200	487900	488800	488600	487900	486700	482000	476800
21	450200	488800	498600	490800	490400	485600	485800	489700	487200	487200	481600	478200
22	449100	491700	495400	492000	492900	488100	485800	489500	486500	487000	481100	477300
23	448700	489500	491100	487200	491300	486100	487900	490800	486300	486500	480000	476200
24	447800	489200	487700	486500	496100	487700	490400	489500	485800	485800	479800	474600
25	448200	489200	489000	487200	494500	488600	488800	490800	489500	485200	479500	473700
26	455600	488800	490800	489500	489000	487400	487400	489200	489700	484300	480200	474200
27	466600	488100	490600	496100	490200	488300	486300	487200	489500	485800	478600	474400
28	492900	488300	488100	492000	490800	488600	484000	489700	492000	487400	477700	472600
29	505800	490800	488600	489700	491300	490400	486100	489200	491300	487000	477300	471700
30	494000	492400	491700	489000	---	489900	486700	489200	489200	487700	476800	471300
31	492200	---	493100	489700	---	488800	---	489200	---	489900	476200	---
MAX	505800	492700	513700	496100	496100	500200	492200	496500	492000	489900	489500	482200
MIN	447800	488100	486700	486500	486500	485600	484000	485400	485800	484300	476200	471300
(↑)	435.60	435.61	435.64	435.49	435.56	435.45	435.36	435.47	435.47	435.50	434.89	434.67
(ϕ)	+30700	+200	+700	-3400	+1600	-2500	-2100	+2500	0	+700	-13700	-4900

CAL YR 1991 MAX 513700 MIN 447800 (ϕ) +30900
WTR YR 1992 MAX 513700 MIN 447800 (ϕ) +9800

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

08061635 TRIBUTARY TO DUCK CREEK OUTFALL AT JUPITER ROAD, GARLAND, TX

LOCATION.--Lat 32°53'17", long 96°40'26", Dallas County, Hydrologic Unit 12030106, on Hightower Road three blocks south of West Miller Road, 0.38 miles east of Jupiter Road, and 2.75 miles northwest of Garland.

DRAINAGE AREA.--0.06 mi².

PERIOD OF RECORD.-- Chemical and biochemical analyses: June 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
JUN 20-20	0640	0.34	3.3	0.25	235	125	7.2	7.3	23.5	67	8.9	13000
AUG 12-12	1645	0.34	1.5	0.24	85	96	7.9	8.0	26.5	52	5.0	14000
SEP 01-01	1328	0.31	2.0	0.23	61	175	7.1	7.6	25.5	76	7.5	73000
SEP 21-21	0150	0.80	3.2	0.66	195	139	7.0	8.1	24.0	62	5.2	K1600000

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
JUN 20-20	6200	39	9	30	67	91	64	15	0.28	2.2	10	0.2
AUG 12-12	11000	22	4	18	47	94	34	8.5	0.16	1.3	11	0.1
SEP 01-01	6500	34	7	27	66	144	61	13	0.31	2.3	12	0.2
SEP 21-21	K500000	16	1	15	42	99	21	6.1	0.14	1.0	11	0.1

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)
JUN 20-20	2.1	6.1	1.9	0.040	0.630	0.290	1.5	0.200	0.120	<20.0	1	<10
AUG 12-12	1.4	3.4	0.60	0.040	0.420	0.130	0.50	0.090	0.060	<10.0	1	<10
SEP 01-01	2.4	6.5	2.4	0.030	0.590	0.170	0.90	0.190	0.120	<10.0	3	<10
SEP 21-21	1.5	3.2	0.90	0.020	0.360	0.120	0.70	0.160	0.090	<10.0	3	<10

08061635 TRIBUTARY TO DUCK CREEK OUTFALL AT JUPITER ROAD, GARLAND, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	THAL-LIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
JUN 20-20	1	5	12	<0.010	48	<0.10	3	<2	<1	<10	130	20
AUG 12-12	1	3	14	<0.010	52	<0.10	4	<1	<1	<5	430	15
SEP 01-01	2	5	17	<0.010	80	<0.10	6	<2	<1	<10	190	26
SEP 21-21	1	11	13	<0.010	52	0.10	11	<2	<1	<5	200	17

DATE	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACRO-LEIN TOTAL (UG/L)	ACRYLO-NITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L)	BENZENE SEC BUTYL WATER UNFLTRD REC (UG/L)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
JUN 20-20	<1	4	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
AUG 12-12	<1	4	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
SEP 01-01	2	3	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
SEP 21-21	<1	4	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMO CHLORO-PROPANE WATER WHOLE TOT.REC (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)
JUN 20-20	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
AUG 12-12	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
SEP 01-01	<0.2	<0.2	<1.0	<0.2	<0.2	0.2	0.20	<1.0	<0.2	<0.2	<0.2	<0.2
SEP 21-21	<0.2	<0.2	<1.0	0.7	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2

08061635 TRIBUTARY TO DUCK CREEK OUTFALL AT JUPITER ROAD, GARLAND, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)
JUN 20-20	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AUG 12-12	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SEP 01-01	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SEP 21-21	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)
JUN 20-20	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
AUG 12-12	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
SEP 01-01	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
SEP 21-21	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2

DATE	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,2,3-TRI-CHLORO BENZENE WAT, WH REC (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	PSEUDO-CUMENE WATER UNFLTRD REC (UG/L)	MESIT-YLENE WATER UNFLTRD REC (UG/L)
JUN 20-20	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
AUG 12-12	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
SEP 01-01	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
SEP 21-21	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20

08061635 TRIBUTARY TO DUCK CREEK OUTFALL AT JUPITER ROAD, GARLAND, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	VINYL CHLORIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACENAPHTHENE TOTAL (UG/L)	ACENAPHTHYLENE TOTAL (UG/L)	ANTHRACENE TOTAL (UG/L)	BENZIDINE TOTAL (UG/L)	BENZO A ANTHRACENE1,2-BENZANTHRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUORANTHENE TOTAL (UG/L)	BENZO K FLUORANTHENE TOTAL (UG/L)	BENZOGH I PERYLENE1,12-BENZOPERYLENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)
JUN 20-20	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	11.0	11.0	<10.0	<10.0	<5.0
AUG 12-12	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	16.0	<5.0
SEP 01-01	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
SEP 21-21	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	10.0	15.0	<10.0	11.0	<5.0

DATE	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	PARACHLOROMETA CRESOL TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	CHRYSENE TOTAL (UG/L)	1,2,5,6-DIBENZANTHRACENE TOTAL (UG/L)	3,3'-DICHLOROBENZIDINE TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)
JUN 20-20	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
AUG 12-12	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
SEP 01-01	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	16.0	<10.0	<20.0	<5.0

DATE	DIETHYL PHTHALATE TOTAL (UG/L)	DIMETHYL PHTHALATE TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHALATE TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHALATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	FLUORANTHENE TOTAL (UG/L)
JUN 20-20	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	6.0	23.0
AUG 12-12	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	5.0	20.0
SEP 01-01	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	19.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	35.0

08061635 TRIBUTARY TO DUCK CREEK OUTFALL AT JUPITER ROAD, GARLAND, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	FLUORENE TOTAL (UG/L)	HEXACHLOROBENZENE TOTAL (UG/L)	HEXACHLOROCYCLOPENTADIENE TOTAL (UG/L)	HEXACHLOROETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISOPHORONE TOTAL (UG/L)	NITROBENZENE TOTAL (UG/L)	N-NITROSODIMETHYLAMINE TOTAL (UG/L)	2-NITROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	N-NITROSODI-N-PROPYLAMINE TOTAL (UG/L)
JUN 20-20	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
AUG 12-12	<5.0	<5.0	<5.0	<5.0	18.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
SEP 01-01	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	11.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0

DATE	N-NITROSODIPHENYLAMINE TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	PHENANTHRENE TOTAL (UG/L)	PHENOL (C6H5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXACHLORIDE TOTAL (UG/L)	DELTA BENZENE HEXACHLORIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLORDANE CIS WATER WHOLE TOTAL (UG/L)
JUN 20-20	<5.0	<30.0	11.0	<5.0	16.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
AUG 12-12	<5.0	<30.0	9.0	<5.0	14.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
SEP 01-01	<5.0	<30.0	7.0	<5.0	14.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
SEP 21-21	<5.0	<30.0	17.0	<5.0	26.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

DATE	CHLORDANE TRANS WATER WHOLE TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN-I WATER WHOLE REC (UG/L)	ENDOSULFAN BETA TOTAL (UG/L)	ENDOSULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDEHYDE TOTAL (UG/L)
JUN 20-20	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
AUG 12-12	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
SEP 01-01	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
SEP 21-21	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)
JUN 20-20	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.20
AUG 12-12	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.30
SEP 01-01	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
SEP 21-21	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.10

08061660 SLEEPY HOLLOW STREET OUTFALL AT NORTHWEST HIGHWAY, GARLAND, TX

LOCATION.--Lat 32°51'08", long 96°37'58", Dallas County, Hydrologic Unit 12030106, on north side of Northwest Highway, three blocks west of Sleepy Hollow Street, and 1.75 miles south of Garland.

DRAINAGE AREA.--0.10 mi².

PERIOD OF RECORD.-- Chemical and biochemical analyses: June 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	PH WATER WHOLE LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
SEP 01-01	1340	0.39	1.3	0.14	80	138	8.2	6.8	26.5	63	13	100000
SEP 21-21	0155	0.89	2.2	0.34	115	72	8.0	7.4	24.5	50	6.5	8000

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO
SEP 01-01	69000	21	4	17	28	<1	29	8.0	0.25	1.4	11	0.1
SEP 21-21	K4000	17	1	16	32	84	55	6.3	0.20	0.90	9	0.1

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)
SEP 01-01	2.5	3.9	0.60	0.030	0.430	0.160	1.0	0.320	0.210	<10.0	6	<10
SEP 21-21	2.3	3.3	1.5	0.020	0.350	0.170	1.4	0.330	0.180	<10.0	4	<10

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	THAL-LIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
SEP 01-01	<1	7	12	<0.010	52	<0.10	7	<2	<1	<5	140	32
SEP 21-21	<1	4	12	<0.010	20	<0.10	5	<2	<1	<5	80	14

08061660 SLEEPY HOLLOW STREET OUTFALL AT NORTHWEST HIGHWAY,GARLAND, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACRO-LEIN TOTAL (UG/L)	ACRYLO-NITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
SEP 01-01	2	4	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20
SEP 21-21	19	6	<20	<20	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMO CHLORO-PROPANE WATER WHOLE TOT.REC (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)
SEP 01-01	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2
SEP 21-21	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2

DATE	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)
SEP 01-01	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SEP 21-21	<0.2	<5.0	<5.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)
SEP 01-01	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2
SEP 21-21	<0.2	<0.2	<0.2	<5.0	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2

08061660 SLEEPY HOLLOW STREET OUTFALL AT NORTHWEST HIGHWAY, GARLAND, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	1,2,3-TRI-CHLORO BENZENE WAT, WH REC (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	PSEUDO-CUMENE WATER UNFLTRD REC (UG/L)	MESIT-YLENE WATER UNFLTRD REC (UG/L)
SEP 01-01	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20
SEP 21-21	<0.2	<0.2	<0.2	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20

DATE	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)
SEP 01-01	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0
SEP 21-21	<0.2	<0.20	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0

DATE	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6 -DIBENZ -ANTHRA -CENE TOTAL (UG/L)	3,3'-DI-CHLORO-BENZI-DINE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)
SEP 01-01	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0

DATE	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)
SEP 01-01	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	<5.0

08061660 SLEEPY HOLLOW STREET OUTFALL AT NORTHWEST HIGHWAY, GARLAND, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)
SEP 01-01	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0
SEP 21-21	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0

DATE	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L)
SEP 01-01	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10
SEP 21-21	<5.0	<30.0	<5.0	<5.0	<5.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

DATE	CHLOR-DANE TRANS WATER WHOLE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN-I WATER WHOLE REC (UG/L)	ENDO-SULFAN BETA TOTAL (UG/L)	ENDO-SULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDE-HYDE TOTAL (UG/L)
SEP 01-01	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20
SEP 21-21	<0.10	<0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
SEP 01-01	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	1.3
SEP 21-21	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.70

08061690 INTERSTATE HIGHWAY 635 OUTFALL AT CENTERVILLE ROAD, GARLAND, TX

LOCATION.--Lat 32°51'25", long 96°38'57", Dallas County, Hydrologic Unit 12030106, on west side of Centerville Road on north side of Interstate Highway 635 right-of-way, and 1.8 miles southwest of Garland.

DRAINAGE AREA.--0.06 mi².

PERIOD OF RECORD.-- Chemical and biochemical analyses: June 1992 to September 1992.

REMARKS.--Water-quality samples and associated discharge data were collected for selected storm events from storm sewer systems draining urban basins. This study is in cooperation with the North Central Texas Council of Governments to fulfill requirements (by EPA) for the cities of Arlington, Dallas, Fort Worth, Garland, Irving, Mesquite, and Plano, in applying for a National Pollution Discharge Elimination System (NPDES) municipal storm-water discharge permit for each city.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	PRECIP-ITATION TOTAL INCHES/ STORM	ELAPSED TIME OF STORM (HOURS)	STORM WATER FLOW (MGD)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH WATER WHOLE LAB (STAND-ARD UNITS)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
SEP 01-01	1330	0.22	1.5	0.33	105	7.6	58	10	40000	22000	28	49

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
SEP 01-01	128	39	9.0	1.3	0.20	1	0.0	1.4	3.5	0.60	0.020	0.390

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	ANTIMONY TOTAL (UG/L (AS SB)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)
SEP 01-01	0.100	0.40	0.110	0.080	<10.0	3	<10	<1	11	15	<0.010	67

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	THAL-LIUM, TOTAL (UG/L AS TL)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L)	PHENOLS TOTAL (UG/L)	ACRO-LEIN TOTAL (UG/L)	ACRYLO-NITRILE TOTAL (UG/L)	BENZENE TOTAL (UG/L)
SEP 01-01	<0.10	6	<2	<1	<5	150	20	2	2	<20	<20	<0.2

DATE	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)
SEP 01-01	<0.2	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20	<0.2	<0.2	<1.0	<0.2	<0.2

08061690 INTERSTATE HIGHWAY 635 OUTFALL AT CENTERVILLE ROAD, GARLAND, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	DIBROMO CHLORO-PROPANE WATER WHOLE TOT.REC (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	BENZENE O-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)
SEP 01-01	<0.2	<0.20	<1.0	<0.2	<0.2	<0.2	<0.2	<0.2	<5.0	<5.0	<5.0	<0.2

DATE	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)
SEP 01-01	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5.0

DATE	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L)	STYRENE TOTAL (UG/L)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L)	ETHANE, 1,1,2,2 TETRA-CHLORO-WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)
SEP 01-01	<0.20	<0.20	<0.2	<0.2	<5.0	<0.20	<0.2	<0.2	<0.2	<0.2	0.3

DATE	1,2,3-TRI-CHLORO BENZENE WAT, WH REC (UG/L)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	PSEUDO-CUMENE WATER UNFLTRD REC (UG/L)	MESIT-YLENE WATER UNFLTRD REC (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)
SEP 01-01	<0.20	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	0.20	<0.20	<0.2	0.40

DATE	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZI-DINE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)
SEP 01-01	<5.0	<5.0	<5.0	<40.0	<10.0	<10.0	<10.0	<10.0	15.0	<5.0	<5.0

08061690 INTERSTATE HIGHWAY 635 OUTFALL AT CENTERVILLE ROAD,GARLAND, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	CHRY-SENE TOTAL (UG/L)	1,2,5,6-DIBENZ-ANTHRA-CENE TOTAL (UG/L)	3,3'-DI-CHLORO-BENZI-DINE TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)
SEP 01-01	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<10.0	<10.0	<20.0	<5.0

DATE	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)
SEP 01-01	<5.0	<5.0	<5.0	<5.0	<30.0	<20.0	<5.0	<5.0	<10.0	<5.0	9.0

DATE	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)
SEP 01-01	<5.0	<5.0	<5.0	<5.0	15.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0

DATE	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)	PYRENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	ALPHA BHC TOTAL (UG/L)	BETA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L)
SEP 01-01	<5.0	<30.0	<5.0	<5.0	6.0	<20.0	<0.03	<0.03	<0.09	<0.030	<0.10

DATE	CHLOR-DANE TRANS WATER WHOLE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN-I WATER WHOLE REC (UG/L)	ENDO-SULFAN BETA TOTAL (UG/L)	ENDO-SULFAN SULFATE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ENDRIN ALDE-HYDE TOTAL (UG/L)
SEP 01-01	<0.10	0.1	<0.10	<0.04	<0.10	<0.020	<0.10	<0.04	<0.60	<0.060	<0.20

DATE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	AROCLOR 1016 PCB TOTAL (UG/L)	AROCLOR 1221 PCB TOTAL (UG/L)	AROCLOR 1232 PCB TOTAL (UG/L)	AROCLOR 1242 PCB TOTAL (UG/L)	AROCLOR 1248 PCB TOTAL (UG/L)	AROCLOR 1254 PCB TOTAL (UG/L)	AROCLOR 1260 PCB TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
SEP 01-01	<0.030	<0.80	<2	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.30

08061700 DUCK CREEK NEAR GARLAND, TX

LOCATION.--Lat 32°49'58", long 96°35'43", Dallas County, Hydrologic Unit 12030106, on right bank in the median area between the dual bridges on Belt Line Road, 6.0 mi southeast of Garland, and 7.7 mi upstream from mouth.

DRAINAGE AREA.--31.6 mi².

PERIOD OF RECORD.--January 1958 to December 1992 (discontinued).

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 430.02 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1962, at datum 4.00 ft higher.

REMARKS.--No estimated daily discharges. Records fair. Flow is slightly regulated by several small on-channel dams. There are several small diversions above station including the irrigation of a golf course. Low flows are sustained by effluents from the city of Garland. Recording rain gage located at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1895, 21.5 ft (present datum) June 13, 1949, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 27	0445	2,750	16.88	Dec. 9	0330	4,250	17.59
Oct. 28	1100	13,700	20.25	Dec. 20	1630	12,200	19.84
Oct. 29	1400	5,410	17.96	June 28	1030	4,940	17.82

PEAK DISCHARGES FOR PERIOD OCTOBER TO DECEMBER 1992.--Peak discharges greater than base discharge of 2,500 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 16	0245	5,340	17.94	Dec. 14	0730	3,700	17.38

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	59	110	95	22	16	13	10	27	14	71	40
2	2.0	24	233	28	20	15	11	8.3	29	11	266	17
3	2.0	18	21	21	19	17	11	7.5	13	8.6	46	353
4	1.6	14	12	19	21	281	11	8.8	9.1	7.3	7.5	26
5	1.9	13	11	18	17	84	11	7.6	7.5	6.2	5.7	23
6	1.9	13	9.3	18	15	26	115	11	269	5.6	6.1	21
7	1.8	12	9.4	20	15	20	18	7.2	15	4.8	13	20
8	1.0	11	14	18	14	18	13	6.5	11	4.5	14	19
9	.64	11	897	14	13	398	12	6.4	24	3.8	14	17
10	.79	11	31	14	13	29	11	6.2	11	3.7	14	26
11	.82	11	238	13	14	21	11	6.5	97	3.0	14	35
12	.91	10	108	24	20	19	11	6.2	11	2.7	37	18
13	1.3	8.4	29	35	19	17	12	5.7	8.2	2.5	53	18
14	1.2	8.3	17	23	22	16	12	225	7.0	2.2	16	17
15	.90	8.1	14	14	15	15	11	24	6.1	2.2	14	16
16	1.3	86	12	12	12	13	9.8	34	5.5	2.5	14	15
17	1.4	178	11	23	12	128	11	272	5.1	2.5	14	14
18	.75	25	15	197	11	135	14	315	4.5	58	14	15
19	.60	189	494	30	9.9	22	33	31	4.5	7.3	23	15
20	.86	34	2630	21	9.9	17	29	29	39	2.3	16	14
21	.92	18	560	75	9.9	14	12	53	9.8	5.1	14	175
22	2.0	16	349	114	231	14	11	121	6.5	3.4	14	22
23	1.7	13	87	24	49	14	9.0	136	5.5	6.2	14	21
24	1.2	12	43	20	253	36	7.9	27	4.3	2.4	13	20
25	1.5	11	30	18	407	90	11	89	234	1.6	13	20
26	350	11	57	103	42	18	10	26	348	1.4	12	19
27	1060	13	47	644	26	15	7.2	10	69	33	12	18
28	2690	11	25	170	21	18	7.3	193	782	73	12	18
29	1320	19	20	45	18	16	59	26	206	6.3	11	19
30	106	23	18	31	---	12	12	13	23	3.5	11	22
31	324	---	17	25	---	14	---	14	---	281	12	---
TOTAL	5882.89	890.8	6168.7	1926	1370.7	1568	526.2	1735.9	2291.6	571.6	810.3	1093
MEAN	190	29.7	199	62.1	47.3	50.6	17.5	56.0	76.4	18.4	26.1	36.4
MAX	2690	189	2630	644	407	398	115	315	782	281	266	353
MIN	.60	8.1	9.3	12	9.9	12	7.2	5.7	4.3	1.4	5.7	14
AC-FT	11670	1770	12240	3820	2720	3110	1040	3440	4550	1130	1610	2170
CFSM	6.01	.94	6.30	1.97	1.50	1.60	.56	1.77	2.42	.58	.83	1.15
IN.	6.93	1.05	7.26	2.27	1.61	1.85	.62	2.04	2.70	.67	.95	1.29

08061700 DUCK CREEK NEAR GARLAND, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1992, BY WATER YEAR (WY)

MEAN	39.1	20.6	30.9	24.0	34.5	39.3	56.4	68.3	44.1	19.4	9.85	23.9
MAX	190	65.2	199	76.0	97.6	135	385	200	210	138	33.8	153
(WY)	1992	1986	1992	1990	1970	1977	1966	1989	1989	1962	1991	1974
MIN	.000	.66	.41	.28	1.67	3.21	.20	.82	1.40	.18	.016	.000
(WY)	1964	1961	1959	1959	1967	1971	1959	1959	1964	1964	1959	1963

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1959 - 1992	
ANNUAL TOTAL	27292.39		24835.69			
ANNUAL MEAN	74.8		67.9		34.2	
HIGHEST ANNUAL MEAN					67.9	1992
LOWEST ANNUAL MEAN					2.26	1959
HIGHEST DAILY MEAN	2770	Apr 12	2690	Oct 28	4120	May 17 1989
LOWEST DAILY MEAN	.60	Oct 19	.60	Oct 19	.00	Oct 12 1958
ANNUAL SEVEN-DAY MINIMUM	.94	Oct 9	.94	Oct 9	.00	Nov 6 1958
INSTANTANEOUS PEAK FLOW			13700	Oct 28	16900	Apr 16 1990
INSTANTANEOUS PEAK STAGE			20.25	Oct 28	21.06	Apr 16 1990
INSTANTANEOUS LOW FLOW			.57	Oct 15	.00	at times
ANNUAL RUNOFF (AC-FT)	54130		49260		24760	
ANNUAL RUNOFF (CFSM)	2.37		2.15		1.08	
ANNUAL RUNOFF (INCHES)	32.13		29.24		14.69	
10 PERCENT EXCEEDS	133		135		41	
50 PERCENT EXCEEDS	9.7		15		4.4	
90 PERCENT EXCEEDS	2.3		3.3		.27	

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 Interstate Highway 20, 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.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 374.86 ft above National Geodetic Vertical Datum of 1929 (from State Department of Highways and Public Transportation bridge plans). Prior to Aug. 26, 1975, recording gage at 3-foot higher datum located at site 126 ft upstream and 868 ft to left. From Aug. 26, 1975, to May 12, 1977, recording gage at 3-foot higher datum located at site 105 ft downstream. From May 13, 1977, to Sept. 30, 1984, recording gage at 3-foot higher datum at current site.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow is regulated by Lake Ray Hubbard (station 08061550) 1.9 mi upstream. Low flow is sustained by sewage effluent discharge from the city of Garland into Duck Creek, which enters the East Fork Trinity River 0.2 mi upstream from this station. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	2800	1820	2110	2030	2660	2600	e2420	1710	267	405	97
2	48	1410	1250	2270	2160	2540	2580	e2400	1620	814	1230	222
3	49	158	1030	2490	2320	2560	2580	e2400	1620	2000	381	592
4	44	374	1100	2480	2350	3520	2570	e2410	1180	1990	123	236
5	42	1640	1390	2500	2350	2780	2580	2370	846	1990	62	92
6	46	2120	1540	2420	2280	1360	2750	2340	1360	1990	52	60
7	41	2110	2020	2390	2150	418	2610	2380	663	1770	70	56
8	41	2090	2040	2530	2140	1980	2570	2400	295	920	79	76
9	41	2070	7170	2730	2160	3870	2530	2380	966	62	84	58
10	39	2080	4700	2640	2160	1910	2560	2250	1800	38	74	47
11	43	2080	4540	2390	2170	3700	2580	980	2160	41	57	152
12	42	2100	2650	2440	2170	2110	2580	376	2120	34	86	75
13	47	2120	2160	2370	1830	2180	1390	1910	2140	32	262	45
14	46	2140	2040	2200	1930	2450	1580	2090	1900	40	93	46
15	43	2130	1090	2150	2030	2480	e2000	1930	825	42	79	47
16	42	2170	284	2160	2070	2480	e1860	1590	72	41	77	48
17	43	2570	2070	2170	2200	2590	e2000	2320	56	40	75	45
18	49	2250	2150	2370	2200	3680	e2150	4790	49	79	72	47
19	49	2460	2830	2040	2210	1800	e2600	4250	34	211	91	45
20	45	2360	7400	2020	2190	2370	2570	1980	95	49	128	44
21	45	2190	24600	2320	2210	2480	e2430	1400	118	33	87	403
22	48	2120	7530	2590	3590	2480	e2400	2660	48	39	72	171
23	45	2180	5510	2340	2310	2520	2400	2580	34	55	73	48
24	47	2090	2750	2290	2190	2560	e2390	3800	33	45	82	48
25	47	1890	533	2310	5210	2730	e2390	2400	305	35	76	46
26	387	1200	473	2330	3500	2590	e2390	2370	1630	30	77	45
27	1310	549	1200	5240	513	2600	e2390	2280	1540	29	74	47
28	2500	547	1730	4390	446	2600	e2400	2540	3880	341	71	46
29	9420	541	1870	2130	2590	2610	e2520	1550	3970	112	72	44
30	9730	665	2040	1170	---	2590	2530	845	1660	46	69	43
31	5510	---	2050	1070	---	2600	---	1690	---	786	93	---
TOTAL	29978	53204	101560	75050	65659	77798	71480	70081	34729	14001	4426	3071
MEAN	967	1773	3276	2421	2264	2510	2383	2261	1158	452	143	102
MAX	9730	2800	24600	5240	5210	3870	2750	4790	3970	2000	1230	592
MIN	39	158	284	1070	446	418	1390	376	33	29	52	43
AC-FT	59460	105500	201400	148900	130200	154300	141800	139000	68880	27770	8780	6090

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1992#, BYWATER YEAR (WY)

MEAN	414	543	593	438	669	789	927	1528	1184	435	154	191
MAX	3975	2804	3276	2421	2652	2510	2864	8008	5436	2207	1246	1583
(WY)	1974	1982	1992	1992	1975	1992	1985	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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1974 - 1992#	
ANNUAL TOTAL	341163		601037			
ANNUAL MEAN	935		1642		655	
HIGHEST ANNUAL MEAN					1798	1982
LOWEST ANNUAL MEAN					37.6	1978
HIGHEST DAILY MEAN	24600	Dec 21	24600	Dec 21	50700	May 4 1990
LOWEST DAILY MEAN	23	Jul 24	29	Jul 27	8.0	Jun 23 1979
ANNUAL SEVEN-DAY MINIMUM	25	Jul 18	38	Jul 21	15	Sep 30 1977
INSTANTANEOUS PEAK FLOW			28800	Dec 21	53000	May 3 1990
INSTANTANEOUS PEAK STAGE			19.12	Dec 21	22.01	May 3 1990
INSTANTANEOUS LOW FLOW			27	Jul 27		
ANNUAL RUNOFF (AC-FT)	676700		1192000		474400	
10 PERCENT EXCEEDS	2200		2610		2110	
50 PERCENT EXCEEDS	81		1920		51	
90 PERCENT EXCEEDS	32		45		24	

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: November 1981 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1981 to current year.
pH: August 1986 to current year.
WATER TEMPERATURE: October 1981 to current year.
DISSOLVED OXYGEN: August 1986 to current year.

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

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,100 microsiemens Aug. 29, 1985; minimum, 135 microsiemens Nov. 9, 1990.
pH: Maximum, 9.0 units July 28, 1992; minimum, 6.6 units May 27, 28, 1987.
WATER TEMPERATURE: Maximum, 33.5°C Aug. 31, 1990; minimum, 2.5°C Feb. 4, 1989.
DISSOLVED OXYGEN: Maximum, 14.1 mg/l July 14, 1991; minimum, 3.2 mg/l Aug. 10, 1991.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 821 microsiemens Sept. 27; minimum, 134 microsiemens Oct. 28.
PH: Maximum, 9.0 units July 28; minimum, 6.9 units June 8, Sept. 13-15.
WATER TEMPERATURE: Maximum, 30.5°C Aug. 10; minimum, 7.5°C Jan. 18-20.
DISSOLVED OXYGEN: Maximum, 12.9 mg/l Jan. 20; minimum, 4.0 mg/l July 28, Aug. 26, Sept. 1, 19.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
DEC										
12...	1310	2580	263	7.9	13.0	10.7	103	0.8	99	5
FEB										
20...	1205	2200	287	8.6	11.0	12.6	114	1.7	120	16
APR										
20...	1215	2750	297	8.2	18.5	10.1	110	1.1	120	2
JUN										
16...	1100	72	577	7.4	26.0	5.8	72	1.5	170	53
AUG										
04...	1305	62	495	7.4	28.0	6.6	85	1.9	140	23
SEP										
01...	1210	97	644	7.2	26.5	4.2	53	3.9	130	37

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
DEC										
12...	36	2.1	12	0.5	3.7	94	22	10	0.30	4.4
FEB										
20...	45	2.4	11	0.4	3.2	110	23	11	0.30	4.2
APR										
20...	43	2.3	10	0.4	3.4	120	23	9.6	0.30	0.90
JUN										
16...	63	3.2	46	2	8.7	120	54	49	0.90	4.8
AUG										
04...	51	2.5	40	1	6.7	120	51	41	0.80	8.1
SEP										
01...	48	3.2	68	3	12	96	58	77	1.2	10

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
DEC									
12...	147	0.470	0.020	0.490	0.110	0.49	0.60	0.150	0.110
FEB									
20...	164	0.620	0.030	0.650	0.030	0.47	0.50	0.120	0.080
APR									
20...	161	0.450	0.020	0.470	0.090	0.31	0.40	0.060	0.060
JUN									
16...	300	5.78	0.020	5.80	0.090	1.2	1.3	3.70	3.50
AUG									
04...	270	4.86	0.040	4.90	0.090	0.81	0.90	2.80	2.50
SEP									
01...	335	8.60	0.900	9.50	1.50	1.3	2.8	5.50	5.10

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX--Continued

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	29978	240	134	10900	11	869	28	2280	78
NOV.	1991	53204	253	142	20400	11	1570	30	4320	83
DEC.	1991	101560	265	149	40800	12	3240	31	8580	86
JAN.	1992	75050	278	156	31600	13	2590	33	6590	90
FEB.	1992	65659	287	161	28500	13	2390	33	5920	93
MAR.	1992	77798	300	168	35200	14	3040	35	7270	97
APR.	1992	71480	308	172	33200	15	2910	35	6820	99
MAY	1992	70081	305	170	32200	15	2810	35	6630	98
JUNE	1992	34729	294	164	15400	14	1340	34	3180	95
JULY	1992	14001	334	185	7000	19	702	37	1390	100
AUG.	1992	4426	480	262	3130	35	412	47	567	140
SEPT	1992	3071	496	270	2240	36	299	49	405	150
TOTAL		601037	**	**	261000	**	22200	**	54000	**
WTD.AVG.		1642	287	161	**	14	**	33	**	93

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	635	588	622	248	231	241	283	242	264	289	253	264
2	651	627	640	382	245	290	293	236	261	260	248	254
3	677	637	655	566	395	476	271	257	265	260	249	253
4	681	644	671	577	239	483	274	257	266	257	251	253
5	704	659	687	252	234	245	269	263	266	255	251	253
6	709	620	664	246	240	243	272	255	266	256	252	253
7	673	614	639	247	241	243	265	262	264	258	251	254
8	665	616	643	246	238	241	266	263	265	280	253	268
9	686	642	666	245	239	241	280	234	250	280	277	278
10	686	659	671	245	242	243	257	254	255	280	276	278
11	709	643	678	245	239	243	296	256	264	280	277	279
12	669	646	658	247	242	245	269	262	266	282	277	280
13	660	609	641	249	244	247	272	266	268	285	278	281
14	605	586	596	251	247	249	272	265	269	286	277	281
15	653	592	631	250	245	249	502	264	352	281	278	279
16	682	632	658	317	247	253	612	249	514	281	278	279
17	677	642	655	302	247	260	266	257	262	282	277	279
18	730	651	701	250	247	248	268	262	264	311	281	290
19	702	668	687	284	242	258	343	255	277	286	279	282
20	755	689	720	248	242	246	274	247	261	287	277	282
21	687	600	644	255	248	250	259	250	257	295	280	282
22	638	601	622	254	248	252	285	252	260	315	281	287
23	667	620	649	253	247	249	260	257	259	284	280	282
24	688	639	663	252	245	249	393	256	306	285	282	283
25	688	655	671	255	248	250	445	389	404	285	281	283
26	672	160	418	298	249	269	519	427	460	324	281	285
27	280	146	196	296	284	291	509	254	341	309	260	276
28	304	134	211	310	291	300	262	254	258	293	279	281
29	229	155	213	302	278	286	262	247	255	293	288	291
30	233	213	225	341	242	285	257	251	254	510	293	370
31	265	225	238	---	---	---	257	251	254	596	280	414
MONTH	755	134	578	577	231	271	612	234	288	596	248	282

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	294	284	288	295	290	292	302	297	299	309	304	307
2	291	275	283	295	292	293	305	298	302	310	307	309
3	280	274	277	297	291	295	304	300	302	310	307	308
4	286	277	281	330	282	296	304	302	303	310	306	308
5	287	282	284	309	292	297	305	301	303	308	300	305
6	286	279	283	460	300	365	342	298	307	305	294	300
7	286	279	282	545	291	435	304	300	302	304	299	302
8	286	277	281	305	301	302	306	302	304	307	303	305
9	286	280	282	336	266	287	307	304	306	311	305	308
10	287	282	284	339	283	307	308	305	306	317	307	310
11	288	282	284	402	286	318	307	305	306	435	307	362
12	293	283	285	303	294	298	308	304	306	579	304	419
13	311	283	295	302	291	298	451	303	361	312	306	310
14	293	278	287	299	292	296	535	299	372	373	277	308
15	290	283	286	298	292	296	316	306	310	329	293	306
16	287	281	284	300	295	298	312	309	311	325	308	311
17	287	283	285	332	297	302	312	307	310	326	266	303
18	287	281	283	309	282	293	312	309	311	299	283	292
19	284	280	283	364	286	307	313	301	310	302	298	300
20	287	282	285	299	292	295	308	301	304	344	301	326
21	289	284	287	299	294	297	304	301	302	347	300	326
22	316	278	294	302	295	298	307	302	305	339	298	306
23	287	273	282	299	294	297	308	305	307	320	284	299
24	345	279	291	302	297	298	308	304	307	285	274	281
25	282	254	269	355	292	301	308	304	305	308	279	285
26	382	282	300	299	296	297	309	303	306	285	277	280
27	544	379	434	301	297	299	307	299	304	296	285	291
28	603	288	489	304	297	300	308	302	305	341	282	297
29	301	283	293	304	297	301	332	302	309	429	288	330
30	---	---	---	300	296	298	305	302	304	542	297	403
31	---	---	---	301	297	299	---	---	---	305	299	301
MONTH	603	254	297	545	266	305	535	297	310	579	266	313

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	311	301	305	609	377	497	---	---	e335	660	611	636
2	338	294	309	634	280	454	---	---	e355	618	452	510
3	313	282	301	284	273	278	---	---	e363	579	153	353
4	299	282	289	276	270	273	---	---	e484	500	384	432
5	413	294	329	275	272	273	609	544	574	588	509	543
6	443	243	306	276	270	274	635	609	623	623	534	566
7	488	296	372	286	272	278	637	529	581	584	508	548
8	527	308	442	418	278	325	646	555	598	585	530	561
9	356	283	308	615	430	543	651	600	625	609	565	584
10	298	283	291	665	615	643	600	566	578	650	575	617
11	336	266	283	688	667	680	596	573	580	656	479	561
12	268	259	263	690	626	669	629	608	618	595	513	544
13	274	262	268	624	578	594	635	298	452	609	536	567
14	310	276	295	659	585	635	530	469	483	577	538	563
15	484	309	368	664	644	657	600	544	576	639	561	610
16	617	494	567	708	664	692	632	598	610	658	597	624
17	670	626	650	724	654	699	596	566	576	653	604	633
18	684	637	664	717	490	688	623	586	610	658	606	634
19	689	668	679	595	360	484	648	617	630	688	629	661
20	716	529	665	591	569	583	643	565	598	633	577	601
21	573	506	540	631	575	612	651	606	625	576	218	392
22	625	562	583	635	616	627	659	621	639	509	359	445
23	629	581	609	685	634	662	656	615	629	591	518	547
24	682	631	666	683	635	663	620	592	605	649	614	630
25	678	209	527	701	667	690	648	609	627	672	613	645
26	324	217	267	662	640	646	664	612	634	751	652	699
27	297	266	283	640	611	624	660	632	644	821	628	699
28	283	240	258	---	---	e481	677	644	659	634	579	600
29	274	252	261	---	---	e435	711	665	687	636	585	606
30	370	248	287	---	---	e570	684	622	648	680	609	636
31	---	---	---	---	---	e459	639	601	620	---	---	---
MONTH	716	209	408	724	270	538	711	298	576	821	153	575
YEAR	821	134	396									

e Estimated

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	635	588	622	248	231	241	283	242	264	289	253	264
2	651	627	640	382	245	290	293	236	261	260	248	254
3	677	637	655	566	395	476	271	257	265	260	249	253
4	681	644	671	577	239	483	274	257	266	257	251	253
5	704	659	687	252	234	245	269	263	266	255	251	253
6	709	620	664	246	240	243	272	255	266	256	252	253
7	673	614	639	247	241	243	265	262	264	258	251	254
8	665	616	643	246	238	241	266	263	265	280	253	268
9	686	642	666	245	239	241	280	234	250	280	277	278
10	686	659	671	245	242	243	257	254	255	280	276	278
11	709	643	678	245	239	243	296	256	264	280	277	279
12	669	646	658	247	242	245	269	262	266	282	277	280
13	660	609	641	249	244	247	272	266	268	285	278	281
14	605	586	596	251	247	249	272	265	269	286	277	281
15	653	592	631	250	245	249	502	264	352	281	278	279
16	682	632	658	317	247	253	612	249	514	281	278	279
17	677	642	655	302	247	260	266	257	262	282	277	279
18	730	651	701	250	247	248	268	262	264	311	281	290
19	702	668	687	284	242	258	343	255	277	286	279	282
20	755	689	720	248	242	246	274	247	261	287	277	282
21	687	600	644	255	248	250	259	250	257	295	280	282
22	638	601	622	254	248	252	285	252	260	315	281	287
23	667	620	649	253	247	249	260	257	259	284	280	282
24	688	639	663	252	245	249	393	256	306	285	282	283
25	688	655	671	255	248	250	445	389	404	285	281	283
26	672	160	418	298	249	269	519	427	460	324	281	285
27	280	146	196	296	284	291	509	254	341	309	260	276
28	304	134	211	310	291	300	262	254	258	293	279	281
29	229	155	213	302	278	286	262	247	255	293	288	291
30	233	213	225	341	242	285	257	251	254	510	293	370
31	265	225	238	---	---	---	257	251	254	596	280	414
MONTH	755	134	578	577	231	271	612	234	288	596	248	282

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	294	284	288	295	290	292	302	297	299	309	304	307
2	291	275	283	295	292	293	305	298	302	310	307	309
3	280	274	277	297	291	295	304	300	302	310	307	308
4	286	277	281	330	282	296	304	302	303	310	306	308
5	287	282	284	309	292	297	305	301	303	308	300	305
6	286	279	283	460	300	365	342	298	307	305	294	300
7	286	279	282	545	291	435	304	300	302	304	299	302
8	286	277	281	305	301	302	306	302	304	307	303	305
9	286	280	282	336	266	287	307	304	306	311	305	308
10	287	282	284	339	283	307	308	305	306	317	307	310
11	288	282	284	402	286	318	307	305	306	435	307	362
12	293	283	285	303	294	298	308	304	306	579	304	419
13	311	283	295	302	291	298	451	303	361	312	306	310
14	293	278	287	299	292	296	535	299	372	373	277	308
15	290	283	286	298	292	296	316	306	310	329	293	306
16	287	281	284	300	295	298	312	309	311	325	308	311
17	287	283	285	332	297	302	312	307	310	326	266	303
18	287	281	283	309	282	293	312	309	311	299	283	292
19	284	280	283	364	286	307	313	301	310	302	298	300
20	287	282	285	299	292	295	308	301	304	344	301	326
21	289	284	287	299	294	297	304	301	302	347	300	326
22	316	278	294	302	295	298	307	302	305	339	298	306
23	287	273	282	299	294	297	308	305	307	320	284	299
24	345	279	291	302	297	298	308	304	307	285	274	281
25	282	254	269	355	292	301	308	304	305	308	279	285
26	382	282	300	299	296	297	309	303	306	285	277	280
27	544	379	434	301	297	299	307	299	304	296	285	291
28	603	288	489	304	297	300	308	302	305	341	282	297
29	301	283	293	304	297	301	332	302	309	429	288	330
30	---	---	---	300	296	298	305	302	304	542	297	403
31	---	---	---	301	297	299	---	---	---	305	299	301
MONTH	603	254	297	545	266	305	535	297	310	579	266	313

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	311	301	305	609	377	497	---	---	e335	660	611	636
2	338	294	309	634	280	454	---	---	e355	618	452	510
3	313	282	301	284	273	278	---	---	e363	579	153	353
4	299	282	289	276	270	273	---	---	e484	500	384	432
5	413	294	329	275	272	273	609	544	574	588	509	543
6	443	243	306	276	270	274	635	609	623	623	534	566
7	488	296	372	286	272	278	637	529	581	584	508	548
8	527	308	442	418	278	325	646	555	598	585	530	561
9	356	283	308	615	430	543	651	600	625	609	565	584
10	298	283	291	665	615	643	600	566	578	650	575	617
11	336	266	283	688	667	680	596	573	580	656	479	561
12	268	259	263	690	626	669	629	608	618	595	513	544
13	274	262	268	624	578	594	635	298	452	609	536	567
14	310	276	295	659	585	635	530	469	483	577	538	563
15	484	309	368	664	644	657	600	544	576	639	561	610
16	617	494	567	708	664	692	632	598	610	658	597	624
17	670	626	650	724	654	699	596	566	576	653	604	633
18	684	637	664	717	490	688	623	586	610	658	606	634
19	689	668	679	595	360	484	648	617	630	688	629	661
20	716	529	665	591	569	583	643	565	598	633	577	601
21	573	506	540	631	575	612	651	606	625	576	218	392
22	625	562	583	635	616	627	659	621	639	509	359	445
23	629	581	609	685	634	662	656	615	629	591	518	547
24	682	631	666	683	635	663	620	592	605	649	614	630
25	678	209	527	701	667	690	648	609	627	672	613	645
26	324	217	267	662	640	646	664	612	634	751	652	699
27	297	266	283	640	611	624	660	632	644	821	628	699
28	283	240	258	---	---	e481	677	644	659	634	579	600
29	274	252	261	---	---	e435	711	665	687	636	585	606
30	370	248	287	---	---	e570	684	622	648	680	609	636
31	---	---	---	---	---	e459	639	601	620	---	---	---
MONTH	716	209	408	724	270	538	711	298	576	821	153	575
YEAR	821	134	396									

e Estimated

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.7	7.6	7.6	---	---	---	8.3	7.4	7.6	7.3	7.1	7.2
2	7.9	7.6	7.7	---	---	---	7.9	7.6	7.8	7.4	7.3	7.3
3	8.4	7.9	8.1	7.9	7.6	7.7	7.9	7.5	7.6	8.1	7.3	7.6
4	8.4	7.8	8.1	7.8	7.6	7.7	7.5	7.4	7.4	7.5	7.3	7.4
5	8.1	7.7	7.8	7.8	7.6	7.7	7.4	7.3	7.3	7.3	7.2	7.3
6	7.8	7.5	7.7	7.6	7.4	7.5	7.3	7.2	7.3	7.3	7.2	7.3
7	7.8	7.4	7.7	7.5	7.3	7.5	7.3	7.2	7.2	7.3	7.2	7.2
8	8.2	6.9	7.4	---	---	---	7.4	7.2	7.3	7.2	7.2	7.2
9	7.9	7.5	7.7	---	---	---	7.4	7.4	7.4	7.2	7.1	7.2
10	7.7	7.6	7.7	---	---	---	7.5	7.4	7.4	7.2	7.1	7.1
11	7.9	7.5	7.7	---	---	---	7.7	7.4	7.5	7.2	7.0	7.1
12	8.0	7.8	7.9	---	---	---	7.5	7.4	7.4	7.1	7.0	7.1
13	7.8	7.6	7.7	---	---	---	8.0	7.4	7.6	7.0	6.9	7.0
14	7.6	7.5	7.6	8.0	7.9	8.0	7.6	7.3	7.4	7.0	6.9	7.0
15	7.6	7.5	7.6	8.0	7.9	7.9	7.5	7.3	7.4	7.0	6.9	7.0
16	---	---	---	7.9	7.8	7.9	7.5	7.3	7.4	7.2	7.0	7.1
17	---	---	---	8.1	7.8	7.9	7.5	7.4	7.4	7.2	7.1	7.2
18	---	---	---	8.2	7.9	8.0	7.5	7.3	7.4	7.2	7.1	7.1
19	---	---	---	8.3	7.5	8.0	7.4	7.3	7.4	7.1	7.1	7.1
20	---	---	---	7.8	7.5	7.6	7.5	7.3	7.4	7.1	7.0	7.1
21	---	---	---	8.0	7.8	7.9	7.3	7.2	7.3	7.7	7.0	7.4
22	---	---	---	8.0	7.9	7.9	7.3	7.2	7.2	7.4	7.2	7.2
23	---	---	---	8.1	8.0	8.0	7.4	7.2	7.3	7.2	7.1	7.1
24	---	---	---	8.0	8.0	8.0	7.4	7.3	7.3	7.1	7.0	7.1
25	---	---	---	8.0	7.9	8.0	7.4	7.3	7.3	7.1	7.1	7.1
26	8.1	7.7	7.9	8.1	8.0	8.1	7.4	7.3	7.3	7.1	7.0	7.0
27	8.2	7.9	8.0	8.1	8.1	8.1	7.3	7.2	7.3	7.1	7.0	7.0
28	8.0	7.8	7.9	9.0	8.1	8.4	7.2	7.2	7.2	7.0	6.9	7.0
29	8.3	7.7	8.0	7.9	7.5	7.6	7.3	7.2	7.3	7.1	7.0	7.1
30	8.1	7.7	8.0	7.5	7.3	7.4	7.3	7.1	7.2	7.1	7.0	7.1
31	---	---	---	8.4	7.4	7.7	7.3	7.1	7.2	---	---	---
MONTH	8.4	6.9	7.8	9.0	7.3	7.8	8.3	7.1	7.4	8.1	6.9	7.2
YEAR	9.0	6.9	7.9									

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

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

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.0	21.5	21.5	27.5	26.0	27.0	30.0	27.0	28.0	26.5	26.0	26.5
2	22.5	21.5	22.0	28.0	26.0	27.0	28.5	25.5	27.5	27.5	25.0	26.0
3	23.5	22.0	22.5	27.5	26.0	26.5	28.0	26.0	27.0	27.0	22.5	25.0
4	24.0	22.5	23.0	27.0	26.5	27.0	29.0	27.0	28.0	26.5	25.0	25.5
5	24.0	22.5	23.5	27.0	26.5	27.0	29.5	27.5	28.5	27.5	26.0	26.5
6	24.0	21.5	22.5	27.0	26.5	27.0	30.0	28.0	29.0	27.5	26.5	27.0
7	24.5	22.5	24.0	27.5	26.5	27.0	29.5	28.0	29.0	28.0	26.5	27.0
8	25.5	23.5	25.0	28.5	26.5	27.5	30.0	28.5	29.0	28.5	27.0	27.5
9	24.5	23.5	23.5	29.0	27.0	28.0	30.0	28.5	29.0	28.5	27.0	28.0
10	23.5	22.5	23.0	29.0	27.0	28.0	30.5	28.5	29.5	27.5	25.5	27.0
11	25.0	23.0	24.0	29.0	26.5	27.5	30.0	29.0	29.5	26.5	24.5	25.5
12	26.0	25.0	25.5	29.0	26.5	27.5	29.0	27.5	28.5	26.5	25.0	25.5
13	25.5	25.0	25.5	28.5	26.5	27.5	28.5	26.5	27.5	27.0	25.5	26.0
14	24.5	22.5	23.5	29.0	26.5	27.5	28.5	27.0	27.5	28.0	26.5	27.0
15	26.0	22.0	24.0	29.0	27.0	28.0	27.5	26.0	27.0	27.5	26.5	27.0
16	28.0	25.5	26.5	28.5	27.0	28.0	27.0	25.5	26.0	27.0	26.0	26.5
17	28.5	26.0	27.0	29.0	27.0	28.0	27.0	25.0	26.0	27.5	26.5	27.0
18	29.0	26.5	27.5	28.0	26.5	27.5	25.5	25.0	25.5	28.5	26.5	27.5
19	29.0	26.5	28.0	27.5	26.0	26.5	25.5	24.5	25.0	28.5	27.5	27.5
20	29.0	26.5	27.5	28.0	26.5	27.5	26.0	24.0	25.0	28.5	27.5	27.5
21	27.0	26.0	26.5	28.0	27.0	27.5	27.5	25.5	26.5	27.0	25.0	26.0
22	26.5	25.5	26.0	28.5	27.5	28.0	28.0	26.5	27.0	26.5	25.5	26.0
23	27.5	25.5	26.5	29.0	27.5	28.0	28.0	26.5	27.0	25.5	23.5	24.5
24	28.5	26.0	27.0	29.0	28.0	28.5	28.0	27.0	27.5	24.0	22.5	23.0
25	28.0	24.0	26.5	29.5	28.0	29.0	28.5	27.0	27.5	24.0	23.0	23.5
26	26.5	24.5	25.5	29.5	28.5	29.0	29.5	27.5	28.0	25.5	23.5	24.5
27	27.5	26.5	27.0	30.0	28.5	29.0	28.0	25.5	27.0	25.5	24.0	24.5
28	26.5	25.0	26.0	29.0	27.0	28.5	27.0	24.5	25.5	24.5	23.5	24.0
29	27.0	25.5	26.0	28.5	27.0	28.0	26.5	25.5	26.0	24.5	23.0	23.5
30	27.0	26.5	27.0	29.5	28.0	28.5	27.0	25.5	26.0	23.5	21.5	22.5
31	---	---	---	28.5	25.5	27.5	27.5	26.0	26.5	---	---	---
MONTH	29.0	21.5	25.0	30.0	25.5	27.5	30.5	24.0	27.5	28.5	21.5	26.0
YEAR	30.5	7.5	19.0									

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.7	5.9	6.4	10.5	9.9	10.2	11.1	10.6	10.8	11.6	11.4	11.5
2	6.9	5.7	6.2	10.7	9.5	10.2	11.5	10.6	10.9	11.7	11.4	11.5
3	6.2	5.3	5.7	9.7	9.2	9.4	11.7	10.9	11.2	11.7	11.3	11.6
4	5.7	5.0	5.4	10.8	8.6	9.4	11.6	11.0	11.2	11.7	11.4	11.5
5	7.0	6.0	6.5	11.4	10.7	11.1	11.3	10.9	11.1	11.5	11.1	11.3
6	7.8	6.8	7.2	11.3	11.0	11.1	11.2	10.9	11.0	11.5	11.1	11.3
7	8.2	6.7	7.4	11.2	10.9	11.1	11.0	10.7	10.9	11.4	10.9	11.2
8	7.4	6.6	7.0	11.8	11.2	11.5	10.8	10.5	10.7	11.6	10.6	11.3
9	7.4	6.7	7.0	11.8	11.3	11.5	11.2	10.0	10.6	11.8	11.6	11.7
10	7.6	6.7	7.1	11.6	11.3	11.4	11.4	11.0	11.3	12.0	11.7	11.8
11	7.4	6.2	6.8	11.7	11.3	11.4	11.4	10.1	11.1	11.8	11.7	11.8
12	7.4	6.2	6.7	11.7	11.3	11.5	10.8	10.1	10.5	11.8	11.6	11.7
13	7.7	5.6	6.6	11.6	11.2	11.4	---	---	---	11.9	11.6	11.7
14	6.9	6.0	6.4	11.3	10.9	11.1	---	---	---	12.2	12.0	12.0
15	7.1	6.3	6.6	11.1	10.9	11.0	---	---	---	12.4	12.0	12.1
16	8.1	6.1	7.0	11.1	10.2	10.9	---	---	---	12.5	12.4	12.4
17	7.4	6.5	6.9	11.0	10.1	10.6	---	---	---	12.5	12.4	12.4
18	7.2	6.0	6.5	11.2	10.6	10.9	---	---	---	12.5	12.2	12.4
19	6.5	5.6	6.1	11.1	10.1	10.7	---	---	---	12.7	12.3	12.5
20	7.2	5.9	6.4	11.5	10.9	11.2	---	---	---	12.9	12.3	12.6
21	7.9	5.9	6.9	11.6	11.3	11.4	---	---	---	12.7	12.4	12.6
22	7.1	5.7	6.5	11.4	11.1	11.3	---	---	---	12.5	12.2	12.4
23	6.4	5.6	5.9	12.0	11.3	11.7	---	---	---	12.8	12.5	12.6
24	6.0	5.3	5.7	12.1	11.5	11.7	---	---	---	12.8	12.6	12.7
25	5.6	5.1	5.3	11.9	11.4	11.6	---	---	---	12.8	12.6	12.7
26	7.2	4.7	5.8	11.7	10.6	11.3	---	---	---	12.7	12.1	12.6
27	8.2	5.7	7.0	11.2	10.3	10.7	11.4	8.8	10.3	12.5	11.9	12.2
28	7.6	5.0	6.0	10.7	10.1	10.4	11.4	11.1	11.2	12.8	12.1	12.6
29	9.0	5.7	8.2	10.2	9.8	10.1	11.6	11.1	11.4	12.5	12.2	12.3
30	9.4	8.6	9.2	11.1	9.3	10.0	11.7	11.4	11.5	12.3	9.6	11.1
31	9.9	9.2	9.4	---	---	---	11.7	11.4	11.5	12.5	8.9	10.9
MONTH	9.9	4.7	6.7	12.1	8.6	10.9	11.7	8.8	11.0	12.9	8.9	12.0

08061750 EAST FORK TRINITY RIVER NEAR FORNEY, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.5	12.2	12.4	12.0	11.6	11.8	10.7	10.4	10.5	9.7	9.4	9.6
2	12.6	12.2	12.4	11.8	11.4	11.6	10.7	10.5	10.6	9.6	9.4	9.4
3	12.5	12.4	12.4	11.6	11.2	11.4	10.8	10.5	10.6	9.7	9.5	9.6
4	12.4	12.3	12.4	11.3	10.7	11.0	10.8	10.4	10.6	10.2	9.5	9.7
5	12.7	12.4	12.5	11.2	10.7	11.0	10.7	10.5	10.6	10.0	9.4	9.6
6	12.8	12.4	12.5	11.1	8.7	9.9	10.6	10.3	10.5	9.9	9.4	9.6
7	12.8	12.4	12.6	12.5	8.2	9.5	10.8	10.5	10.6	9.9	9.4	9.6
8	12.8	12.5	12.6	11.0	10.7	10.9	10.7	10.4	10.6	9.6	9.2	9.4
9	12.8	12.5	12.6	10.7	8.5	10.1	10.8	10.4	10.6	9.4	9.0	9.3
10	12.7	12.4	12.5	11.2	8.3	9.5	10.8	10.5	10.6	9.2	8.8	9.0
11	12.7	12.3	12.5	11.6	10.1	10.7	10.7	10.5	10.6	8.9	7.2	8.3
12	12.6	12.2	12.3	11.0	10.5	10.7	10.7	10.5	10.5	9.2	5.8	7.4
13	12.6	11.7	12.2	11.2	10.6	10.8	10.5	8.8	9.7	9.3	9.0	9.1
14	12.3	11.9	12.0	11.3	10.7	10.9	10.7	7.8	9.7	9.3	7.6	8.8
15	12.6	11.9	12.2	11.4	10.7	10.9	10.4	10.1	10.3	9.3	8.6	8.9
16	12.4	12.0	12.1	10.9	10.6	10.7	10.2	10.0	10.1	8.9	8.6	8.8
17	12.3	11.9	12.1	10.8	10.2	10.6	10.2	10.0	10.0	9.0	8.3	8.6
18	12.6	12.0	12.2	11.0	8.8	10.1	10.0	9.8	9.9	9.2	8.9	9.0
19	12.8	12.1	12.3	11.7	10.1	10.7	10.0	9.8	9.8	9.3	9.1	9.2
20	12.6	11.9	12.2	11.6	10.7	11.1	10.2	9.9	10.0	9.0	8.0	8.7
21	12.5	11.8	12.1	11.2	10.6	10.9	10.3	10.0	10.1	8.8	7.9	8.3
22	11.9	10.5	11.4	11.2	10.6	10.9	10.1	9.9	10.0	9.0	8.4	8.7
23	11.9	10.7	11.3	11.5	10.9	11.1	10.0	9.8	9.9	9.5	8.5	9.0
24	11.8	10.3	11.3	11.3	10.6	11.0	10.0	9.8	9.9	9.4	8.6	9.0
25	11.4	10.5	11.0	11.0	10.3	10.7	10.2	9.8	10.0	9.2	8.6	8.9
26	11.8	9.7	11.4	10.9	10.5	10.7	10.2	9.8	10.0	9.3	8.6	8.9
27	9.3	8.8	9.1	10.8	10.4	10.6	10.2	9.8	10.0	9.2	8.6	8.8
28	12.2	8.3	9.5	10.8	10.3	10.5	9.9	9.5	9.7	8.7	8.4	8.5
29	12.0	11.2	11.6	10.8	10.3	10.5	10.0	9.4	9.7	9.0	7.9	8.6
30	---	---	---	10.7	10.3	10.5	9.9	9.6	9.8	9.1	7.0	8.0
31	---	---	---	10.8	10.4	10.6	---	---	---	8.9	8.6	8.7
MONTH	12.8	8.3	11.9	12.5	8.2	10.7	10.8	7.8	10.2	10.2	5.8	8.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.6	8.3	8.5	7.0	6.0	6.5	7.9	5.9	6.4	4.6	4.0	4.2
2	8.9	8.4	8.6	7.9	5.6	6.8	6.7	6.0	6.5	5.3	4.1	4.5
3	10.0	8.7	9.1	8.6	7.7	8.1	6.4	5.0	5.9	6.1	4.1	5.1
4	11.0	8.2	9.5	8.6	8.0	8.2	6.5	5.6	6.2	5.7	4.9	5.4
5	9.9	8.2	8.9	8.6	7.9	8.2	6.1	5.4	5.7	5.2	4.8	5.0
6	8.7	7.6	8.1	8.6	7.9	8.2	6.8	5.5	6.1	5.6	4.9	5.2
7	8.4	7.3	8.1	8.6	7.8	8.2	6.5	5.6	6.1	5.7	5.2	5.4
8	11.2	6.5	7.8	8.8	7.6	8.2	6.8	5.7	6.2	5.4	4.5	5.1
9	8.9	7.5	8.2	7.4	6.1	6.7	7.0	5.5	6.3	5.0	4.4	4.7
10	8.9	8.1	8.5	6.5	5.4	6.0	7.7	5.6	6.5	4.9	4.6	4.7
11	8.9	8.0	8.5	6.6	5.4	6.0	8.8	5.8	7.1	6.5	4.6	5.5
12	8.9	8.3	8.6	7.4	5.6	6.5	6.7	5.8	6.2	5.5	4.4	5.0
13	8.7	8.1	8.4	7.6	6.2	6.8	8.6	5.0	6.5	5.0	4.2	4.5
14	8.2	7.6	8.0	6.8	5.5	6.2	7.2	5.7	6.6	---	---	---
15	7.7	6.9	7.5	6.7	5.2	6.0	7.8	5.8	6.6	---	---	---
16	6.7	5.8	6.2	6.3	5.1	5.7	8.1	6.1	6.8	---	---	---
17	6.7	5.2	5.9	7.4	4.7	6.0	7.7	6.4	6.9	5.2	4.3	4.8
18	7.8	5.6	6.6	6.8	5.2	6.1	6.8	5.8	6.3	4.8	4.2	4.4
19	7.6	5.1	6.4	6.3	4.5	5.4	6.6	6.0	6.2	4.9	4.0	4.3
20	9.8	4.9	6.4	6.8	4.9	5.8	7.3	5.6	6.4	4.7	4.1	4.4
21	8.9	4.8	6.7	6.7	5.2	5.9	7.2	5.2	6.1	5.6	4.2	4.8
22	7.8	6.1	7.0	6.9	5.1	6.0	6.4	5.0	5.6	5.8	4.8	5.3
23	7.8	6.2	6.9	6.4	5.1	5.8	6.3	5.0	5.5	6.2	5.3	5.8
24	6.9	5.1	6.0	6.8	5.4	6.1	5.8	4.9	5.3	7.2	5.7	6.2
25	6.3	4.5	5.4	7.0	5.1	6.0	5.8	4.4	4.9	6.7	6.0	6.4
26	8.4	5.7	7.4	6.8	5.0	5.9	6.6	4.0	5.0	6.2	5.7	5.9
27	8.5	7.5	7.9	7.4	5.0	6.1	5.6	4.2	4.9	6.7	5.5	6.0
28	8.3	7.6	8.0	6.9	4.0	5.3	6.1	4.8	5.2	6.0	5.4	5.8
29	8.4	7.8	8.1	6.1	5.5	5.8	5.5	4.3	4.9	5.7	5.3	5.5
30	8.7	7.2	8.0	5.9	4.6	5.3	5.4	4.1	4.7	5.7	5.0	5.3
31	---	---	---	7.4	4.9	5.9	5.5	4.2	4.7	---	---	---
MONTH	11.2	4.5	7.6	8.8	4.0	6.4	8.8	4.0	5.9	7.2	4.0	5.2
YEAR	12.9	4.0	8.9									

08061970 EAST FORK TRINITY RIVER ABOVE SEAGOVILLE, TX

LOCATION.--Lat 32°42'01", long 96°31'52", Dallas County, Hydrologic Unit 12030106, at downstream side of downstream bridge on Interstate Highway 20, about 20 ft to right of channel, 100 ft downstream from South Mesquite Creek, and 3.7 mi north of intersection of U. S. Highway 175 and Malloy Bridge Road in Seagoville.

PERIOD OF RECORD.--Chemical and biochemical analyses: April 1987 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1987 to current year.
pH: March 1987 to current year.
WATER TEMPERATURE: March 1987 to current year.
DISSOLVED OXYGEN: March 1987 to current year.

INSTRUMENTATION.--Since March 1987, a four-parameter water-quality monitor continuously records specific conductance, pH, water temperature, and dissolved oxygen at this station.

REMARKS.--Interruptions in the record were due to malfunction of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD --
SPECIFIC CONDUCTANCE: Maximum, 934 microsiemens July 24, 1992; minimum, 110 microsiemens May 17, 1989.
pH: Maximum, 9.5 units Oct. 30, 1989; minimum, 6.6 units Mar. 29, 1988.
WATER TEMPERATURE: Maximum, 32.0°C Aug. 8, 9, 1988, July 14, 1991 minimum, 3.0°C Jan. 8, 1988, Feb. 4-6, 1989.
DISSOLVED OXYGEN: Maximum, 15.8 mg/L Feb. 9, 1992; minimum, 1.0 mg/L May 22, 1989.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 815 microsiemens Aug. 31; minimum, 124 microsiemens Oct. 28.
pH: Maximum, 9.0 units Feb. 6, 19-21; minimum, 6.8 units May 12.
WATER TEMPERATURE: Maximum, 31.5°C July 27, Aug. 10, 11; minimum, 6.0°C Jan. 18, 19.
DISSOLVED OXYGEN: Maximum, 15.8 mg/l Feb. 9; minimum, 2.9 mg/L Oct. 25, 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
NOV										
12...	1020	2100	254	8.1	13.0	10.2	98	2.2	94	5
FEB										
19...	1310	2210	308	8.6	12.0	12.4	115	2.7	130	16
APR										
14...	1200	1500	484	7.8	23.0	6.1	72	4.9	160	7
JUN										
09...	1050	800	320	7.9	24.0	7.1	86	2.1	130	8
JUL										
27...	1455	30	632	7.5	31.0	6.3	86	2.2	140	42
AUG										
31...	1057	93	674	7.3	25.5	4.0	50	7.5	130	9

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV										
12...	34	2.1	14	0.6	4.1	89	22	12	0.40	4.0
FEB										
19...	47	2.5	14	0.5	3.7	110	25	14	0.30	4.2
APR										
14...	60	3.5	32	1	5.6	160	39	30	0.50	4.9
JUN										
09...	46	2.5	17	0.7	4.2	120	29	17	0.30	4.3
JUL										
27...	48	4.2	67	2	E3.0	95	59	70	1.0	8.7
AUG										
31...	45	3.4	71	3	E4.0	120	57	73	1.1	9.0

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
NOV									
12...	146	0.510	0.070	0.580	0.200	0.70	0.90	0.300	0.200
FEB									
19...	178	0.670	0.040	0.710	0.060	0.64	0.70	0.330	0.280
APR									
14...	270	1.54	0.060	1.60	2.10	1.3	3.4	1.50	1.30
JUN									
09...	190	0.690	0.090	0.780	0.410	0.79	1.2	0.420	0.290
JUL									
27...	--	9.50	0.400	9.90	0.100	1.4	1.5	7.40	5.20
AUG									
31...	--	7.31	0.690	8.00	3.40	2.2	5.6	5.90	5.00

08061970 EAST FORK TRINITY RIVER ABOVE SEAGOVILLE, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	687	628	650	277	258	268	321	264	292	449	290	345
2	681	600	638	325	272	286	352	257	296	317	277	294
3	705	611	661	468	325	372	313	273	293	292	271	281
4	713	636	672	417	375	399	315	288	305	287	275	280
5	701	588	667	354	257	281	308	282	296	283	272	278
6	---	---	e676	282	263	273	306	288	298	339	267	304
7	---	---	e687	288	271	278	296	277	289	333	316	323
8	---	---	e689	281	266	276	329	281	288	337	316	328
9	---	---	e667	286	266	276	388	194	244	339	318	329
10	712	670	688	284	268	276	288	243	268	335	317	326
11	716	661	687	280	266	275	395	274	308	343	323	334
12	718	668	699	280	264	273	307	287	299	358	328	344
13	715	664	681	281	265	273	317	303	309	358	318	339
14	710	664	676	283	266	274	321	303	313	---	---	e340
15	707	648	672	283	266	275	461	303	343	---	---	e335
16	707	649	673	333	269	282	551	448	499	---	---	e332
17	724	659	686	386	283	309	486	271	300	---	---	e340
18	723	675	700	284	271	277	321	288	303	---	---	e368
19	722	666	695	296	272	282	478	233	327	---	---	e356
20	728	699	712	299	271	280	286	130	229	---	---	e359
21	739	674	696	288	273	280	230	130	193	---	---	e349
22	734	677	702	293	275	283	250	207	229	---	---	e362
23	694	610	652	294	271	283	265	237	250	---	---	e350
24	684	611	646	288	276	284	318	260	274	---	---	e346
25	697	616	655	293	274	282	389	322	359	---	---	e346
26	691	269	544	342	277	298	497	358	415	---	---	e349
27	268	138	190	358	328	345	446	293	382	---	---	e311
28	276	124	194	361	315	338	309	294	304	---	---	e315
29	184	162	171	356	314	332	312	289	300	---	---	e341
30	242	195	220	389	318	348	307	286	296	---	---	e367
31	296	244	260	---	---	---	308	288	300	---	---	e340
MONTH	739	124	597	468	257	295	551	130	303	449	267	333

e Estimated

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	e368	317	304	310	323	303	313	338	305	316
2	---	---	e365	317	305	312	318	303	313	326	306	317
3	---	---	e354	319	307	313	322	303	312	324	308	316
4	---	---	e355	417	236	309	316	301	308	341	305	320
5	---	---	e359	309	252	289	314	301	309	341	314	327
6	---	---	e360	423	306	333	396	301	333	357	319	335
7	---	---	e359	523	300	441	305	296	302	341	315	330
8	---	---	e359	330	301	315	315	300	305	343	316	333
9	---	---	e356	369	172	239	323	301	307	347	321	334
10	---	---	e357	331	258	289	312	301	307	350	326	334
11	---	---	e360	368	291	310	313	301	308	475	330	377
12	---	---	e363	346	294	320	326	302	311	566	317	483
13	347	305	323	328	310	319	453	305	341	340	314	326
14	333	303	315	321	304	312	497	285	391	360	223	311
15	315	302	310	316	303	310	326	296	308	328	293	311
16	312	297	306	312	300	307	325	314	320	389	301	343
17	304	293	299	339	296	311	323	312	318	364	243	318
18	307	292	300	295	233	276	328	310	320	304	236	274
19	311	290	302	352	292	308	399	298	331	328	303	314
20	309	293	301	319	290	304	322	304	313	409	331	346
21	310	292	301	318	303	309	329	308	319	420	324	383
22	313	215	265	321	305	314	328	312	321	475	318	344
23	305	256	286	324	307	314	327	312	321	339	315	328
24	380	207	307	333	304	316	328	313	320	365	295	315
25	262	187	226	420	314	348	337	313	324	458	291	321
26	311	268	286	321	309	314	338	311	325	311	293	301
27	447	308	378	322	313	317	330	309	320	336	303	318
28	512	309	466	327	313	319	324	304	317	375	246	317
29	330	295	311	326	316	321	336	257	303	391	295	318
30	---	---	---	331	315	322	315	302	309	512	312	439
31	---	---	---	330	309	316	---	---	---	351	316	334
MONTH	512	187	331	523	172	314	497	257	318	566	223	335

e Estimated

08061970 EAST FORK TRINITY RIVER ABOVE SEAGOVILLE, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	453	328	365	524	337	440	389	245	317	753	704	724
2	391	342	363	612	287	514	389	229	276	792	593	708
3	368	321	339	323	288	304	333	250	284	583	216	384
4	365	325	347	312	293	303	468	335	386	476	306	383
5	432	335	364	309	288	297	526	450	487	542	467	497
6	512	187	300	306	289	298	569	516	539	578	544	559
7	460	303	362	329	287	306	599	570	582	586	551	568
8	499	403	466	413	297	348	609	562	592	607	570	581
9	451	304	368	522	414	468	621	562	586	645	563	612
10	338	301	315	609	436	531	647	560	620	652	614	638
11	340	269	309	653	545	601	623	554	576	696	622	653
12	316	295	306	670	628	647	575	528	558	697	642	668
13	333	290	312	672	655	666	605	492	548	677	644	654
14	354	301	322	666	614	635	541	431	483	685	659	672
15	479	343	378	674	615	643	553	537	549	670	651	658
16	605	481	534	683	660	669	596	557	580	688	649	675
17	675	542	609	708	677	688	616	596	608	706	690	698
18	713	610	673	726	421	685	608	533	569	729	695	708
19	722	668	701	652	451	574	565	435	509	746	722	736
20	726	604	681	717	582	647	616	459	550	738	696	726
21	693	660	679	---	---	e630	616	573	592	687	478	550
22	696	618	645	---	---	e640	631	600	617	614	539	580
23	731	669	702	---	---	e650	631	612	624	608	483	531
24	705	593	662	---	---	e670	---	---	e611	565	515	549
25	732	331	584	---	---	e700	665	636	650	629	572	614
26	482	173	276	---	---	e620	671	649	660	655	625	644
27	346	208	290	---	---	e660	648	603	625	681	634	664
28	330	154	234	---	---	e520	647	612	635	735	668	701
29	295	240	261	410	290	341	681	644	670	664	630	650
30	327	271	287	549	421	492	739	676	694	669	609	623
31	---	---	---	585	204	329	815	654	732	---	---	---
MONTH	732	154	434	726	204	533	815	229	558	792	216	620
YEAR	815	124	415									

e Estimated

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

08061970 EAST FORK TRINITY RIVER ABOVE SEAGOVILLE, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.6	8.2	8.3	8.6	8.4	8.5	8.8	8.5	8.6	---	---	---
2	8.3	8.1	8.2	8.5	8.3	8.4	8.8	8.6	8.7	---	---	---
3	8.5	8.1	8.2	8.4	8.2	8.3	8.8	8.6	8.7	---	---	---
4	8.3	8.2	8.2	8.2	8.0	8.1	8.7	8.6	8.6	8.9	8.1	8.6
5	8.6	8.3	8.5	8.4	8.0	8.1	8.6	8.4	8.5	8.7	8.4	8.6
6	9.0	8.4	8.5	8.5	8.0	8.3	8.4	8.1	8.2	8.6	8.3	8.5
7	8.6	8.3	8.5	8.4	8.0	8.0	8.6	8.1	8.3	8.5	8.3	8.4
8	8.7	8.3	8.4	8.4	8.2	8.3	8.5	8.2	8.4	8.3	8.0	8.2
9	8.7	8.3	8.5	8.2	8.0	8.1	---	---	---	8.1	8.0	8.0
10	8.7	8.3	8.5	8.5	7.9	8.0	---	---	---	8.0	7.8	7.9
11	8.7	8.4	8.5	8.5	8.2	8.4	---	---	---	7.8	7.5	7.7
12	8.9	8.0	8.4	8.5	8.3	8.4	---	---	---	7.9	6.8	7.2
13	8.7	8.3	8.4	8.6	8.4	8.5	---	---	---	8.5	7.9	8.1
14	8.6	8.3	8.4	8.7	8.4	8.5	---	---	---	8.2	7.8	8.0
15	8.7	8.2	8.4	8.7	8.4	8.5	8.7	8.5	8.6	8.1	8.0	8.1
16	8.6	8.2	8.4	8.5	8.3	8.4	8.5	8.4	8.5	8.1	7.9	8.0
17	8.6	8.2	8.4	8.4	8.0	8.3	8.4	8.0	8.3	8.1	8.0	8.1
18	8.7	8.2	8.4	8.2	8.0	8.1	---	---	---	8.2	8.0	8.1
19	9.0	8.3	8.6	8.6	8.1	8.4	---	---	---	8.3	8.0	8.2
20	9.0	8.5	8.7	8.9	8.6	8.7	8.6	7.8	8.1	8.0	7.8	8.0
21	9.0	8.5	8.7	8.7	8.5	8.6	8.6	8.3	8.5	8.0	7.8	7.9
22	8.6	8.1	8.3	8.7	8.4	8.5	8.9	8.5	8.6	8.3	7.9	8.0
23	8.5	8.1	8.3	8.9	8.5	8.7	8.5	8.5	8.5	8.3	8.0	8.2
24	8.5	8.1	8.3	8.8	8.6	8.7	8.5	8.4	8.5	8.2	8.0	8.1
25	8.2	8.0	8.1	8.8	8.3	8.6	8.6	8.5	8.6	8.0	7.7	7.9
26	8.5	8.2	8.3	8.7	8.4	8.6	8.6	8.5	8.6	8.0	7.8	7.9
27	8.3	7.9	8.0	8.6	8.4	8.5	8.7	8.6	8.6	8.0	7.9	7.9
28	8.4	8.0	8.0	---	---	---	8.6	8.5	8.6	8.4	7.7	7.9
29	8.6	8.4	8.5	---	---	---	8.5	8.3	8.4	8.1	8.0	8.0
30	---	---	---	---	---	---	---	---	---	8.1	7.8	7.9
31	---	---	---	8.7	8.2	8.6	---	---	---	8.2	8.0	8.1
MONTH	9.0	7.9	8.4	8.9	7.9	8.4	8.9	7.8	8.5	8.9	6.8	8.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.2	7.9	8.0	---	---	---	8.0	7.5	7.7	---	---	---
2	8.2	8.0	8.1	---	---	---	8.1	7.4	7.8	---	---	---
3	8.2	8.1	8.2	---	---	---	7.8	7.6	7.7	7.3	7.2	7.3
4	8.4	8.0	8.2	---	---	---	---	---	---	7.4	7.3	7.4
5	8.2	7.9	8.0	---	---	---	---	---	---	7.4	7.3	7.3
6	8.2	7.7	7.8	---	---	---	---	---	---	7.4	7.3	7.3
7	7.9	7.7	7.8	---	---	---	---	---	---	7.4	7.2	7.3
8	7.6	7.4	7.5	7.7	7.5	7.6	---	---	---	7.5	7.2	7.3
9	7.9	7.6	7.7	7.6	7.4	7.5	---	---	---	7.5	7.0	7.4
10	7.9	7.7	7.8	8.1	7.4	7.6	---	---	---	7.4	7.3	7.3
11	7.8	7.6	7.8	7.7	7.6	7.6	---	---	---	7.4	7.3	7.3
12	7.9	7.7	7.8	7.7	7.6	7.6	---	---	---	7.3	7.2	7.3
13	7.8	7.7	7.8	7.9	7.6	7.6	---	---	---	7.4	7.2	7.3
14	7.8	7.7	7.7	7.6	7.4	7.5	---	---	---	7.3	7.2	7.3
15	7.8	7.6	7.7	7.7	7.3	7.5	---	---	---	7.3	7.2	7.2
16	7.6	7.5	7.6	7.7	7.6	7.7	7.3	7.2	7.3	7.3	7.2	7.3
17	7.6	7.5	7.6	7.6	7.4	7.5	7.4	7.3	7.3	7.3	7.3	7.3
18	7.7	7.5	7.6	---	---	---	7.4	7.3	7.3	7.3	7.2	7.2
19	7.7	7.5	7.6	---	---	---	---	---	---	7.3	7.2	7.3
20	7.6	7.5	7.6	---	---	---	7.5	7.3	7.4	7.3	7.2	7.2
21	7.5	7.4	7.4	---	---	---	7.4	7.3	7.4	7.4	7.2	7.3
22	7.5	7.2	7.4	---	---	---	7.4	7.2	7.3	---	---	---
23	7.8	7.3	7.6	---	---	---	7.3	7.2	7.2	---	---	---
24	7.8	7.6	7.7	---	---	---	7.2	7.1	7.2	7.5	7.4	7.4
25	---	---	---	---	---	---	7.3	7.2	7.2	7.5	7.4	7.5
26	---	---	---	---	---	---	7.3	7.2	7.3	7.5	7.4	7.5
27	---	---	---	---	---	---	7.3	7.2	7.3	7.4	7.3	7.4
28	---	---	---	7.8	7.4	7.6	7.3	7.2	7.3	7.4	7.3	7.3
29	---	---	---	8.0	7.6	7.8	---	---	---	7.4	7.3	7.3
30	---	---	---	7.7	7.6	7.7	---	---	---	7.4	7.3	7.3
31	---	---	---	8.2	7.6	7.9	---	---	---	---	---	---
MONTH	8.4	7.2	7.7	8.2	7.3	7.6	8.1	7.1	7.4	7.5	7.0	7.3
YEAR	9.0	6.8	8.0									

08061970 EAST FORK TRINITY RIVER ABOVE SEAGOVILLE, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	24.5	22.0	23.5	14.5	13.0	14.0	12.0	11.0	11.5	13.0	11.0	12.0
2	25.5	22.5	24.5	14.5	13.5	14.0	11.0	8.0	9.5	12.5	10.5	11.0
3	26.0	23.5	25.0	13.5	11.5	12.5	10.5	9.0	10.0	11.0	10.0	10.5
4	26.5	24.0	25.5	12.0	11.0	11.5	11.0	10.0	10.5	11.5	10.5	11.0
5	25.0	22.0	23.5	14.0	11.5	13.0	11.5	10.0	11.0	11.5	10.5	11.0
6	---	---	---	14.0	12.5	13.5	12.0	11.0	11.5	11.5	10.5	11.0
7	---	---	---	14.0	12.5	13.0	12.5	11.0	12.0	11.0	10.5	11.0
8	---	---	---	13.0	11.5	12.0	13.5	12.0	12.5	11.0	10.5	11.0
9	---	---	---	13.0	10.5	12.0	15.5	13.5	15.0	11.5	10.5	11.0
10	23.5	19.5	22.0	12.5	10.5	12.0	13.5	12.5	13.0	12.5	9.5	11.5
11	24.5	20.5	23.0	13.0	10.5	12.0	14.5	12.5	13.0	12.0	11.5	12.0
12	25.5	21.5	23.5	13.0	11.0	12.0	14.5	14.0	14.5	12.0	11.5	12.0
13	25.0	21.5	23.5	13.0	11.0	12.0	14.0	13.5	13.5	12.0	11.0	12.0
14	24.0	22.0	23.0	13.5	12.0	13.0	13.0	12.0	13.0	11.0	9.0	10.0
15	24.0	19.5	22.0	13.5	12.5	13.5	12.5	11.5	12.0	9.5	8.5	9.0
16	23.5	19.5	22.0	14.5	12.5	13.0	13.0	11.5	12.5	8.5	7.5	8.0
17	24.0	20.0	22.5	15.0	13.0	14.5	13.0	11.0	12.0	9.0	8.0	8.5
18	24.5	21.0	23.0	14.0	12.0	13.5	13.0	12.5	12.5	8.0	6.0	7.0
19	24.0	21.5	22.5	15.5	13.0	14.0	13.5	8.0	11.0	8.0	6.0	7.0
20	23.0	20.5	22.0	14.5	13.0	14.0	12.5	8.0	10.0	8.5	7.5	8.0
21	23.0	19.5	21.5	13.5	12.5	13.0	12.5	10.0	11.0	9.0	7.5	8.0
22	23.0	20.0	22.0	14.0	12.5	13.5	12.5	10.0	11.0	9.5	7.5	8.5
23	23.5	22.0	23.0	13.0	12.0	12.5	12.0	10.0	11.5	9.0	7.5	8.5
24	24.5	22.5	23.5	12.5	11.5	12.0	11.5	9.0	10.0	9.5	8.0	8.5
25	24.0	22.5	23.5	12.5	11.5	12.0	12.0	8.5	9.5	9.5	8.0	9.0
26	23.5	19.0	21.5	13.0	11.5	12.0	11.5	10.0	10.5	10.5	8.5	9.0
27	19.0	17.5	18.0	14.0	12.5	13.0	12.0	9.5	10.5	9.5	9.0	9.0
28	18.5	17.5	18.0	14.5	13.5	14.0	12.0	10.0	10.5	9.5	9.0	9.5
29	19.0	15.5	17.5	15.0	14.0	14.5	12.5	9.5	10.5	10.0	9.0	9.5
30	17.0	16.0	16.5	16.5	12.5	14.5	11.5	9.5	10.5	12.0	9.5	10.5
31	17.0	14.0	16.0	---	---	---	13.0	10.0	11.5	13.0	10.5	12.0
MONTH	26.5	14.0	22.0	16.5	10.5	13.0	15.5	8.0	11.5	13.0	6.0	10.0

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

08061970 EAST FORK TRINITY RIVER ABOVE SEAGOVILLE, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.0	22.0	22.5	28.0	26.0	27.0	28.5	27.0	27.5	27.0	26.5	26.5
2	23.5	22.5	23.0	29.5	26.5	27.5	29.0	27.0	28.0	26.5	25.5	26.0
3	24.0	23.0	23.5	27.5	26.5	27.0	28.0	27.0	27.5	26.5	22.5	24.5
4	26.5	23.0	24.5	28.0	26.5	27.5	29.5	27.5	28.5	26.0	24.0	24.5
5	26.0	24.5	25.5	28.0	27.0	27.5	30.0	28.0	29.0	27.5	25.5	26.5
6	26.0	23.0	24.5	28.0	26.5	27.5	30.0	28.5	29.5	27.5	26.5	27.0
7	26.0	25.0	25.5	28.5	27.0	27.5	30.5	29.0	29.5	28.0	26.0	27.0
8	27.0	25.5	26.0	29.0	27.0	28.0	30.5	29.0	29.5	29.0	27.0	28.0
9	27.0	25.5	26.5	30.0	28.0	28.5	31.0	29.0	30.0	29.0	27.5	28.0
10	27.0	25.5	26.0	29.5	28.5	29.0	31.5	29.5	30.0	28.0	25.5	27.5
11	27.5	25.5	26.5	29.5	28.0	29.0	31.5	30.0	30.5	27.0	24.0	25.5
12	29.0	26.5	27.5	29.5	28.0	29.0	30.5	29.5	30.0	27.0	25.0	26.0
13	28.5	27.0	28.0	30.0	28.0	29.0	29.5	28.0	29.0	27.5	26.0	26.5
14	28.0	26.5	27.5	29.5	27.5	28.5	30.0	28.0	29.0	28.0	26.0	27.0
15	27.0	23.5	25.0	30.0	28.0	29.0	29.0	28.0	28.5	28.5	26.5	27.5
16	28.0	25.5	26.5	29.5	28.5	28.5	28.5	26.5	27.5	27.5	25.5	27.0
17	29.0	27.0	27.5	29.0	28.0	28.5	28.0	26.0	27.0	28.0	26.0	27.0
18	29.0	27.5	28.0	28.0	26.5	27.5	27.0	26.0	26.5	28.5	26.5	27.5
19	29.0	27.0	28.0	28.0	26.5	27.0	27.0	24.5	26.0	28.5	27.0	28.0
20	28.0	27.0	28.0	28.5	27.0	27.5	27.0	24.5	25.5	28.5	27.0	28.0
21	27.5	26.0	26.5	28.5	27.5	28.0	28.5	25.5	27.0	27.0	23.5	25.5
22	26.5	25.5	26.0	29.0	28.0	28.5	29.0	27.0	28.0	26.5	25.0	26.0
23	27.5	25.5	26.5	30.0	28.0	29.0	29.0	27.0	28.0	26.0	24.0	25.0
24	28.5	25.5	27.0	30.0	28.5	29.5	---	---	---	24.0	22.5	23.5
25	27.5	24.5	26.0	30.5	29.0	29.5	29.0	27.0	28.0	24.5	21.5	23.5
26	26.0	23.5	25.0	30.5	29.5	30.0	29.0	27.5	28.0	26.0	23.5	24.5
27	27.5	26.0	26.5	31.5	29.5	30.0	28.0	26.5	27.5	25.5	23.5	24.5
28	26.0	22.0	24.5	29.5	28.0	29.0	27.0	25.0	26.0	25.0	23.0	24.0
29	25.0	24.0	24.5	28.5	27.5	28.0	26.5	25.0	26.0	24.5	22.5	23.5
30	27.0	24.5	25.5	29.0	28.0	28.5	26.5	25.5	26.0	23.5	21.5	22.5
31	---	---	---	29.0	25.5	27.0	27.0	26.0	26.5	---	---	---
MONTH	29.0	22.0	26.0	31.5	25.5	28.5	31.5	24.5	28.0	29.0	21.5	26.0
YEAR	31.5	6.0	19.0									

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	7.9	7.2	7.6	9.9	9.2	9.6	9.9	9.3	9.8
2	---	---	---	8.6	7.7	8.2	10.6	9.4	10.0	10.3	9.8	10.0
3	---	---	---	10.0	8.0	8.6	10.1	9.8	9.9	10.3	9.9	10.1
4	---	---	---	8.7	8.4	8.6	10.5	9.7	10.1	10.6	10.0	10.3
5	---	---	---	9.3	8.0	9.2	10.4	9.8	10.1	10.6	10.2	10.3
6	---	---	---	9.7	9.2	9.4	10.4	9.7	9.9	11.0	10.3	10.6
7	---	---	---	9.5	9.3	9.4	10.3	9.7	10.0	11.0	10.4	10.6
8	---	---	---	10.1	9.4	9.8	10.0	9.2	9.7	11.4	10.5	10.9
9	---	---	---	10.2	9.8	10.0	8.5	7.2	7.6	11.8	10.8	11.2
10	---	---	---	10.4	9.9	10.1	8.6	7.6	8.0	12.4	11.0	11.5
11	---	---	---	10.6	9.9	10.2	8.5	7.9	8.2	12.1	11.3	11.6
12	---	---	---	10.8	10.0	10.4	8.0	7.5	7.7	12.1	11.4	11.7
13	---	---	---	10.8	10.2	10.4	9.4	8.0	8.8	12.3	11.5	11.9
14	---	---	---	10.6	9.8	10.3	10.1	9.2	9.7	12.2	11.2	11.9
15	---	---	---	10.5	9.7	10.1	10.2	8.7	9.8	12.3	11.1	11.6
16	5.7	5.0	5.3	10.2	9.3	9.9	8.7	8.3	8.5	12.9	11.6	12.1
17	5.3	4.2	4.9	9.0	8.4	8.7	11.1	9.2	10.4	12.3	11.4	11.8
18	5.4	4.0	4.7	10.3	8.7	9.4	10.3	9.9	10.1	11.7	11.3	11.6
19	5.2	3.9	4.4	9.7	8.3	9.1	10.4	9.5	10.2	12.8	11.3	11.8
20	4.7	3.6	4.0	9.8	8.2	9.0	10.2	8.9	9.5	12.5	11.2	11.8
21	4.3	3.3	3.8	10.7	9.3	9.9	10.5	9.3	10.0	12.4	10.9	11.7
22	4.6	3.4	4.0	10.7	9.5	10.0	10.4	8.8	9.6	12.0	10.9	11.3
23	4.9	3.5	4.2	11.1	9.6	10.3	9.1	8.8	8.9	12.4	10.9	11.6
24	4.8	3.4	4.0	11.4	10.0	10.5	9.6	8.6	9.2	13.4	11.4	12.2
25	4.3	2.9	3.6	11.5	9.9	10.5	9.1	8.5	8.8	13.8	11.8	12.5
26	5.2	2.9	3.9	11.0	9.4	10.1	9.6	9.1	9.2	13.2	11.2	12.3
27	6.8	4.2	5.8	9.8	9.3	9.5	10.1	9.1	9.4	11.4	11.1	11.2
28	6.7	3.9	5.4	9.6	9.2	9.4	10.2	10.0	10.1	11.8	11.1	11.4
29	7.5	5.5	6.5	9.3	8.7	9.1	10.2	9.9	10.1	12.7	11.0	11.7
30	7.0	6.5	6.7	9.2	7.9	8.5	10.3	10.0	10.2	13.2	10.8	12.1
31	7.7	6.7	7.1	---	---	---	10.2	9.7	9.9	12.7	10.3	11.0
MONTH	7.7	2.9	4.9	11.5	7.2	9.5	11.1	7.2	9.5	13.8	9.3	11.4

08061970 EAST FORK TRINITY RIVER ABOVE SEAGOVILLE, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.1	12.3	12.6	12.5	10.7	11.4	10.2	9.0	9.5	8.3	7.6	8.1
2	13.0	12.3	12.6	12.4	10.6	11.2	10.3	9.2	9.7	9.9	7.6	8.4
3	12.8	12.2	12.5	11.3	10.5	10.8	10.5	9.4	9.9	9.5	8.8	9.2
4	12.8	12.0	12.4	10.5	8.9	9.7	11.4	9.3	9.8	10.9	8.6	9.2
5	13.4	12.1	12.5	9.8	8.6	9.0	10.4	9.3	9.7	9.8	8.6	9.1
6	13.0	10.7	11.9	10.1	7.6	8.9	9.6	8.6	9.3	10.5	8.2	9.1
7	13.3	10.7	11.6	9.6	7.2	7.7	10.3	8.9	9.5	11.2	8.7	9.4
8	14.8	11.5	12.8	9.8	9.3	9.5	10.5	9.1	9.5	9.7	8.7	9.1
9	15.8	12.2	13.4	9.4	6.7	7.8	10.5	9.2	9.5	9.3	8.2	8.8
10	12.7	8.8	10.2	9.6	7.5	8.2	11.2	9.1	9.7	8.8	7.8	8.5
11	10.2	8.7	9.4	10.9	9.4	9.9	11.0	9.0	9.7	8.3	5.7	7.6
12	11.7	9.0	10.1	10.9	9.7	10.2	9.3	8.8	9.1	8.4	4.3	6.1
13	11.1	9.5	10.4	11.3	9.8	10.4	10.7	7.3	8.9	9.1	6.9	8.6
14	11.4	10.3	10.7	11.6	9.9	10.6	9.5	6.0	7.7	8.6	6.8	8.1
15	11.4	10.2	10.7	11.6	9.7	10.5	9.5	9.0	9.3	8.7	6.8	7.8
16	12.0	10.1	10.6	12.9	9.8	10.8	10.2	9.0	9.2	8.4	8.0	8.3
17	11.4	9.9	10.5	11.4	9.0	10.6	10.2	9.2	9.6	8.4	7.8	8.1
18	11.8	10.0	10.6	10.1	8.5	9.2	9.7	9.0	9.3	8.1	7.2	7.7
19	14.2	10.0	11.8	11.8	9.1	10.4	9.5	7.8	8.9	7.5	6.8	7.3
20	15.1	11.3	12.6	12.6	10.5	11.4	8.4	8.1	8.2	---	---	---
21	15.3	11.2	12.7	11.4	10.3	10.8	9.4	8.3	8.8	---	---	---
22	12.3	9.1	10.0	11.6	9.9	10.7	9.0	8.5	8.7	---	---	---
23	11.3	9.0	10.0	12.3	10.3	11.2	8.7	8.2	8.5	9.2	8.2	8.5
24	11.4	9.8	10.5	12.2	10.3	11.0	8.8	8.0	8.4	8.8	7.7	8.1
25	10.8	9.6	10.3	11.5	9.5	10.6	8.7	8.1	8.4	9.1	7.0	8.0
26	12.1	10.1	10.9	11.3	9.5	10.2	9.2	8.3	8.6	8.6	7.8	8.2
27	10.2	9.2	9.6	11.2	9.7	10.3	10.7	8.3	9.4	9.2	8.1	8.5
28	10.8	8.9	9.2	10.7	9.7	10.1	9.7	7.9	8.5	9.0	7.6	8.4
29	13.9	10.5	11.2	11.0	9.6	10.2	8.3	7.2	7.7	8.4	7.9	8.2
30	---	---	---	10.7	9.4	9.9	8.3	7.7	7.9	10.2	7.0	7.8
31	---	---	---	10.6	9.2	9.8	---	---	---	10.1	9.5	9.7
MONTH	15.8	8.7	11.2	12.9	6.7	10.1	11.4	6.0	9.0	11.2	4.3	8.4
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9.8	8.3	9.4	7.3	5.4	6.3	8.1	5.9	6.3	---	---	---
2	8.5	7.6	8.2	7.2	5.1	5.6	7.1	5.5	6.4	---	---	---
3	9.0	8.4	8.6	7.9	7.0	7.4	6.3	5.4	5.9	---	---	---
4	10.4	7.7	9.0	8.2	7.1	7.6	5.9	5.2	5.6	---	---	---
5	8.9	7.5	8.2	8.2	7.1	7.6	5.9	4.7	5.4	---	---	---
6	7.8	6.1	6.6	8.4	7.2	7.7	8.5	4.8	7.2	---	---	---
7	8.8	6.1	7.2	8.3	7.2	7.7	8.1	3.9	5.4	---	---	---
8	6.3	5.4	5.9	7.7	7.0	7.3	5.6	4.1	4.8	---	---	---
9	8.0	6.3	7.0	6.8	5.4	6.0	5.7	4.1	4.8	---	---	---
10	10.1	7.4	8.2	6.7	4.6	5.3	6.2	3.8	4.8	---	---	---
11	8.4	7.5	7.9	5.6	4.2	4.9	5.6	3.8	4.8	---	---	---
12	9.3	7.3	8.1	6.0	4.3	5.0	5.9	4.0	4.9	---	---	---
13	8.3	7.3	7.6	5.6	4.3	5.0	5.7	4.8	5.3	---	---	---
14	8.3	7.3	7.7	6.0	4.1	4.9	7.6	4.5	5.8	---	---	---
15	7.7	6.4	7.2	6.0	4.3	5.1	6.7	5.4	6.1	---	---	---
16	6.3	4.9	5.5	5.7	4.0	4.8	6.4	5.0	5.8	---	---	---
17	5.1	4.2	4.6	5.9	4.3	5.0	6.1	5.1	5.7	---	---	---
18	4.9	3.7	4.3	6.7	4.1	5.1	5.9	5.3	5.6	---	---	---
19	5.7	3.9	4.6	5.9	4.9	5.4	7.2	5.1	5.9	---	---	---
20	5.4	3.9	4.4	6.5	4.7	5.5	6.2	5.4	5.7	---	---	---
21	7.7	4.5	6.9	6.7	4.9	5.7	6.7	4.7	5.5	6.8	4.2	5.2
22	8.7	4.7	7.7	6.9	5.1	5.9	5.8	4.5	5.2	4.9	4.4	4.7
23	9.0	5.3	7.3	8.3	5.5	6.4	5.9	4.3	5.0	5.8	4.4	4.9
24	6.6	4.2	5.3	7.1	5.1	6.1	---	---	---	5.6	4.8	5.4
25	5.2	3.8	4.6	7.7	5.1	6.3	5.1	3.7	4.4	5.8	5.0	5.5
26	6.2	4.3	5.4	8.0	5.2	6.5	---	---	---	5.6	5.0	5.3
27	6.5	5.6	6.0	6.6	5.4	5.9	---	---	---	5.7	4.6	5.2
28	7.1	6.1	6.5	6.0	4.6	5.3	---	---	---	5.5	4.5	5.1
29	7.1	6.2	6.7	6.1	4.5	5.4	---	---	---	5.4	4.6	5.2
30	8.2	6.3	7.0	5.6	4.7	5.1	---	---	---	5.6	4.9	5.3
31	---	---	---	7.0	5.0	6.2	---	---	---	---	---	---
MONTH	10.4	3.7	6.8	8.4	4.0	5.9	8.5	3.7	5.5	6.8	4.2	5.2
YEAR	15.8	2.9	8.5									

08061980 EAST FORK TRINITY RIVER AT SEAGOVILLE, TX

LOCATION.--Lat 32°39'53", long 96°31'26", Dallas County, Hydrologic Unit 12030106, on right bank at downstream side of bridge on Malloy Bridge Road, 1.3 mi north of intersection of U. S. Highway 175 and Malloy Bridge Road in Seagoville, and 3.5 mi downstream from South Mesquite Creek.

PERIOD OF RECORD.-- Chemical and biochemical analyses: April 1987 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1987 to current year.
pH: March 1987 to current year.
WATER TEMPERATURE: March 1987 to current year.
DISSOLVED OXYGEN: March 1987 to current year.

INSTRUMENTATION.--Since March 1987, a four-parameter water-quality monitor continuously records specific conductance, pH, water temperature, and dissolved oxygen at this station.

REMARKS.--Interruptions in the record were due to malfunction of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 820 microsiemens Aug. 15, 1987; minimum, 129 microsiemens May 17, 1989.
pH: Maximum, 9.4 units Oct. 30, 1989; minimum, 6.7 units Mar. 7, 1988.
WATER TEMPERATURE: Maximum, 31.5°C on several days during summer months of 1988 and 1989; minimum, 3.5°C Jan. 8, 1988, Feb. 5, 1989.
DISSOLVED OXYGEN: Maximum, 13.2 mg/L Mar. 18, 22, 1989; minimum, 0.0 mg/L Nov. 23, 1988, Aug. 10, 12, 1991.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 768 microsiemens Sept. 28; minimum, 160 microsiemens Sept. 21.
pH: Maximum, 8.9 units Jan. 19, 20; minimum, 6.9 units Apr. 14.
WATER TEMPERATURE: Maximum, 31.5°C July 26; minimum, 7.0°C Feb. 6, 8, 10.
DISSOLVED OXYGEN: Maximum, 15.5 mg/L Feb. 9; minimum, 0.2 mg/L June 8.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
NOV										
12...	1140	1980	263	8.0	13.0	9.4	91	1.9	99	12
FEB										
20...	1335	2200	284	8.8	12.0	12.2	114	2.0	120	12
APR										
07...	1316	2670	310	8.2	16.5	9.5	99	1.6	120	3
JUN										
09...	1240	500	329	7.8	25.0	6.7	83	1.8	120	8
JUL										
23...	1254	38	624	7.4	28.0	4.9	64	2.1	150	36
AUG										
31...	1325	71	680	7.3	26.5	4.0	51	6.4	130	4

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV										
12...	36	2.1	13	0.6	4.1	87	21	10	0.30	4.1
FEB										
20...	46	2.3	12	0.5	3.3	110	24	12	0.30	3.1
APR										
07...	46	2.3	12	0.5	3.9	120	23	10	0.30	0.80
JUN										
09...	45	2.5	16	0.6	4.0	120	29	16	0.30	4.6
JUL										
23...	54	4.0	60	2	9.3	120	55	75	0.90	8.4
AUG										
31...	47	3.5	70	3	14	130	57	70	1.1	8.6

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
NOV									
12...	143	0.460	0.060	0.520	0.110	0.59	0.70	0.240	0.140
FEB									
20...	170	0.510	0.030	0.540	0.020	0.48	0.50	0.160	0.110
APR									
07...	171	0.520	0.030	0.550	0.110	0.49	0.60	0.120	0.100
JUN									
09...	186	0.690	0.070	0.760	0.210	0.79	1.0	0.350	0.260
JUL									
23...	336	5.08	0.520	5.60	0.360	1.4	1.8	4.40	3.90
AUG									
31...	348	6.69	0.810	7.50	4.30	1.6	5.9	5.90	5.40

08061980 EAST FORK TRINITY RIVER AT SEAGOVILLE, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	653	597	620	---	---	e210	366	280	315	279	260	268
2	633	585	612	---	---	e220	288	265	279	275	264	271
3	674	605	650	---	---	e290	296	271	284	---	---	e290
4	688	634	661	---	---	e300	290	274	281	---	---	e290
5	678	604	648	---	---	e310	298	291	295	---	---	e280
6	665	645	657	261	255	259	301	293	297	---	---	e280
7	675	661	668	263	259	261	296	287	291	---	---	e280
8	677	632	659	263	258	262	293	285	291	285	281	283
9	686	641	658	261	258	260	299	246	265	284	281	283
10	685	652	666	262	259	260	283	255	270	284	282	283
11	681	653	664	261	259	260	299	283	287	283	281	282
12	686	649	669	262	258	260	305	286	298	281	279	280
13	690	652	679	261	259	260	311	305	309	279	277	278
14	658	650	653	264	259	261	313	309	311	278	270	275
15	---	---	e660	265	260	263	411	308	328	272	271	271
16	---	---	e650	289	260	265	529	417	473	273	271	272
17	---	---	e660	291	280	287	320	271	287	296	272	279
18	---	---	e670	286	274	280	274	270	272	313	293	302
19	---	---	e680	306	208	278	343	271	275	304	284	292
20	714	681	698	295	285	291	272	258	269	298	284	294
21	---	---	e680	289	280	283	255	222	235	291	282	286
22	---	---	e670	282	277	279	241	240	241	319	286	297
23	---	---	e640	281	277	279	241	238	239	291	281	287
24	---	---	e600	279	276	278	240	237	238	287	280	284
25	---	---	e440	278	275	276	---	---	e280	287	281	284
26	---	---	e210	280	272	276	---	---	e340	312	280	286
27	---	---	e180	318	278	288	---	---	e310	311	236	255
28	---	---	e170	331	319	325	285	271	274	272	245	258
29	---	---	e160	343	315	326	276	266	273	290	273	280
30	---	---	e190	335	261	310	266	263	264	348	291	301
31	---	---	e200	---	---	---	265	260	262	359	236	279
MONTH	714	585	559	343	208	275	529	222	288	359	236	282

e Estimated

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	304	297	302	---	---	e290	309	306	308	317	312	314
2	301	291	299	---	---	e290	312	308	310	320	316	318
3	293	288	290	---	---	e290	314	311	312	319	317	318
4	293	288	291	---	---	e290	314	311	313	317	302	314
5	296	292	294	298	285	292	314	312	313	313	310	311
6	298	291	295	346	299	307	341	309	321	314	299	307
7	298	290	294	489	340	412	329	308	315	307	305	306
8	297	289	294	315	309	312	311	302	310	309	306	308
9	294	288	292	350	228	268	313	310	311	313	309	310
10	296	290	293	308	258	276	313	311	312	316	312	314
11	297	292	295	308	292	295	314	312	313	378	317	329
12	319	292	298	328	299	307	315	311	313	504	343	425
13	314	298	304	311	304	307	344	312	316	321	310	315
14	327	303	314	305	301	304	452	312	384	351	296	317
15	313	301	307	305	300	302	314	306	310	345	283	311
16	307	300	304	305	299	302	320	315	317	317	290	299
17	303	297	301	348	302	306	317	312	314	318	264	297
18	306	296	301	323	290	301	315	310	312	283	260	273
19	304	295	300	324	294	302	340	304	315	298	283	290
20	319	285	298	336	301	307	312	302	308	323	299	305
21	---	---	e300	308	304	306	309	303	306	363	313	347
22	---	---	e300	311	308	309	305	303	304	379	308	321
23	---	---	e290	311	303	307	307	304	305	316	305	310
24	---	---	e290	308	299	305	306	304	306	309	287	298
25	---	---	e290	325	302	313	307	304	306	305	286	291
26	---	---	e300	305	301	303	310	306	308	312	287	293
27	---	---	e300	307	303	305	310	307	308	298	287	293
28	---	---	e300	309	305	307	310	305	308	330	290	303
29	---	---	e290	311	307	309	336	302	313	312	296	300
30	---	---	---	309	306	308	317	311	313	449	312	366
31	---	---	---	309	306	307	---	---	---	327	309	315
MONTH	327	285	297	489	228	304	452	302	313	504	260	313

e Estimated

08061980 EAST FORK TRINITY RIVER AT SEAGOVILLE, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	339	311	320	466	283	386	334	264	289	656	629	648
2	329	318	323	549	294	479	373	255	302	638	552	602
3	331	304	316	298	270	280	338	232	271	637	189	376
4	318	301	309	281	270	274	400	240	314	406	244	323
5	324	307	310	280	276	279	509	408	455	492	405	462
6	328	252	294	280	275	277	576	513	541	556	496	528
7	333	276	301	286	275	278	625	579	601	580	548	566
8	480	335	400	355	277	297	639	623	632	582	567	576
9	473	385	425	471	359	418	613	582	597	584	554	570
10	504	320	458	495	446	471	651	614	637	597	542	576
11	353	289	307	546	446	508	649	561	615	584	488	528
12	288	269	278	615	530	566	575	553	565	610	543	579
13	277	273	275	603	520	562	641	554	578	549	535	543
14	306	277	288	621	602	614	640	433	495	594	543	574
15	---	---	e320	632	601	615	541	489	516	581	552	565
16	505	373	439	650	632	643	603	532	561	598	548	571
17	578	509	544	652	635	646	637	599	616	631	587	608
18	652	582	613	653	637	650	638	557	607	652	613	629
19	682	647	665	637	603	615	570	463	533	690	632	657
20	677	596	666	626	603	616	---	---	e540	692	657	674
21	653	588	626	644	601	620	---	---	e560	685	160	441
22	607	527	565	661	646	656	---	---	e570	---	---	e450
23	608	555	585	651	580	627	---	---	e580	---	---	e500
24	655	584	618	661	612	638	---	---	e590	---	---	e550
25	668	375	589	651	620	635	643	620	632	651	579	609
26	621	317	481	660	643	653	651	622	634	676	634	654
27	339	266	308	657	620	642	636	597	617	691	640	661
28	334	246	295	619	334	457	634	570	601	768	685	711
29	295	242	260	466	328	401	671	620	648	694	638	664
30	345	265	301	535	360	508	691	661	670	636	598	620
31	---	---	---	433	205	278	691	658	674	---	---	---
MONTH	682	242	416	661	205	503	691	232	550	768	160	567
YEAR	768	160	389									

e Estimated

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.4	7.2	7.3	7.9	7.8	7.8	8.5	8.3	8.4	---	---	---
2	7.4	7.3	7.3	8.1	7.7	7.9	8.6	8.4	8.5	---	---	---
3	7.3	7.2	7.3	8.1	7.9	8.0	8.5	8.4	8.5	---	---	---
4	7.2	7.1	7.2	8.1	7.9	8.0	8.6	8.5	8.5	---	---	---
5	7.2	7.1	7.2	8.1	7.8	7.9	8.6	8.5	8.6	---	---	---
6	7.1	7.1	7.1	8.0	7.8	7.9	8.5	8.4	8.5	---	---	---
7	7.1	7.0	7.1	7.9	7.8	7.8	8.5	8.2	8.4	---	---	---
8	7.1	7.0	7.1	8.0	7.8	8.0	8.3	7.5	8.1	8.3	8.2	8.2
9	---	---	---	8.1	8.0	8.0	8.2	7.3	7.9	8.3	8.3	8.3
10	---	---	---	8.1	8.0	8.0	8.2	7.4	7.9	8.3	8.3	8.3
11	---	---	---	8.2	8.0	8.1	7.7	7.4	7.6	8.4	8.3	8.3
12	---	---	---	8.2	8.0	8.1	8.0	7.2	7.4	8.4	8.3	8.4
13	---	---	---	8.2	8.1	8.2	8.1	7.2	7.4	8.3	8.3	8.3
14	---	---	---	8.2	8.0	8.1	8.2	7.3	7.9	8.6	7.8	8.3
15	---	---	---	8.0	7.9	7.9	8.3	7.3	8.0	8.6	8.6	8.6
16	7.6	7.5	7.5	7.9	7.7	7.9	8.1	7.9	8.0	8.7	8.6	8.7
17	7.6	7.5	7.5	7.8	7.5	7.6	8.7	8.2	8.5	8.6	8.2	8.5
18	7.6	7.4	7.5	8.3	7.4	7.9	8.7	8.1	8.3	8.5	8.3	8.4
19	7.5	7.4	7.5	8.4	8.2	8.3	8.4	7.7	8.0	8.9	8.3	8.6
20	7.5	7.4	7.5	8.4	8.3	8.3	7.8	7.7	7.8	8.9	8.4	8.6
21	7.5	7.4	7.5	8.5	8.4	8.4	7.7	7.6	7.7	8.6	8.1	8.4
22	7.5	7.4	7.5	8.7	8.4	8.6	7.6	7.6	7.6	8.4	7.9	8.1
23	7.4	7.3	7.4	8.7	8.5	8.6	7.6	7.5	7.6	8.7	7.7	8.3
24	7.4	7.3	7.4	---	---	---	7.5	7.5	7.5	8.8	8.1	8.4
25	7.7	7.3	7.5	---	---	---	7.7	7.5	7.6	8.8	8.1	8.5
26	7.8	7.4	7.6	---	---	---	7.6	7.4	7.5	8.5	8.1	8.3
27	8.2	7.5	7.9	---	---	---	7.8	7.4	7.6	8.2	8.0	8.0
28	8.2	7.7	7.8	8.6	8.5	8.5	7.9	7.7	7.8	8.1	8.0	8.1
29	8.2	7.9	8.0	8.6	8.4	8.5	7.8	7.8	7.8	8.4	8.0	8.2
30	7.9	7.7	7.8	8.5	8.3	8.4	7.8	7.7	7.7	8.7	8.0	8.3
31	7.9	7.7	7.8	---	---	---	7.8	7.7	7.7	8.2	7.9	8.0
MONTH	8.2	7.0	7.5	8.7	7.4	8.1	8.7	7.2	7.9	8.9	7.7	8.3

08061980 EAST FORK TRINITY RIVER AT SEAGOVILLE, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.4	8.1	8.2	---	---	---	---	---	---	7.8	7.7	7.8
2	8.3	8.0	8.2	---	---	---	---	---	---	7.8	7.7	7.8
3	8.2	8.0	8.1	---	---	---	---	---	---	8.0	7.8	7.9
4	8.2	7.9	8.1	---	---	---	---	---	---	8.2	8.0	8.1
5	---	---	---	8.5	8.1	8.3	---	---	---	8.2	8.1	8.1
6	---	---	---	8.7	8.3	8.5	---	---	---	8.0	8.0	8.0
7	---	---	---	8.4	8.0	8.1	---	---	---	7.9	7.5	7.8
8	---	---	---	8.5	8.3	8.4	---	---	---	---	---	---
9	---	---	---	8.3	8.1	8.2	---	---	---	---	---	---
10	---	---	---	8.2	8.1	8.2	8.4	8.3	8.3	---	---	---
11	---	---	---	8.7	8.3	8.5	8.3	8.2	8.3	7.5	7.3	7.4
12	---	---	---	8.6	8.3	8.5	8.3	8.1	8.2	8.0	7.1	7.5
13	---	---	---	8.6	8.3	8.4	8.3	8.1	8.2	8.2	8.1	8.2
14	---	---	---	8.8	8.3	8.5	8.3	6.9	7.9	8.2	8.1	8.2
15	---	---	---	8.6	8.3	8.5	8.3	7.0	8.2	8.2	7.8	8.0
16	---	---	---	---	---	---	8.2	8.1	8.2	7.8	7.7	7.8
17	---	---	---	---	---	---	8.3	8.1	8.2	7.9	7.8	7.8
18	---	---	---	8.6	8.4	8.5	8.3	8.1	8.2	7.8	7.7	7.8
19	---	---	---	---	---	---	8.2	7.9	8.0	8.0	7.8	7.8
20	---	---	---	---	---	---	8.1	7.9	8.1	8.0	7.8	7.9
21	---	---	---	8.7	8.4	8.5	8.3	8.0	8.2	7.9	7.7	7.8
22	---	---	---	8.5	8.3	8.4	8.4	8.2	8.3	8.0	7.7	7.9
23	---	---	---	8.8	8.3	8.5	8.3	8.2	8.3	8.1	7.9	8.0
24	---	---	---	8.6	8.3	8.5	8.3	8.1	8.2	8.1	7.9	8.0
25	---	---	---	8.5	8.2	8.4	8.3	8.2	8.3	8.1	8.0	8.1
26	---	---	---	8.5	8.2	8.4	8.3	8.2	8.3	8.4	8.0	8.1
27	---	---	---	8.5	8.2	8.3	8.3	8.2	8.3	8.2	8.0	8.1
28	---	---	---	---	---	---	8.2	8.0	8.1	8.2	8.0	8.1
29	---	---	---	---	---	---	8.1	7.9	8.0	8.2	8.0	8.2
30	---	---	---	---	---	---	7.9	7.8	7.8	8.1	7.5	7.8
31	---	---	---	---	---	---	---	---	---	7.9	7.6	7.8
MONTH	8.4	7.9	8.1	8.8	8.0	8.4	8.4	6.9	8.2	8.4	7.1	7.9
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.0	7.8	7.9	7.8	7.3	7.5	7.8	7.7	7.7	7.5	7.4	7.5
2	8.0	7.8	7.9	7.8	7.2	7.4	7.9	7.6	7.7	7.5	7.4	7.5
3	8.0	7.8	7.9	8.0	7.7	7.9	7.7	7.6	7.7	8.3	7.5	7.8
4	8.0	7.7	7.8	8.2	7.9	8.0	7.7	7.6	7.6	7.9	7.5	7.7
5	7.9	7.5	7.7	8.2	8.0	8.1	7.7	7.5	7.6	7.6	7.4	7.5
6	7.7	7.4	7.5	8.1	7.9	8.1	7.6	7.5	7.6	7.5	7.4	7.4
7	7.7	7.4	7.6	8.3	7.9	8.1	7.7	7.5	7.6	7.4	7.4	7.4
8	7.6	7.3	7.4	8.4	7.8	8.1	7.7	7.5	7.6	7.4	7.4	7.4
9	7.6	7.2	7.5	7.8	7.5	7.6	7.7	7.5	7.6	7.6	7.3	7.4
10	8.0	7.9	7.9	7.8	7.5	7.7	7.7	7.5	7.6	7.6	7.5	7.5
11	8.1	7.8	8.0	7.8	7.7	7.8	7.8	7.6	7.6	7.6	7.5	7.6
12	8.2	7.9	8.0	7.8	7.7	7.7	7.8	7.6	7.7	7.6	7.5	7.5
13	8.2	7.8	8.0	7.8	7.7	7.7	7.8	7.6	7.7	7.6	7.5	7.5
14	8.1	7.8	8.0	7.8	7.7	7.8	7.9	7.7	7.8	7.4	7.3	7.4
15	---	---	---	7.8	7.7	7.8	8.3	7.8	7.9	7.3	7.2	7.3
16	7.9	7.7	7.8	7.7	7.6	7.7	7.9	7.7	7.8	7.3	7.2	7.3
17	8.0	7.7	7.8	7.7	7.6	7.7	8.0	7.8	7.9	7.3	7.2	7.3
18	7.9	7.8	7.9	7.7	7.6	7.6	7.9	7.7	7.7	7.2	7.2	7.2
19	7.9	7.8	7.8	7.7	7.6	7.6	7.8	7.6	7.7	7.2	7.1	7.2
20	7.9	7.7	7.8	7.7	7.6	7.6	---	---	---	7.2	7.1	7.2
21	7.8	7.5	7.6	7.7	7.6	7.6	---	---	---	7.7	7.2	7.3
22	---	---	---	7.6	7.6	7.6	8.1	7.4	7.7	---	---	---
23	---	---	---	7.6	7.3	7.5	7.8	7.3	7.6	---	---	---
24	---	---	---	7.6	7.3	7.4	8.0	7.6	7.7	---	---	---
25	---	---	---	7.6	7.3	7.4	7.8	7.6	7.7	7.7	7.5	7.6
26	---	---	---	7.6	7.2	7.4	7.8	7.6	7.7	7.6	7.5	7.5
27	---	---	---	7.4	7.0	7.2	7.7	7.6	7.7	7.6	7.5	7.5
28	7.7	7.5	7.6	7.5	7.0	7.4	7.8	7.6	7.7	7.5	7.5	7.5
29	7.7	7.5	7.5	7.6	7.4	7.5	7.7	7.6	7.6	7.5	7.5	7.5
30	8.0	7.5	7.7	7.8	7.5	7.6	7.7	7.6	7.6	7.7	7.5	7.5
31	---	---	---	8.1	7.6	7.8	7.6	7.5	7.6	---	---	---
MONTH	8.2	7.2	7.8	8.4	7.0	7.7	8.3	7.3	7.7	8.3	7.1	7.4
YEAR	8.9	6.9	7.9									

08061980 EAST FORK TRINITY RIVER AT SEAGOVILLE, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

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

08061980 EAST FORK TRINITY RIVER AT SEAGOVILLE, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.5	21.5	21.5	27.5	26.0	27.0	28.5	26.5	27.5	27.0	26.0	26.5
2	23.0	21.5	22.0	30.0	27.0	28.5	28.5	27.5	28.0	27.5	25.0	26.5
3	23.0	22.0	22.5	28.0	26.5	27.5	28.0	26.0	27.0	27.0	22.5	24.5
4	24.5	22.5	23.5	28.5	26.5	27.5	29.5	27.0	28.0	26.0	23.5	24.5
5	24.5	23.0	24.0	28.5	26.5	27.5	30.0	27.5	29.0	27.0	25.5	26.0
6	24.5	22.0	23.5	28.5	26.5	27.5	30.5	28.0	29.5	27.5	26.0	27.0
7	24.0	23.0	23.5	28.5	26.5	27.5	30.5	28.5	29.5	28.0	26.0	27.0
8	26.0	22.0	25.0	28.5	27.0	27.5	31.0	28.5	30.0	29.0	26.5	28.0
9	25.5	24.5	25.0	29.5	27.5	28.5	31.0	28.5	30.0	29.0	27.0	28.0
10	25.5	24.0	24.5	30.0	27.5	28.5	31.0	28.5	30.0	28.5	26.5	27.5
11	26.0	23.5	24.5	30.0	28.0	29.5	31.0	29.0	30.0	26.5	25.0	26.0
12	27.0	24.5	26.0	30.0	27.5	28.5	30.0	28.5	29.0	26.5	24.5	25.5
13	27.0	25.0	26.0	30.0	28.0	29.5	29.0	27.5	28.0	27.0	25.0	26.5
14	27.0	25.0	26.0	30.0	27.5	28.5	28.5	27.0	28.0	27.5	26.0	27.0
15	---	---	---	30.0	28.0	29.0	28.0	26.5	27.5	28.0	26.0	27.0
16	28.0	25.0	26.5	30.0	28.0	28.5	27.0	25.0	26.0	27.5	25.5	26.5
17	29.0	26.5	27.5	30.0	28.0	29.5	26.5	24.5	25.5	27.5	25.5	26.5
18	30.0	27.0	28.5	30.0	28.0	28.5	26.0	24.5	25.5	28.0	26.0	27.0
19	30.0	27.5	28.5	30.0	28.5	29.5	25.5	24.0	25.0	28.5	26.5	27.5
20	29.0	27.5	28.5	30.0	28.0	29.0	---	---	---	---	---	---
21	28.0	27.0	27.0	30.0	29.0	30.0	---	---	---	28.0	24.0	26.0
22	26.5	25.5	26.0	29.5	28.0	28.5	27.0	25.5	26.0	---	---	---
23	27.5	25.5	26.5	30.0	28.5	29.5	28.0	26.5	27.5	---	---	---
24	28.5	26.0	27.0	30.5	28.5	29.5	---	---	---	---	---	---
25	28.5	25.0	27.0	31.0	28.5	30.0	29.0	26.5	28.0	24.0	21.5	23.0
26	26.5	24.0	25.5	31.5	29.0	30.0	29.0	27.0	28.0	25.5	23.5	24.5
27	26.5	25.5	26.0	31.0	28.5	30.0	28.0	26.5	27.0	25.0	23.5	24.5
28	26.0	24.5	25.5	29.5	27.5	28.5	27.0	25.0	26.0	24.5	23.0	24.0
29	25.5	24.0	25.0	29.5	27.5	28.5	26.5	24.0	25.5	24.0	22.5	23.5
30	27.5	25.0	26.0	30.5	26.0	29.0	27.0	24.5	26.0	23.0	21.0	22.0
31	---	---	---	27.5	24.5	26.0	27.5	25.5	26.5	---	---	---
MONTH	30.0	21.5	25.5	31.5	24.5	28.5	31.0	24.0	27.5	29.0	21.0	26.0
YEAR	31.5	7.0	19.5									

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.3	8.0	6.3	8.3	7.5	7.9	---	---	---	10.3	8.6	9.6
2	4.3	7.9	6.2	8.7	7.8	8.3	---	---	---	10.8	6.7	8.5
3	3.7	2.7	3.2	9.0	7.9	8.6	---	---	---	---	---	---
4	3.5	2.4	2.8	9.3	8.9	9.1	---	---	---	---	---	---
5	3.4	2.2	2.7	11.5	8.5	10.0	12.5	10.7	11.7	---	---	---
6	3.7	2.8	3.1	10.9	10.0	10.6	11.2	10.4	10.7	---	---	---
7	4.0	3.1	3.5	10.0	9.6	9.8	10.9	9.8	10.4	---	---	---
8	3.8	3.1	3.4	11.1	9.8	10.4	10.3	9.4	9.7	---	---	---
9	3.9	3.0	3.3	10.7	10.1	10.4	9.4	7.9	8.2	---	---	---
10	3.7	2.7	3.1	10.3	9.8	10.1	8.9	8.2	8.6	---	---	---
11	3.2	2.3	2.8	10.1	9.4	9.8	8.7	8.1	8.5	---	---	---
12	2.9	2.1	2.4	10.1	9.3	9.7	8.0	7.6	7.7	---	---	---
13	3.2	2.2	2.7	10.0	9.1	9.5	8.8	7.6	8.3	---	---	---
14	3.1	2.3	2.6	9.3	8.5	9.0	9.6	8.5	9.1	---	---	---
15	9.6	2.4	5.0	8.9	8.2	8.5	10.0	8.4	9.4	---	---	---
16	8.2	3.9	5.9	8.5	7.5	8.2	8.7	8.0	8.3	---	---	---
17	4.7	3.7	4.2	7.5	6.8	7.2	9.6	8.2	9.3	---	---	---
18	4.5	3.4	3.9	9.3	6.8	8.0	10.2	7.3	8.7	12.9	11.8	12.3
19	4.7	3.7	4.1	---	---	---	---	---	---	14.8	11.9	13.1
20	4.7	3.8	4.2	---	---	---	---	---	---	14.4	12.0	13.1
21	4.4	3.7	4.0	---	---	---	---	---	---	---	---	---
22	4.7	3.6	4.0	---	---	---	---	---	---	---	---	---
23	4.7	3.5	3.9	---	---	---	---	---	---	---	---	---
24	4.9	3.6	4.0	---	---	---	---	---	---	14.1	11.0	12.4
25	4.3	3.0	3.7	---	---	---	---	---	---	13.9	10.3	11.9
26	4.7	2.7	3.6	---	---	---	12.0	10.9	11.5	12.3	10.2	11.1
27	6.2	3.1	5.3	---	---	---	11.8	9.6	11.0	10.4	9.4	9.7
28	6.0	4.1	4.9	---	---	---	11.1	9.3	10.2	9.9	9.3	9.6
29	7.5	5.6	6.3	11.2	10.6	10.9	10.8	9.1	10.1	10.7	9.2	9.8
30	8.6	7.3	8.0	---	---	---	10.6	8.2	9.4	11.8	9.2	10.3
31	8.2	7.2	7.8	---	---	---	10.5	7.6	8.7	---	---	---
MONTH	9.6	2.1	4.2	11.5	6.8	9.3	12.5	7.3	9.5	14.8	6.7	10.9

08061980 EAST FORK TRINITY RIVER AT SEAGOVILLE, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	10.8	9.0	9.8	---	---	---
2	---	---	---	---	---	---	10.7	9.3	9.9	---	---	---
3	---	---	---	---	---	---	11.2	9.5	10.2	---	---	---
4	---	---	---	---	---	---	10.9	9.3	10.0	---	---	---
5	---	---	---	10.4	8.6	9.3	10.5	9.1	9.7	---	---	---
6	14.2	11.3	12.5	11.6	8.7	9.8	9.8	9.1	9.4	---	---	---
7	14.7	11.3	12.7	9.7	7.3	7.8	11.2	7.1	9.5	---	---	---
8	15.2	11.4	13.0	10.0	9.4	9.7	10.0	8.7	9.3	---	---	---
9	15.5	11.3	13.0	9.4	7.9	8.4	9.6	8.5	9.0	---	---	---
10	15.4	11.3	13.1	9.0	8.0	8.5	9.4	8.3	8.8	---	---	---
11	14.3	11.0	12.5	11.8	9.1	10.3	9.2	8.3	8.7	---	---	---
12	13.6	10.8	12.6	11.7	10.1	10.7	8.8	8.0	8.3	8.4	4.6	6.6
13	---	---	---	11.8	9.8	10.6	11.7	7.1	8.2	8.5	7.7	8.1
14	---	---	---	11.8	9.5	10.5	9.4	5.5	7.2	---	---	---
15	---	---	---	11.8	8.8	10.1	8.9	7.5	8.5	---	---	---
16	---	---	---	11.8	8.5	10.0	8.9	8.2	8.5	7.8	7.2	7.5
17	---	---	---	10.6	8.8	9.7	8.9	8.3	8.6	7.8	7.0	7.5
18	---	---	---	9.9	8.2	8.9	8.8	8.3	8.5	7.5	6.5	7.2
19	---	---	---	11.7	8.0	9.8	8.7	8.0	8.4	7.5	7.0	7.2
20	---	---	---	12.1	9.6	10.6	8.5	8.0	8.2	7.8	7.2	7.4
21	---	---	---	10.6	9.2	9.9	8.6	7.9	8.3	7.5	6.2	6.9
22	---	---	---	11.1	9.0	9.9	9.1	7.8	8.2	9.8	5.6	7.4
23	---	---	---	11.1	9.6	10.2	9.1	8.1	8.5	8.1	7.0	7.5
24	---	---	---	11.1	9.2	10.0	9.1	8.0	8.6	7.8	7.1	7.4
25	---	---	---	11.2	9.0	10.0	10.9	8.7	9.7	7.5	7.0	7.3
26	---	---	---	11.2	8.9	9.9	11.4	7.5	9.8	7.6	6.8	7.1
27	---	---	---	11.1	9.1	10.0	---	---	---	6.9	5.8	6.5
28	---	---	---	10.5	9.2	9.8	---	---	---	6.9	5.3	6.2
29	---	---	---	11.4	9.2	10.1	---	---	---	7.6	6.2	7.2
30	---	---	---	11.3	9.1	9.9	---	---	---	8.8	.9	5.8
31	---	---	---	11.3	7.8	9.9	---	---	---	7.1	5.4	6.3
MONTH	15.5	10.8	12.8	12.1	7.3	9.8	11.7	5.5	8.9	9.8	.9	7.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.1	5.7	6.5	6.1	4.2	5.1	5.9	5.7	5.8	3.1	2.2	2.7
2	7.2	4.6	5.9	7.0	3.6	4.4	6.3	5.1	5.8	4.0	2.9	3.5
3	7.5	4.9	6.3	7.8	6.7	7.2	6.0	4.9	5.6	5.5	3.3	4.6
4	8.0	4.8	6.5	8.2	6.7	7.3	5.2	4.6	5.0	5.1	4.4	4.8
5	7.1	3.6	5.6	8.2	6.8	7.4	5.4	4.4	4.7	4.9	4.2	4.6
6	4.7	1.7	3.7	8.0	6.7	7.3	5.0	4.0	4.3	4.2	3.7	3.9
7	5.0	2.3	4.4	7.9	6.6	7.2	4.8	3.7	4.1	4.3	3.3	3.9
8	8.5	.2	5.4	7.2	6.5	6.8	5.7	3.6	4.3	4.8	4.0	4.2
9	7.6	5.5	6.5	6.4	4.9	5.6	5.8	3.8	4.5	4.7	3.6	4.1
10	8.2	7.3	7.7	4.8	4.4	4.6	5.2	3.5	4.1	3.7	3.0	3.4
11	8.4	7.0	7.6	4.8	3.8	4.1	5.4	3.4	4.1	4.5	3.5	4.0
12	8.8	7.0	7.7	4.3	3.7	4.0	5.1	3.7	4.1	4.1	3.7	3.9
13	8.6	6.8	7.6	4.2	3.9	4.0	5.6	4.2	5.0	4.3	2.0	3.1
14	8.4	6.7	7.5	4.6	3.8	4.1	6.4	4.5	5.2	3.9	1.1	2.8
15	---	---	---	4.5	3.9	4.2	9.1	5.5	6.8	4.3	.9	3.1
16	6.8	4.7	5.7	4.9	3.9	4.3	7.5	5.6	6.3	4.0	3.0	3.4
17	4.9	4.0	4.4	4.8	3.9	4.1	7.8	5.7	6.4	3.7	2.5	3.3
18	4.6	3.7	4.0	5.1	3.7	4.2	7.3	5.4	6.0	4.0	2.5	3.1
19	4.8	3.3	3.8	5.0	3.9	4.3	6.6	5.4	5.9	3.5	2.5	2.9
20	4.8	2.7	3.8	5.3	3.7	4.4	---	---	---	3.4	2.5	2.9
21	4.3	2.8	3.8	5.3	3.8	4.2	---	---	---	4.5	2.4	3.3
22	4.7	3.5	3.9	4.8	3.7	4.0	2.7	2.5	2.6	---	---	---
23	---	---	---	6.3	4.0	4.9	2.6	2.5	2.5	---	---	---
24	---	---	---	6.8	4.0	4.9	---	---	---	---	---	---
25	4.4	3.2	3.7	6.3	4.1	5.0	6.0	3.0	4.0	5.7	5.0	5.2
26	6.0	4.3	5.1	6.9	4.4	5.2	4.9	2.5	3.3	5.7	4.9	5.2
27	---	---	---	6.9	4.4	5.3	4.4	2.2	2.9	5.5	4.6	4.9
28	---	---	---	5.4	4.4	4.8	5.1	2.0	2.9	5.6	4.6	5.0
29	6.4	5.7	6.0	5.7	4.6	5.0	5.1	1.8	2.9	6.0	4.7	5.1
30	7.0	5.6	6.2	6.2	4.2	4.8	4.3	2.0	2.9	6.4	4.9	5.5
31	---	---	---	5.8	4.7	5.4	4.0	2.1	2.7	---	---	---
MONTH	8.8	.2	5.6	8.2	3.6	5.1	9.1	1.8	4.5	6.4	.9	3.9
YEAR	15.5	.2	6.9									

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX

LOCATION.--Lat 32°38'19", long 96°29'17", 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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1949 to current year.

REVISED RECORDS.--WSP 1922: Drainage area. WDR TX-75-1: 1974.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 338.69 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 21, 1983, at datum 5.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow largely regulated by Lavon Lake (station 08060500) since September 1953, and by Lake Ray Hubbard (station 08061550) since Mar. 22, 1970. The city of Forney discharges sewage effluent into a tributary below Lake Ray Hubbard and above this station. The North Texas Municipal Water District discharges sewage effluent into tributaries above this station from their Mesquite and Changler's Landing sewage treatment plants. Flow is also affected at times by discharge from the flood-detention pools of 20 floodwater-retarding structures with a combined detention capacity of 11,760 acre-ft. These structures control runoff from an 39.2² area above this station. Gage-height telemeter at 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	6610	1580	2160	1770	2390	2550	2430	1620	1090	759	82
2	67	3570	2000	2290	2030	2720	2540	2410	1650	156	1120	122
3	58	1520	1920	2400	2250	2620	2550	2410	1710	1650	508	570
4	61	603	1310	2580	2440	3200	2550	2420	1270	1970	158	344
5	59	1270	1470	2580	2450	4460	2540	2410	927	1990	86	107
6	54	1760	1550	2560	2430	3190	2610	2400	1460	1990	73	87
7	57	2010	1740	2530	2320	718	2740	2410	1730	1980	67	81
8	86	2020	1930	2520	2180	1610	2620	2410	278	1480	75	80
9	76	2000	2960	2560	2150	3310	2570	2400	711	185	74	80
10	59	1990	6190	2690	2140	5170	2560	2410	1470	45	71	76
11	52	1990	4150	2640	2160	2580	2560	2020	2370	38	83	116
12	51	1970	4070	2520	2210	2620	2550	204	2510	36	84	101
13	51	1950	2820	2500	2390	2260	2520	1530	2360	33	126	80
14	52	1920	2100	2410	1900	2330	766	1900	2320	33	115	74
15	53	1920	1880	2280	1930	2560	1910	2380	1590	33	81	73
16	54	1920	571	2220	2000	2570	2020	1770	161	33	77	74
17	53	2140	1210	2200	2070	2560	1870	1830	54	34	79	77
18	51	2270	1800	2500	2180	3330	2020	3660	46	34	83	76
19	55	2160	2070	2860	2200	3350	2180	4980	40	110	96	75
20	56	2230	3720	2270	2200	2100	2620	4450	44	52	115	72
21	56	2140	19300	2160	2200	2450	2780	1540	63	36	91	402
22	55	1990	24200	2760	2690	2580	2450	2030	45	36	79	261
23	60	1910	12100	2860	4260	2580	2410	2530	36	39	74	95
24	66	1900	8420	2500	3040	2580	2410	2620	33	44	72	72
25	70	1880	4200	2380	5160	2650	2400	3380	76	41	77	69
26	150	1750	1390	2390	6360	2710	2400	2790	1100	40	76	63
27	1860	858	1100	4780	3440	2620	2400	2440	1600	38	83	67
28	3550	594	1760	7100	411	2590	2400	2410	2150	93	77	68
29	9350	592	1800	5150	1570	2600	2530	3050	4270	172	68	69
30	12300	960	1980	2710	---	2570	2540	737	4340	79	70	66
31	10300	---	2120	758	---	2570	---	1430	---	538	72	---
TOTAL	38985	58397	125411	84818	72531	84148	71566	73791	38034	14128	4769	3679
MEAN	1258	1947	4046	2736	2501	2714	2386	2380	1268	456	154	123
MAX	12300	6610	24200	7100	6360	5170	2780	4980	4340	1990	1120	570
MIN	51	592	571	758	411	718	766	204	33	33	67	63
AC-FT	77330	115800	248800	168200	143900	166900	142000	146400	75440	28020	9460	7300

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1992#, BY WATER YEAR (WY)

MEAN	370	450	640	498	675	762	956	1725	1082	430	168	214
MAX	4116	3032	4401	3083	3043	2714	3425	9586	5718	2026	1459	1560
(WY)	1974	1975	1972	1972	1975	1992	1985	1957	1989	1982	1989	1974
MIN	1.58	3.78	3.57	7.77	23.1	10.6	7.47	42.1	17.8	3.84	.000	.000
(WY)	1957	1956	1955	1957	1957	1956	1956	1959	1954	1956	1956	1954

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1954 - 1992#	
ANNUAL TOTAL	414689		670257			
ANNUAL MEAN	1136		1831		664	
HIGHEST ANNUAL MEAN					1875	1982
LOWEST ANNUAL MEAN					38.4	1955
HIGHEST DAILY MEAN	28200	Apr 14	24200	Dec 22	48800	May 5 1990
LOWEST DAILY MEAN	41	Aug 9	33	Jun 24	.00	Oct 1 1953
ANNUAL SEVEN-DAY MINIMUM	52	Oct 12	34	Jul 12	.00	Oct 1 1953
INSTANTANEOUS PEAK FLOW			29500	Dec 22	59900	May 5 1990
INSTANTANEOUS PEAK STAGE			21.95	Dec 22	27.17	May 5 1990
INSTANTANEOUS LOW FLOW					.00	at times
ANNUAL RUNOFF (AC-FT)	822500		1329000		481000	
10 PERCENT EXCEEDS	2110		3040		1980	
50 PERCENT EXCEEDS	176		1920		81	
90 PERCENT EXCEEDS	62		56		16	

Period of regulated streamflow.

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January to April 1964, May 1966 to September 1981, and June 1986 to current year. Pesticide analyses: March 1977 to July 1981. Sediment analyses: April to September 1964.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to September 1981, May 1986 to current year.
pH: March to September 1977, May 1986 to current year.
WATER TEMPERATURE: October 1967 to September 1981, May 1986 to current year.
DISSOLVED OXYGEN: March to September 1977, May 1986 to current year.

INSTRUMENTATION.--From March to November 1977, a four-parameter water-quality monitor continuously recorded specific conductance, pH, water temperature, and dissolved oxygen at this station. Since May 1986, a four-parameter water-quality monitor continuously records specific conductance, pH, water temperature, and dissolved oxygen at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,010 microsiemens Nov. 23, 1968; minimum, 100 microsiemens May 17, 1989.
pH: Maximum, 9.5 units Oct. 30, 1989; minimum, 6.7 units on several days during 1988 and 1991.
WATER TEMPERATURE: Maximum, 34.0°C June 26, July 1, Aug. 16, 17, 1980; minimum, 1.0°C Jan. 3, 1979.
DISSOLVED OXYGEN: Maximum, 14.7 mg/L Feb. 9, 1992; minimum, 0.0 mg/L on many days during 1977 and 1991.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 750 microsiemens Sept. 29; minimum, 139 microsiemens Oct. 28.
pH: Maximum, 8.9 units Jan. 24, 25, Feb. 9, 11, 13; minimum, 7.1 units Sept. 18-21.
WATER TEMPERATURE: Maximum, 31.5°C July 25-27; minimum, 8.0°C Dec. 3.
DISSOLVED OXYGEN: Maximum, 14.7 mg/L Feb. 9; minimum, 1.6 mg/L Sept. 1.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
NOV										
12...	1350	1970	263	7.9	11.0	9.6	88	1.9	99	17
FEB										
26...	1510	5030	276	8.3	11.0	10.6	98	2.0	120	7
APR										
22...	1430	2450	317	8.1	19.0	8.4	92	1.4	130	11
JUN										
09...	1412	718	326	8.0	25.0	7.5	93	2.1	120	8
AUG										
20...	1135	108	475	7.9	24.5	6.3	77	2.3	130	28
SEP										
04...	1545	226	279	7.8	25.0	5.3	65	6.0	90	12

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV										
12...	36	2.1	13	0.6	3.9	82	25	13	0.30	4.0
FEB										
26...	43	2.1	9.6	0.4	3.1	110	19	5.9	0.20	5.2
APR										
22...	50	2.3	11	0.4	3.8	120	23	11	0.40	1.6
JUN										
09...	45	2.4	16	0.6	4.4	110	28	16	0.30	4.8
AUG										
20...	45	3.4	47	2	7.1	98	54	46	0.80	7.0
SEP										
04...	33	1.8	19	0.9	4.6	78	22	21	0.40	4.8

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
NOV									
12...	146	0.460	0.060	0.520	0.110	0.49	0.60	0.230	0.160
FEB									
26...	153	0.490	0.040	0.530	0.040	0.46	0.50	0.130	0.100
APR									
22...	177	0.490	0.050	0.540	0.130	0.47	0.60	0.110	0.130
JUN									
09...	185	0.670	0.060	0.730	0.130	0.97	1.1	0.380	0.260
AUG									
20...	269	4.80	0.100	4.90	0.150	0.95	1.1	1.90	1.80
SEP									
04...	153	1.36	0.140	1.50	0.390	0.51	0.90	0.810	0.720

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	38985	213	120	12600	7.9	835	18	1880	82
NOV.	1991	58397	273	154	24200	11	1760	23	3680	100
DEC.	1991	125411	251	141	47800	9.5	3210	21	7150	97
JAN.	1992	84818	284	160	36500	12	2750	24	5580	110
FEB.	1992	72531	305	172	33600	14	2740	27	5220	110
MAR.	1992	84148	306	172	39100	14	3190	27	6080	110
APR.	1992	71566	323	182	35100	16	3030	29	5520	120
MAY	1992	73791	309	174	34600	14	2860	27	5390	110
JUNE	1992	38034	295	166	17000	13	1370	26	2640	110
JULY	1992	14128	313	176	6700	16	599	28	1060	110
AUG.	1992	4769	436	244	3140	33	419	43	554	130
SEPT	1992	3679	489	273	2710	39	388	49	489	140
TOTAL		670257	**	**	293000	**	23100	**	45200	**
WTD.AVG.		1831	288	162	**	13	**	25	**	110

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	635	612	618	232	224	226	344	262	292	309	283	291
2	655	616	632	247	228	234	292	272	282	295	286	290
3	664	612	633	285	250	265	286	267	275	292	283	286
4	687	656	671	392	285	329	295	280	290	284	267	281
5	690	654	669	494	269	321	288	275	279	288	279	281
6	684	634	661	275	269	272	282	276	279	283	280	282
7	680	625	671	279	275	277	280	270	274	286	280	282
8	633	622	627	279	276	277	278	275	276	295	282	290
9	635	616	626	277	273	275	296	230	256	295	292	293
10	666	625	652	277	273	275	249	228	238	294	282	292
11	691	660	675	276	273	275	256	244	249	293	291	292
12	696	678	685	276	273	275	266	254	260	297	292	294
13	704	682	691	277	274	275	291	267	276	299	270	288
14	712	683	702	279	272	276	295	291	294	280	271	276
15	681	672	676	282	277	279	297	292	294	276	251	267
16	695	670	683	281	278	279	380	300	345	272	250	253
17	669	648	658	308	286	304	475	274	345	272	249	252
18	679	656	670	302	281	290	289	279	282	295	250	280
19	694	672	681	306	268	282	341	287	303	293	279	288
20	690	661	675	295	281	288	313	210	278	289	278	285
21	702	683	692	281	276	279	215	170	196	287	276	282
22	705	656	676	280	277	278	239	209	224	303	281	293
23	732	647	686	279	275	277	251	237	245	293	288	291
24	651	612	631	278	274	276	262	252	257	298	287	290
25	637	597	617	276	271	274	310	263	290	295	288	292
26	664	160	453	278	270	276	409	309	339	298	291	294
27	207	155	184	329	279	310	401	297	365	296	256	282
28	200	139	170	329	312	320	296	289	291	259	251	255
29	191	156	169	339	314	324	293	281	290	288	259	276
30	210	189	204	362	258	306	287	282	285	353	292	320
31	224	211	216	---	---	---	287	284	285	484	337	413
MONTH	732	139	579	494	224	283	475	170	282	484	249	288

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	329	324	327	308	303	306	318	310	314	325	321	323
2	327	317	324	309	303	307	314	312	313	329	324	326
3	317	308	312	308	307	308	317	314	315	330	325	327
4	314	309	311	310	296	309	317	314	315	328	323	326
5	313	311	312	326	297	303	320	316	318	326	319	324
6	316	306	310	320	282	302	341	315	325	327	310	320
7	306	301	303	384	308	348	336	319	325	319	312	316
8	310	297	304	392	307	330	321	320	320	324	316	319
9	306	302	304	312	250	271	323	321	322	324	319	322
10	306	288	296	292	252	267	323	321	323	329	322	326
11	322	294	307	300	291	294	325	322	323	366	324	334
12	365	322	327	320	302	308	326	323	324	487	373	410
13	337	322	329	309	295	305	341	323	326	461	311	330
14	353	327	336	297	293	295	455	325	399	343	264	312
15	339	322	331	298	292	295	327	318	323	299	264	291
16	333	325	327	298	293	295	334	329	332	324	301	308
17	---	---	e324	311	295	303	333	326	330	323	265	304
18	---	---	e322	344	302	315	330	326	328	280	264	271
19	---	---	e325	316	302	309	350	312	327	294	280	286
20	---	---	e324	340	310	315	343	319	326	308	293	297
21	---	---	e325	316	311	315	325	318	321	349	309	334
22	---	---	e298	318	316	317	320	317	319	361	311	336
23	---	---	e283	319	313	316	323	320	321	362	333	338
24	---	---	e317	319	312	316	324	321	322	364	280	323
25	---	---	e255	334	312	325	324	320	322	315	266	286
26	---	---	e257	321	315	318	327	321	323	283	278	281
27	---	---	e297	320	317	318	327	322	325	290	283	286
28	---	---	e393	321	318	320	326	318	323	300	280	288
29	476	307	343	323	320	321	350	314	324	284	278	280
30	---	---	---	322	315	319	331	321	326	413	270	313
31	---	---	---	318	314	316	---	---	---	428	325	349
MONTH	476	288	315	392	250	309	455	310	325	487	264	316

e Estimated

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	347	316	327	385	276	322	---	---	e295	686	659	672
2	331	323	326	537	390	437	---	---	e306	659	565	615
3	341	312	320	556	285	317	---	---	e285	602	161	394
4	336	323	326	285	278	281	---	---	e325	375	215	262
5	325	311	317	279	276	278	---	---	e475	406	297	354
6	338	241	291	279	275	277	---	---	e560	452	404	420
7	336	269	302	286	273	277	---	---	e600	490	453	473
8	414	338	386	321	280	290	619	578	600	514	491	503
9	411	326	356	380	331	354	630	586	621	525	506	515
10	332	291	300	474	382	429	623	583	599	542	519	529
11	327	288	302	532	466	494	645	625	639	557	499	528
12	302	276	289	589	537	562	631	558	577	594	502	558
13	295	272	284	628	594	617	564	553	559	587	557	566
14	296	273	282	659	630	648	626	516	582	596	566	576
15	345	296	319	661	626	651	507	438	469	620	599	612
16	433	347	390	640	600	624	533	494	520	601	582	589
17	520	429	467	669	637	655	590	533	570	626	592	610
18	599	517	547	673	636	662	622	590	611	652	617	640
19	641	579	610	703	458	612	615	546	575	673	638	658
20	661	640	651	647	492	566	570	478	511	710	657	689
21	663	605	638	551	471	507	638	546	607	691	183	499
22	621	577	608	593	553	576	637	607	618	492	303	358
23	574	536	555	616	574	596	641	625	632	469	355	410
24	629	571	599	644	615	630	647	637	639	526	474	501
25	669	514	632	677	637	651	650	637	643	589	530	568
26	547	215	332	677	639	655	644	631	635	655	589	632
27	296	234	271	679	654	669	652	630	643	677	643	663
28	313	223	257	674	448	646	629	591	614	696	649	675
29	261	235	247	539	341	444	649	595	628	750	673	715
30	274	261	267	---	---	e560	681	651	674	672	631	652
31	---	---	---	---	---	e260	701	676	691	---	---	---
MONTH	669	215	393	703	273	502	701	438	558	750	161	548
YEAR	750	139	392									

e Estimated

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

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

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.1	8.0	8.0	8.0	7.8	7.9	---	---	---	7.6	7.6	7.6
2	8.1	8.0	8.0	7.9	7.5	7.7	---	---	---	7.7	7.6	7.6
3	8.2	8.0	8.1	8.0	7.9	7.9	---	---	---	8.3	7.6	7.9
4	8.3	8.1	8.2	8.0	7.9	7.9	---	---	---	8.0	7.8	7.9
5	8.3	8.1	8.2	8.0	7.8	7.9	---	---	---	7.8	7.7	7.7
6	8.0	7.7	7.9	8.2	7.8	8.0	---	---	---	7.7	7.6	7.6
7	7.9	7.8	7.9	8.2	8.0	8.1	---	---	---	7.7	7.6	7.6
8	7.9	7.8	7.9	8.1	7.9	8.0	7.7	7.6	7.7	7.7	7.6	7.6
9	8.0	7.9	7.9	8.0	7.9	7.9	7.8	7.6	7.7	7.7	7.6	7.6
10	8.1	8.0	8.1	7.9	7.8	7.9	7.7	7.6	7.6	7.6	7.5	7.6
11	8.2	7.9	8.1	7.9	7.8	7.9	7.6	7.5	7.5	7.6	7.5	7.6
12	8.4	8.0	8.2	8.0	7.8	7.9	7.6	7.4	7.5	7.5	7.4	7.5
13	8.3	8.0	8.2	7.8	7.7	7.8	7.7	7.5	7.5	7.5	7.4	7.5
14	8.3	8.0	8.2	7.8	7.7	7.8	7.6	7.5	7.6	7.5	7.4	7.4
15	8.1	8.0	8.1	7.8	7.7	7.7	7.9	7.5	7.6	7.5	7.3	7.4
16	8.0	7.9	8.0	7.8	7.6	7.7	7.9	7.7	7.7	7.3	7.3	7.3
17	8.0	7.9	7.9	7.9	7.6	7.7	7.7	7.6	7.7	7.3	7.2	7.3
18	8.0	7.8	7.9	7.8	7.7	7.8	7.7	7.5	7.6	7.3	7.1	7.2
19	8.0	7.8	7.9	7.9	7.8	7.8	7.6	7.5	7.6	7.2	7.1	7.2
20	8.1	7.9	8.0	7.8	7.7	7.7	7.6	7.5	7.6	7.2	7.1	7.1
21	8.0	7.9	8.0	7.7	7.6	7.7	7.6	7.5	7.5	7.8	7.1	7.4
22	7.9	7.9	7.9	7.9	7.7	7.8	7.6	7.4	7.5	7.6	7.4	7.5
23	7.9	7.8	7.9	8.0	7.7	7.8	7.7	7.5	7.6	7.4	7.3	7.3
24	7.8	7.8	7.8	8.0	7.8	7.9	7.8	7.5	7.7	7.4	7.2	7.3
25	7.8	7.7	7.8	8.0	7.8	7.9	7.6	7.5	7.6	7.3	7.3	7.3
26	8.1	7.8	7.9	8.0	7.8	7.8	7.7	7.5	7.6	7.3	7.3	7.3
27	7.9	7.8	7.9	7.9	7.7	7.8	7.7	7.5	7.6	7.4	7.3	7.3
28	8.0	7.8	7.9	7.8	7.6	7.7	7.7	7.5	7.6	7.4	7.3	7.4
29	8.0	7.8	7.9	7.8	7.7	7.7	7.7	7.5	7.6	7.4	7.3	7.3
30	8.1	7.9	8.0	---	---	---	7.6	7.5	7.5	7.5	7.3	7.4
31	---	---	---	---	---	---	7.6	7.5	7.6	---	---	---
MONTH	8.4	7.7	8.0	8.2	7.5	7.8	7.9	7.4	7.6	8.3	7.1	7.5
YEAR	8.9	7.1	8.0									

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.5	21.5	22.0	29.0	27.0	28.0	---	---	---	27.5	26.0	27.0
2	23.0	22.0	22.5	30.5	28.0	29.0	---	---	---	28.0	26.0	27.0
3	23.0	22.0	22.5	29.5	26.5	27.5	---	---	---	27.5	23.5	25.0
4	24.0	22.5	23.5	28.0	27.0	27.5	---	---	---	25.5	24.0	25.0
5	24.0	23.5	24.0	28.0	27.0	27.5	---	---	---	27.0	25.5	26.0
6	24.0	22.5	23.5	28.0	26.5	27.5	---	---	---	28.0	26.5	27.0
7	24.0	23.0	23.5	28.5	26.5	27.5	---	---	---	28.5	26.5	27.5
8	26.0	24.0	24.5	28.5	27.0	28.0	31.0	29.0	30.0	29.5	27.5	28.5
9	25.5	24.5	25.0	29.5	28.0	28.5	31.5	29.5	30.5	29.5	27.5	28.5
10	25.0	24.0	24.5	30.0	28.0	29.0	31.5	29.5	30.5	28.5	26.5	27.5
11	25.5	23.5	24.5	30.0	28.0	29.0	31.0	29.5	30.5	27.0	25.5	26.5
12	26.5	24.5	25.5	30.0	28.0	29.0	30.0	29.0	29.5	26.5	25.5	26.0
13	27.0	25.0	26.0	30.0	28.0	29.0	29.0	28.0	28.5	27.0	25.5	26.5
14	26.5	25.0	26.0	30.0	28.0	29.0	28.5	27.5	28.0	27.5	26.0	27.0
15	26.0	24.0	24.5	30.5	28.5	29.5	28.5	27.0	28.0	28.0	26.5	27.0
16	28.0	25.0	26.0	30.0	28.5	29.0	27.5	26.0	27.0	27.5	26.0	27.0
17	29.0	26.5	27.5	29.5	28.0	29.0	27.0	25.0	26.0	28.0	26.0	27.0
18	30.0	27.5	28.5	29.0	27.5	28.0	26.0	25.0	25.5	28.5	26.5	27.5
19	30.5	28.0	29.5	27.5	26.0	27.0	25.5	24.5	25.0	28.5	27.0	27.5
20	30.0	28.0	29.0	28.0	26.5	27.5	25.5	23.5	24.5	28.5	27.0	28.0
21	28.5	27.0	27.5	29.0	27.0	28.0	27.0	24.5	26.0	28.0	25.0	26.5
22	27.0	26.0	26.5	29.5	27.5	28.5	28.5	25.5	27.0	26.5	25.0	26.0
23	28.0	25.5	26.5	30.0	27.5	29.0	28.5	26.5	27.5	25.5	23.0	24.5
24	30.0	26.5	28.0	31.0	28.5	29.5	29.0	27.0	28.0	23.5	22.5	23.0
25	29.0	26.0	28.0	31.5	29.0	30.0	29.5	27.0	28.5	23.5	21.5	22.5
26	27.0	25.0	26.0	31.5	29.5	30.5	29.5	28.0	29.0	24.5	22.5	23.5
27	27.5	26.5	27.0	31.5	29.5	30.5	28.0	26.5	27.5	25.0	23.5	24.0
28	28.0	25.5	26.5	30.5	28.0	30.0	28.0	25.5	26.5	24.5	22.5	23.5
29	26.0	25.0	25.5	29.0	28.0	28.5	27.5	25.5	26.5	24.0	22.0	23.0
30	27.5	25.5	26.5	---	---	---	27.5	25.5	26.5	23.0	21.0	22.0
31	---	---	---	---	---	---	28.0	26.0	27.0	---	---	---
MONTH	30.5	21.5	25.5	31.5	26.0	28.5	31.5	23.5	27.5	29.5	21.0	26.0
YEAR	31.5	8.0	20.0									

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5.7	4.2	5.0	---	---	---	10.6	9.3	10.0	---	---	---
2	5.8	3.8	4.8	---	---	---	10.9	9.9	10.3	---	---	---
3	4.7	3.5	4.1	---	---	---	11.1	10.6	10.9	---	---	---
4	4.6	2.7	3.6	---	---	---	11.7	10.9	11.3	---	---	---
5	4.6	2.5	3.6	---	---	---	11.5	11.1	11.3	---	---	---
6	4.9	3.0	3.9	8.9	8.4	8.7	11.4	10.8	11.1	---	---	---
7	5.5	3.6	4.5	9.0	8.2	8.6	11.3	10.7	11.0	---	---	---
8	7.0	5.3	6.0	9.5	8.8	9.2	10.8	10.0	10.4	---	---	---
9	7.1	5.0	5.9	9.8	9.3	9.5	10.2	8.4	9.0	11.6	10.5	10.9
10	6.1	4.2	5.2	9.7	9.3	9.5	9.4	8.7	9.0	11.8	10.6	11.1
11	5.6	3.3	4.4	9.9	9.3	9.6	9.3	8.7	9.1	11.7	10.7	11.1
12	5.3	2.9	4.0	10.1	9.4	9.7	9.1	8.3	8.7	11.5	10.6	11.0
13	4.8	3.0	3.8	10.3	9.5	9.8	9.3	8.1	8.6	11.0	10.4	10.7
14	4.9	3.0	3.8	10.2	9.5	9.8	10.5	9.1	9.6	11.2	10.6	10.8
15	5.1	3.3	4.1	9.8	9.1	9.5	11.1	10.2	10.6	11.1	10.8	10.9
16	5.4	3.5	4.3	9.7	9.1	9.4	10.7	9.9	10.1	11.6	10.9	11.2
17	5.9	4.1	4.8	9.0	8.1	8.5	11.0	9.4	10.4	11.5	11.1	11.3
18	5.0	3.6	4.1	9.2	8.3	8.7	11.0	10.4	10.6	11.3	11.0	11.2
19	5.2	3.4	4.3	8.8	8.1	8.4	10.6	10.2	10.4	12.0	11.2	11.5
20	5.1	3.7	4.3	9.3	7.9	8.5	10.5	10.1	10.3	12.1	11.5	11.8
21	5.4	3.6	4.5	10.8	9.0	9.7	---	---	---	12.1	11.5	11.8
22	4.9	3.3	4.0	11.0	9.3	10.0	---	---	---	12.4	11.5	11.9
23	4.6	3.3	3.9	11.7	9.6	10.4	---	---	---	12.9	12.2	12.5
24	5.1	3.2	4.0	12.2	10.2	11.0	---	---	---	12.9	12.1	12.5
25	4.5	2.8	3.6	12.3	10.2	11.1	---	---	---	12.8	11.9	12.3
26	6.2	3.0	4.1	12.0	10.2	11.0	---	---	---	12.4	11.7	11.9
27	6.3	3.0	5.0	11.6	9.9	10.4	---	---	---	11.7	11.2	11.4
28	---	---	---	10.4	10.1	10.3	---	---	---	11.4	11.2	11.3
29	---	---	---	10.1	9.8	10.0	---	---	---	11.3	10.7	11.1
30	---	---	---	9.8	8.6	9.2	---	---	---	12.6	10.1	11.1
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	7.1	2.5	4.4	12.3	7.9	9.6	11.7	8.1	10.1	12.9	10.1	11.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.1	10.2	11.5	---	---	---	10.4	8.9	9.6	8.9	8.2	8.5
2	12.2	11.0	11.6	---	---	---	10.3	9.1	9.6	8.7	8.0	8.3
3	11.8	10.9	11.3	---	---	---	10.6	9.2	9.8	8.4	7.8	8.1
4	12.2	10.8	11.5	---	---	---	10.2	8.9	9.5	8.5	7.8	8.1
5	13.3	11.0	12.0	---	---	---	9.7	8.4	9.0	8.8	7.9	8.3
6	13.5	11.3	12.4	---	---	---	8.9	8.4	8.6	8.9	7.8	8.3
7	14.0	11.2	12.5	---	---	---	9.6	8.3	8.8	8.9	8.1	8.5
8	14.4	11.4	12.6	---	---	---	9.3	8.1	8.6	8.6	7.7	8.2
9	14.7	11.3	12.8	---	---	---	9.0	7.9	8.4	---	---	---
10	13.7	11.4	12.4	9.4	8.1	8.9	8.7	7.7	8.1	---	---	---
11	11.8	10.3	11.0	11.0	9.2	10.2	8.6	7.7	8.1	---	---	---
12	11.0	9.2	10.0	11.1	9.8	10.4	8.2	7.5	7.8	---	---	---
13	11.6	8.8	10.1	11.4	9.7	10.5	8.3	7.4	7.8	8.4	5.4	7.8
14	10.9	8.9	9.9	11.7	9.8	10.6	8.1	5.7	6.7	8.5	6.8	8.1
15	12.0	9.4	10.5	11.9	9.3	10.4	8.3	7.9	8.1	7.9	7.0	7.6
16	12.0	9.6	10.7	11.6	9.1	10.2	8.3	7.6	7.9	7.9	7.6	7.8
17	---	---	---	10.5	9.2	9.8	8.2	7.9	8.0	7.9	7.2	7.7
18	---	---	---	9.3	8.3	8.8	8.3	7.8	7.9	7.5	7.1	7.2
19	---	---	---	10.8	7.7	9.1	8.0	7.5	7.8	7.5	7.0	7.2
20	---	---	---	10.9	9.0	9.8	7.8	7.4	7.6	7.9	7.2	7.5
21	---	---	---	9.6	8.7	9.2	8.7	7.6	8.1	7.6	6.9	7.2
22	---	---	---	10.1	8.4	9.1	8.4	7.8	8.1	7.9	7.1	7.7
23	---	---	---	10.7	9.0	9.8	8.3	7.8	8.0	8.4	7.6	7.9
24	---	---	---	10.4	8.9	9.6	8.3	7.6	7.9	8.4	7.5	7.9
25	---	---	---	10.3	8.7	9.4	8.6	7.7	8.1	8.2	7.2	7.6
26	---	---	---	10.2	8.4	9.2	9.2	8.2	8.6	8.7	7.6	8.1
27	---	---	---	10.0	8.1	9.1	9.2	8.3	8.7	8.3	7.6	7.9
28	---	---	---	9.5	8.4	8.9	8.7	8.1	8.4	8.1	7.7	7.9
29	---	---	---	10.2	8.5	9.2	8.5	7.7	8.2	8.7	8.1	8.4
30	---	---	---	10.0	8.5	9.2	8.7	8.1	8.3	8.4	6.8	7.5
31	---	---	---	10.5	8.9	9.6	---	---	---	8.4	7.3	8.2
MONTH	14.7	8.8	11.4	11.9	7.7	9.6	10.6	5.7	8.3	8.9	5.4	7.9

08062000 EAST FORK TRINITY RIVER NEAR CRANDALL, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.4	8.0	8.2	7.7	6.4	7.0	---	---	---	2.2	1.6	2.0
2	8.2	7.8	8.0	6.4	5.0	6.0	---	---	---	3.7	2.1	2.9
3	8.8	7.9	8.3	8.2	5.4	7.4	---	---	---	5.8	3.1	4.3
4	9.2	7.8	8.4	8.3	7.3	7.8	---	---	---	5.6	5.0	5.3
5	8.8	7.7	8.3	8.3	7.2	7.7	---	---	---	5.2	4.4	4.9
6	8.1	4.9	6.6	8.3	7.2	7.7	---	---	---	4.4	3.6	4.1
7	7.3	6.5	6.9	8.2	7.1	7.6	---	---	---	4.4	3.3	3.8
8	6.6	5.5	5.8	7.5	6.9	7.3	5.3	3.1	4.0	4.6	3.6	4.1
9	7.2	5.3	6.4	7.0	5.8	6.5	5.9	3.3	4.4	5.0	3.5	4.1
10	8.4	7.3	7.9	6.2	5.0	5.6	5.5	3.6	4.4	4.0	3.2	3.6
11	8.6	7.2	8.0	5.7	4.4	5.0	4.8	3.1	3.9	4.8	3.6	4.1
12	8.8	7.4	8.0	5.9	4.0	4.9	4.5	3.1	3.8	4.8	3.8	4.2
13	8.7	7.3	8.0	6.2	4.1	5.1	5.8	3.6	4.5	5.1	2.8	4.0
14	8.6	6.9	7.7	5.9	4.3	5.1	5.8	4.7	5.1	5.1	2.8	4.0
15	7.6	6.8	7.3	5.9	4.0	4.9	8.2	4.3	5.7	4.5	3.0	3.6
16	6.7	4.2	5.5	5.2	4.2	4.7	7.3	5.7	6.5	4.6	3.3	3.9
17	6.2	3.6	4.4	5.3	3.6	4.4	7.1	5.3	6.2	4.8	3.3	4.0
18	5.2	3.7	4.3	4.7	3.8	4.2	6.4	5.4	5.8	4.4	3.5	3.9
19	---	---	---	4.6	3.2	3.9	6.2	5.2	5.6	4.9	3.5	4.0
20	---	---	---	4.7	3.9	4.4	6.1	5.4	5.8	5.4	3.4	4.2
21	---	---	---	5.1	3.3	4.1	5.7	4.2	5.1	5.2	3.6	4.2
22	---	---	---	6.2	3.6	4.8	6.0	4.1	4.8	5.0	4.3	4.6
23	---	---	---	6.7	3.5	5.0	6.2	3.8	4.8	5.0	4.3	4.5
24	---	---	---	6.1	3.8	5.0	7.2	3.3	5.4	5.3	4.2	4.6
25	4.7	3.2	3.9	6.4	4.0	5.1	5.9	2.9	4.4	5.6	5.0	5.3
26	6.9	3.8	5.3	6.3	3.8	5.0	5.2	2.6	3.8	5.2	4.7	5.0
27	7.5	6.9	7.1	6.3	4.1	5.2	4.7	2.5	3.6	5.3	4.3	4.8
28	7.4	6.5	7.2	5.3	3.6	4.5	5.1	2.4	3.6	5.3	4.0	4.6
29	7.5	6.9	7.2	5.0	4.5	4.8	6.5	2.0	3.8	4.7	3.9	4.3
30	8.3	6.9	7.5	---	---	---	6.6	2.2	3.8	5.0	3.9	4.4
31	---	---	---	---	---	---	4.4	2.0	3.3	---	---	---
MONTH	9.2	3.2	6.9	8.3	3.2	5.5	8.2	2.0	4.7	5.8	1.6	4.2
YEAR	14.7	1.6	7.5									

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 September 1925, October 1938 to current year. Monthly discharge only for some periods, are published in WSP 1312.

REVISED RECORDS.--WSP 1922: Drainage area. WDR TX-77-1: 1942(M), drainage area. WDR TX-89-1

GAGE.--Water-stage recorder. Datum of gage is 302.65 ft above National Geodetic Vertical Datum of 1929. 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 6.94 ft higher.

REMARKS.--Records fair including those of estimated daily discharges. At times, flow is affected by storage in 15 upstream reservoirs having a combined capacity of 3,572,000 acre-ft, of which 1,138,000 acre-ft is for flood control. A levee system constructued in 1916, extends several miles upstream and downstream from the station. The cities of Fort Worth, Dallas, and several smaller cities divert considerable water for their municipal use, of which about 60 percent is returned as sewage effluent that sustains low flows at this site. Flow may also be affected at times by discharge from the flood-detention pools of 38 floodwater-retarding structures with a combined detention capacity of 22,600 acre-ft. These structures control runoff from 76.7² above this station. Two separate gage-height telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1908 reached a stage of about 33 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. 22, 1942.

REVISIONS.--Revised daily discharges for water year 1991, in feet cubed per second. are given in the table below. These figures supersede those published in WDR TX-91-1.

Sept. 19, 1991.....1540	Sept. 22.....1190	Sept. 25.....1480	Sept. 28.....835
20.....3800	23..... 988	26.....1370	29.....791
21.....2270	24..... 943	27.....1030	30.....776

	TOTAL	MEAN	MAX	MIN	AC-FT
September 1991	46668	1556	5230	484	92570
WTR YR 1991	782373	2143	26100	418	1552000

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	758	49700	5030	e16800	15600	15100	9500	5270	10400	15900	5800	881
2	749	36800	6220	16600	15000	14800	9290	3910	12000	14500	4720	1410
3	744	27200	8720	16600	14800	14500	9130	3720	13000	11100	4160	2390
4	730	18600	7420	16700	15100	16600	9010	3670	11700	8320	3150	4030
5	713	14000	4950	16300	15300	18700	8580	3760	9340	6650	1660	1850
6	705	13200	4540	15900	15300	17800	8080	3700	9100	6420	1300	1180
7	698	13200	4620	15700	15200	16200	8430	3530	10800	5400	1180	994
8	693	13400	5570	15700	14900	14700	8090	3470	8900	4080	1090	940
9	689	13300	9950	15800	14300	17200	6980	3410	8560	2660	1050	905
10	661	13100	15900	15800	13800	21600	5950	3370	9160	e1640	1050	864
11	656	13100	14600	15700	13500	18800	6550	3270	10700	e1360	1040	1840
12	639	13100	14000	15600	14600	17100	5570	e1700	11400	e1160	1060	4840
13	625	13000	14100	15400	14100	14800	4710	e1900	11100	e1130	1640	2110
14	623	13000	13300	15300	13800	13200	3520	2830	10300	e1140	1780	1160
15	628	12900	12400	15200	13500	12700	3780	6810	9500	1050	1360	993
16	613	12800	10800	15100	13100	12500	4260	7460	7270	e1010	1190	911
17	614	12900	9770	15000	12500	12100	4270	5630	5950	957	1090	903
18	603	13100	9990	16300	11800	12500	5720	11800	5620	984	1020	876
19	577	13000	11000	17500	11100	13200	5790	15600	5400	1540	1100	877
20	585	13700	15600	17100	10200	11800	5820	16800	4870	1430	2550	875
21	602	13100	41600	16800	9600	11300	5960	13900	4610	1180	2050	1680
22	595	12000	75900	17600	10300	10900	4980	8730	4370	1040	1360	3530
23	611	10300	89800	17100	13700	10800	4340	8590	4130	1120	1110	2120
24	641	8980	e74900	16500	12700	10800	3920	7890	3410	1040	1010	1130
25	701	8340	e54000	16000	20000	10600	3760	9240	4150	935	1010	914
26	775	7920	37600	15500	24300	10800	3630	12200	5830	837	1140	905
27	8130	6520	e30900	20000	21600	10600	3510	10300	8790	798	1070	838
28	18600	5180	e26600	23900	19600	10100	3490	8890	8870	1120	990	870
29	31500	3960	e23900	25000	16300	9820	4660	11300	13300	3530	926	824
30	58900	4430	e20500	23800	---	9720	7380	11300	15400	2650	861	855
31	60300	---	e18300	19100	---	9610	---	10500	---	2610	850	---
TOTAL	194658	423830	692480	531400	425600	420950	178660	224450	257930	105291	51367	44495
MEAN	6279	14130	22340	17140	14680	13580	5955	7240	8598	3396	1657	1483
MAX	60300	49700	89800	25000	24300	21600	9500	16800	15400	15900	5800	4840
MIN	577	3960	4540	15000	9600	9610	3490	1700	3410	798	850	824
AC-FT	386100	840700	1374000	1054000	844200	835000	354400	445200	511600	208800	101900	88260

e Estimated

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1992, BY WATER YEAR (WY)

MEAN	1726	2157	2469	2049	3046	3279	4265	6506	5346	1972	1089	1160
MAX	11140	16860	22340	17140	14680	20120	38610	40400	24600	10650	6912	8322
(WY)	1982	1982	1992	1992	1992	1945	1942	1990	1941	1989	1982	1962
MIN	32.8	49.5	50.4	61.0	72.7	54.6	213	614	154	62.6	37.1	89.1
(WY)	1925	1925	1925	1925	1925	1925	1956	1964	1925	1925	1925	1925

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1925 - 1992	
ANNUAL TOTAL	1972551		3551111			
ANNUAL MEAN	5404		9702		2921	
HIGHEST ANNUAL MEAN					9702	1992
LOWEST ANNUAL MEAN					280	1956
HIGHEST DAILY MEAN	89800	Dec 23	89800	Dec 23	133000	Apr 23 1942
LOWEST DAILY MEAN	418	Aug 26	577	Oct 19	32	Oct 4 1924
ANNUAL SEVEN-DAY MINIMUM	590	Aug 20	598	Oct 17	32	Oct 14 1924
INSTANTANEOUS PEAK FLOW			92900	Dec 23	150000	Apr 23 1942
INSTANTANEOUS PEAK STAGE			36.47	Dec 23	41.55	Apr 22 1942
INSTANTANEOUS LOW FLOW			523	Oct 19		
ANNUAL RUNOFF (AC-FT)	3913000		7044000		2116000	
10 PERCENT EXCEEDS	13100		17100		8080	
50 PERCENT EXCEEDS	1590		8490		816	
90 PERCENT EXCEEDS	675		876		195	

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1954 to current year. Chemical and biochemical analyses: January 1968 to current year. Pesticide analyses: January 1968 to July 1981. Sediment analyses: October 1963 to September 1964, and April 1972 to April 1975.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1954 to current year.
pH: March 1977 to current year.
WATER TEMPERATURE: October 1954 to current year.
DISSOLVED OXYGEN: March 1977 to current year.

INSTRUMENTATION.--Since March 1977, a four-parameter water-quality monitor records temperature, DO, pH, and specific conductance continuously at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,990 microsiemens Oct. 13, 1956; minimum, 122 microsiemens Sept. 30, 1981.
pH: Maximum, 9.9 units July 12, 1982; minimum, 6.8 units Oct. 3, 19, 20, Nov. 19, 1980.
WATER TEMPERATURE: Maximum, 36.0°C July 1, 1955; minimum, 1.0°C on many days during winter months.
DISSOLVED OXYGEN: Maximum, 11.4 mg/l Feb. 12, 1986; minimum, 0.0 mg/l on several days during 1979-81.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 746 microsiemens July 28; minimum, 192 microsiemens Dec. 21.
pH: Maximum, 8.3 units Feb. 11; minimum, 7.3 units Sept. 3, 4, 16.
WATER TEMPERATURE: Maximum, 31.5°C July 27, Aug. 10, 11; minimum, 6.5°C Jan. 18-20.
DISSOLVED OXYGEN: Maximum, 11.7 mg/l Feb. 9; minimum, 3.9 mg/l Oct. 28.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
NOV										
25...	1330	8340	393	7.9	12.0	10.2	94	0.1	140	23
JAN										
30...	1025	24400	365	7.9	10.0	10.3	92	0.9	150	30
APR										
15...	1015	3900	559	7.8	22.0	6.9	79	3.0	170	31
JUN										
23...	1330	4160	545	7.8	27.0	6.3	80	1.0	180	51
JUL										
21...	1415	1270	680	7.7	28.0	6.4	82	1.2	190	52
AUG										
25...	1430	1060	617	7.8	29.0	6.9	90	1.2	160	50

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV										
25...	49	4.0	23	0.8	5.3	120	38	20	0.40	6.3
JAN										
30...	52	3.7	17	0.6	4.2	120	37	12	0.20	6.8
APR										
15...	60	4.7	34	1	5.4	140	53	35	0.50	4.5
JUN										
23...	56	8.6	41	1	5.6	120	53	51	0.30	6.9
JUL										
21...	64	6.3	64	2	8.1	130	77	67	0.70	7.9
AUG										
25...	54	5.3	56	2	9.3	110	69	57	0.90	8.1

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)
NOV									
25...	216	1.57	0.030	1.60	0.060	0.44	0.50	0.440	0.360
JAN									
30...	202	0.790	0.040	0.830	0.110	0.39	0.50	0.140	0.140
APR									
15...	280	3.24	0.060	3.30	0.060	0.54	0.60	0.930	0.920
JUN									
23...	297	2.45	0.050	2.50	0.100	0.50	0.60	0.690	0.660
JUL									
21...	375	6.50	0.100	6.60	0.110	0.59	0.70	1.70	1.70
AUG									
25...	324	7.92	0.080	8.00	0.140	0.66	0.80	2.40	2.30

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	194658	287	161	84800	15	7820	30	15700	110
NOV.	1991	423830	339	190	218000	18	20700	35	40600	120
DEC.	1991	692480	320	180	336000	17	30900	33	62200	120
JAN.	1992	531400	351	197	283000	19	27200	37	52800	130
FEB.	1992	425600	348	196	225000	19	21800	37	42000	120
MAR.	1992	420950	395	221	251000	23	26600	42	47800	140
APR.	1992	178660	431	241	116000	27	13200	47	22500	140
MAY	1992	224450	400	224	136000	24	14600	43	25900	140
JUNE	1992	257930	435	243	169000	28	19800	47	32900	140
JULY	1992	105291	463	257	73100	33	9410	51	14500	140
AUG.	1992	51367	543	300	41600	44	6060	62	8550	150
SEPT	1992	44495	566	312	37500	47	5590	65	7760	150
TOTAL		3551111	**	**	1972000	**	204000	**	373000	**
WTD.AVG.		9702	367	206	**	21	**	39	**	130

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	674	736	662	---	---	e250	460	414	439	360	356	358
2	658	722	690	---	---	e260	422	404	412	362	358	360
3	666	802	690	---	---	e280	436	396	416	360	356	357
4	666	772	704	---	---	e300	426	408	416	356	354	356
5	670	734	716	---	---	e320	446	428	438	356	354	355
6	674	732	708	---	---	e350	472	444	457	354	352	354
7	700	716	710	354	352	353	474	462	469	356	354	354
8	666	746	696	354	352	353	482	446	466	360	354	356
9	676	720	598	360	352	357	444	288	385	358	356	357
10	670	598	502	364	358	361	348	314	332	358	356	356
11	696	582	546	364	358	361	378	344	364	358	356	356
12	698	658	586	362	358	361	394	372	382	358	356	357
13	704	680	662	364	360	362	396	380	389	362	354	359
14	700	670	448	368	364	365	400	396	399	364	360	362
15	696	708	456	366	362	364	400	394	398	362	360	361
16	700	704	450	366	360	365	410	400	405	360	358	359
17	686	408	312	376	348	363	432	404	413	366	358	362
18	688	666	674	374	370	371	402	394	397	345	337	345
19	696	678	687	378	360	368	414	396	404	345	337	343
20	684	670	679	374	360	366	394	312	360	354	353	353
21	702	678	694	382	374	379	308	192	231	353	353	353
22	714	696	704	392	382	385	---	---	e240	353	345	349
23	696	664	675	394	390	392	---	---	e250	353	345	352
24	684	658	665	396	388	392	288	254	270	353	353	353
25	704	684	697	396	390	393	322	290	306	353	353	353
26	682	642	663	400	390	395	348	324	335	353	353	353
27	636	218	436	458	396	425	358	348	353	353	290	316
28	268	222	249	470	460	465	364	358	361	322	298	308
29	---	---	e260	506	466	483	364	358	361	329	322	324
30	---	---	e240	500	432	466	366	358	363	372	322	359
31	---	---	e240	---	---	---	366	362	365	390	374	383
MONTH	714	218	571	506	348	367	482	192	373	390	290	352

e Estimated

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	396	380	387	406	396	400	408	402	406	436	378	405
2	380	376	377	396	396	396	408	406	407	396	378	384
3	378	372	374	398	394	396	410	404	408	412	396	408
4	378	370	374	404	366	381	410	404	407	424	410	420
5	378	372	375	380	366	373	412	406	409	460	426	445
6	378	374	376	390	382	388	416	406	409	458	402	447
7	374	370	372	414	390	399	432	412	418	430	400	410
8	372	370	370	428	412	418	432	412	423	420	410	416
9	374	366	369	412	304	373	418	404	410	422	414	419
10	366	362	364	358	306	337	456	418	435	426	400	419
11	378	360	368	382	360	372	450	418	434	450	424	435
12	368	362	365	402	382	392	424	408	413	706	452	548
13	378	368	372	410	402	407	460	426	446	704	454	608
14	386	380	381	410	408	409	592	462	513	462	400	454
15	384	378	381	408	406	408	608	468	521	544	380	460
16	388	384	386	406	402	404	470	454	461	438	370	397
17	388	384	386	404	400	402	480	468	474	426	412	417
18	386	382	383	426	374	398	494	466	473	424	312	373
19	388	382	384	410	388	396	478	440	464	338	316	327
20	392	384	386	420	408	416	440	418	431	342	338	340
21	---	---	e390	410	404	407	434	414	424	380	342	355
22	---	---	e280	410	402	406	434	426	428	424	382	401
23	---	---	e240	410	396	401	432	422	426	434	414	424
24	---	---	e230	400	396	398	428	420	425	434	426	431
25	---	---	e230	408	394	400	440	426	435	426	314	380
26	---	---	e240	414	402	409	440	424	435	392	362	376
27	---	---	e290	408	398	401	432	422	428	418	400	407
28	406	362	386	412	402	408	430	424	428	440	418	428
29	420	406	409	416	406	411	554	422	465	446	404	421
30	---	---	---	416	408	413	536	408	444	438	384	407
31	---	---	---	412	400	406	---	---	---	458	440	447
MONTH	420	360	353	428	304	398	608	402	437	706	312	420

e Estimated

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	442	438	441	342	304	314	466	350	407	738	724	732
2	452	332	400	404	346	376	380	344	362	742	660	721
3	416	370	402	454	406	421	446	342	389	716	640	687
4	458	408	432	418	410	414	436	406	417	702	292	537
5	478	460	470	450	414	432	458	420	433	404	326	359
6	482	416	466	420	414	417	556	462	506	456	374	411
7	432	400	418	416	400	411	614	558	588	542	460	496
8	456	432	444	470	400	439	652	616	633	642	546	594
9	458	444	449	584	472	526	682	654	670	672	644	662
10	460	442	450	608	588	603	708	684	700	672	658	668
11	442	400	424	642	608	630	712	704	709	702	656	678
12	418	412	415	666	634	654	704	686	696	726	356	579
13	424	414	418	---	---	e640	686	642	665	432	374	411
14	438	424	431	---	---	e660	688	610	652	484	434	456
15	462	436	447	---	---	e680	612	562	591	522	486	497
16	524	464	499	---	---	e700	628	574	595	582	526	559
17	542	526	536	754	716	e710	642	626	631	620	582	601
18	548	540	544	732	708	722	652	638	645	664	622	641
19	548	540	544	732	612	688	658	640	651	696	664	674
20	558	546	553	706	628	660	682	548	644	702	688	695
21	560	526	550	728	626	682	626	524	576	724	664	696
22	562	546	553	718	654	675	624	550	576	728	358	506
23	566	538	552	690	632	663	580	546	555	530	392	458
24	572	522	547	726	646	695	602	582	589	452	394	429
25	580	468	517	732	652	691	648	604	627	514	452	478
26	540	352	468	708	688	702	684	650	673	584	520	558
27	392	328	359	712	690	707	698	684	693	638	586	612
28	406	330	372	746	700	714	698	640	677	674	638	660
29	328	282	316	722	570	666	674	638	650	708	670	689
30	320	302	311	532	426	456	692	658	678	706	660	681
31	---	---	---	478	396	444	722	658	685	---	---	---
MONTH	580	282	458	754	304	587	722	342	599	742	292	581
YEAR	754	192	458									

e Estimated

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

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

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	24.5	23.0	24.0	---	---	---	14.5	12.0	13.5	11.0	11.0	11.0
2	25.0	23.5	24.5	---	---	---	12.0	10.5	11.0	11.0	11.0	11.0
3	25.5	24.5	25.0	---	---	---	10.5	10.0	10.0	11.0	10.5	11.0
4	26.0	24.0	25.0	---	---	---	10.5	9.5	10.0	11.0	10.5	11.0
5	24.0	22.5	23.0	---	---	---	11.5	10.0	10.5	11.5	11.0	11.5
6	23.0	21.5	22.5	---	---	---	12.5	11.5	12.0	12.0	11.5	11.5
7	22.5	21.0	22.0	13.0	12.0	12.5	14.0	12.5	13.0	12.0	12.0	12.0
8	22.0	21.0	21.5	12.5	11.0	12.0	15.0	14.0	14.5	12.0	11.0	12.0
9	22.0	20.5	21.5	11.5	11.0	11.0	17.0	15.0	16.0	11.0	10.5	11.0
10	23.0	21.0	22.0	11.5	11.0	11.0	16.0	15.0	15.5	10.5	10.5	10.5
11	24.0	22.0	23.0	12.5	11.5	12.0	15.0	14.5	15.0	10.5	10.0	10.5
12	24.0	22.5	23.5	12.5	12.0	12.5	15.5	14.5	15.0	10.5	10.5	10.5
13	24.5	22.5	23.5	13.0	12.5	12.5	15.5	15.5	15.5	10.5	9.0	10.0
14	24.0	22.5	23.5	13.5	13.0	13.5	15.0	14.0	14.5	9.5	9.0	9.0
15	22.5	21.5	22.0	14.5	13.5	14.0	13.5	12.5	13.0	9.0	7.5	8.0
16	22.5	21.0	21.5	15.0	14.5	14.5	13.0	12.5	12.5	7.5	7.5	7.5
17	22.5	21.0	22.0	15.5	15.0	15.0	13.0	12.5	12.5	7.5	7.5	7.5
18	23.0	21.5	22.0	15.5	15.0	15.0	13.0	12.5	12.5	6.5	6.5	6.5
19	22.5	21.0	22.0	15.5	15.0	15.0	12.5	11.5	12.0	6.5	6.5	6.5
20	22.0	20.5	21.5	15.0	14.0	14.5	11.5	11.0	11.0	7.0	6.5	7.0
21	22.5	21.0	21.5	14.0	13.0	13.5	13.0	11.5	11.5	7.5	7.0	7.5
22	23.0	21.5	22.0	14.0	13.0	13.5	---	---	---	8.0	7.5	8.0
23	23.5	22.5	23.0	13.5	12.5	13.0	---	---	---	8.5	8.0	8.5
24	24.0	23.0	23.5	12.5	12.0	12.0	10.5	10.0	10.5	8.5	8.0	8.5
25	24.5	24.0	24.0	12.0	11.5	12.0	10.0	9.5	10.0	9.0	8.0	8.5
26	24.0	23.0	23.5	12.0	11.5	11.8	10.0	10.0	10.0	9.0	8.5	9.0
27	23.0	19.5	21.5	13.5	12.0	12.5	10.0	9.5	10.0	9.0	9.0	9.0
28	20.5	19.5	20.0	15.0	13.5	14.0	10.0	10.0	10.0	9.5	9.0	9.0
29	---	---	---	16.5	15.0	15.5	10.0	10.0	10.0	9.5	9.0	9.0
30	---	---	---	16.5	15.0	16.0	10.5	10.0	10.0	11.0	9.0	10.0
31	---	---	---	---	---	---	11.0	10.5	10.5	11.5	11.0	11.0
MONTH	26.0	19.5	22.5	16.5	11.0	13.5	17.0	9.5	12.0	12.0	6.5	9.5

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.0	21.0	21.5	26.5	26.0	26.0	29.0	27.0	28.0	28.0	26.5	27.0
2	22.5	21.5	22.0	28.0	26.5	27.5	28.5	27.5	28.0	28.0	26.5	27.5
3	23.0	22.0	22.5	29.0	28.0	28.5	29.0	27.5	28.0	28.0	26.5	27.0
4	24.0	22.5	23.0	29.0	28.0	28.5	29.5	28.0	29.0	27.0	24.5	26.0
5	25.0	23.5	24.0	28.5	28.0	28.5	30.0	29.0	29.5	26.0	24.5	26.0
6	25.0	24.0	24.5	28.5	27.5	28.0	30.0	29.5	30.0	27.0	26.0	26.5
7	24.5	24.0	24.5	28.5	27.5	28.0	30.5	29.5	30.0	27.5	27.0	27.0
8	25.5	24.0	24.5	29.0	27.5	28.5	31.0	29.5	30.5	28.5	27.5	28.0
9	26.0	24.5	25.0	29.0	28.0	28.5	31.0	30.0	30.5	29.0	28.0	28.5
10	26.0	25.0	25.5	29.5	28.5	29.0	31.5	30.5	31.0	29.0	28.0	28.5
11	26.0	25.0	25.5	29.5	28.5	29.0	31.5	30.5	31.0	28.0	26.5	27.0
12	26.5	25.5	26.0	29.0	28.5	29.0	30.5	29.5	30.0	28.0	25.0	26.5
13	27.0	26.0	26.5	---	---	---	29.5	28.5	29.0	26.5	25.0	25.5
14	27.0	26.0	26.5	---	---	---	29.5	28.5	29.0	26.5	26.0	26.0
15	27.5	26.5	27.0	---	---	---	29.0	28.0	28.5	27.5	26.5	26.5
16	28.5	26.5	27.5	---	---	---	28.0	27.5	27.5	27.5	26.0	27.0
17	29.0	27.5	28.0	30.0	28.5	29.0	28.0	27.0	27.5	28.0	26.5	27.0
18	29.5	28.0	28.5	29.0	28.0	28.5	27.5	26.5	27.0	28.5	27.0	27.5
19	29.5	28.0	29.0	28.0	27.5	27.5	26.5	26.0	26.0	29.0	27.5	28.0
20	29.5	28.0	29.0	28.0	27.5	27.5	26.0	25.5	26.0	28.5	27.5	28.0
21	29.5	27.5	28.5	28.5	27.5	28.0	26.5	25.5	26.0	28.5	27.5	28.0
22	28.0	27.5	27.5	29.0	28.0	28.5	27.5	26.5	27.0	28.5	26.0	27.0
23	28.0	27.0	27.5	29.5	28.0	29.0	28.0	27.0	27.5	27.0	25.0	26.0
24	28.5	27.0	28.0	30.0	28.0	29.5	28.5	27.5	28.0	25.0	23.5	24.0
25	28.5	27.5	28.0	31.0	30.0	30.5	29.0	27.5	28.5	24.5	23.0	24.0
26	28.0	26.5	27.0	31.0	30.0	30.5	29.5	28.5	29.0	25.5	24.0	24.5
27	28.0	26.0	27.0	31.5	30.5	31.0	29.0	27.5	28.5	25.5	24.0	24.5
28	28.0	26.0	27.0	31.0	30.0	30.5	28.0	26.5	27.5	24.5	23.5	24.0
29	26.0	25.0	25.5	30.0	29.0	29.5	28.0	26.5	27.0	24.5	23.0	23.5
30	26.0	25.5	25.5	29.5	28.5	29.0	27.5	26.5	27.0	23.5	22.0	22.5
31	---	---	---	29.5	28.0	29.0	28.0	26.5	27.5	---	---	---
MONTH	29.5	21.0	26.0	31.5	26.0	29.0	31.5	25.5	28.5	29.0	22.0	26.5
YEAR	31.5	6.5	20.0									

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.5	8.1	8.3	---	---	---	9.2	8.4	8.8	9.8	9.8	9.8
2	8.3	8.0	8.2	---	---	---	9.6	8.9	9.3	9.8	9.8	9.8
3	8.4	8.0	8.2	---	---	---	10.0	9.5	9.7	9.8	9.8	9.8
4	8.5	7.8	8.0	---	---	---	10.0	9.9	10.0	9.9	9.8	9.8
5	8.5	8.0	8.2	---	---	---	9.9	9.8	9.9	9.8	9.7	9.8
6	8.5	8.0	8.3	---	---	---	9.8	9.5	9.7	9.8	9.7	9.7
7	8.5	8.2	8.4	9.1	8.8	8.9	9.5	9.2	9.4	9.8	9.7	9.7
8	8.7	8.4	8.5	9.3	8.9	9.1	9.2	9.0	9.1	9.9	9.7	9.8
9	8.7	8.4	8.6	9.5	9.3	9.4	9.0	7.2	8.2	10.2	9.9	10.1
10	8.7	8.2	8.5	9.5	9.4	9.5	8.0	7.5	7.8	10.3	10.1	10.2
11	8.2	7.8	8.0	9.4	9.2	9.3	8.4	7.9	8.0	10.3	10.1	10.2
12	7.9	7.7	7.8	9.3	9.2	9.2	8.7	8.4	8.6	10.2	10.1	10.1
13	8.0	7.5	7.8	9.2	9.1	9.1	8.4	8.2	8.2	10.5	10.1	10.3
14	7.9	7.5	7.7	9.1	8.8	9.0	8.9	8.3	8.6	10.8	10.4	10.6
15	8.1	7.5	7.9	8.8	8.5	8.6	9.6	8.9	9.4	11.1	10.5	10.8
16	8.4	8.0	8.1	8.5	8.3	8.4	9.8	9.6	9.7	11.4	11.0	11.2
17	8.3	8.0	8.1	8.3	7.7	7.9	9.9	9.8	9.8	11.3	11.1	11.2
18	8.4	8.0	8.1	8.1	7.8	7.9	10.0	9.9	9.9	11.1	10.9	11.0
19	8.4	8.0	8.2	8.2	8.0	8.1	10.1	9.9	10.0	10.9	10.7	10.9
20	8.3	8.0	8.2	8.1	7.8	7.9	10.1	9.6	9.9	11.1	10.8	11.0
21	8.3	7.9	8.1	8.3	8.0	8.2	9.6	9.1	9.3	11.1	10.8	11.0
22	8.1	7.7	7.9	8.7	8.3	8.5	---	---	---	11.0	10.4	10.8
23	7.9	7.5	7.7	9.4	8.7	9.1	---	---	---	10.8	10.4	10.6
24	7.6	7.2	7.5	9.9	9.5	9.7	9.8	9.6	9.7	11.1	10.6	10.8
25	7.4	7.0	7.3	10.0	9.9	9.9	9.7	9.7	9.7	11.4	10.7	11.1
26	7.3	6.9	7.1	10.1	9.8	10.0	9.8	9.7	9.7	11.5	10.6	11.1
27	6.8	4.1	5.2	9.8	9.3	9.6	9.9	9.8	9.9	10.7	10.0	10.4
28	4.4	3.9	4.1	9.3	9.0	9.2	9.9	9.8	9.9	10.0	9.8	10.0
29	---	---	---	9.0	8.5	8.7	9.9	9.8	9.8	9.9	9.7	9.8
30	---	---	---	8.4	8.1	8.3	9.9	9.8	9.9	10.3	10.0	10.2
31	---	---	---	---	---	---	10.0	9.9	9.9	10.6	10.2	10.4
MONTH	8.7	3.9	7.8	10.1	7.7	8.9	10.1	7.2	9.4	11.5	9.7	10.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	10.7	10.3	10.5	10.0	9.7	9.9	9.2	9.0	9.1	7.1	6.4	6.7
2	10.8	10.3	10.6	10.1	9.6	9.9	9.4	9.1	9.2	7.2	7.0	7.1
3	10.8	10.3	10.5	9.9	9.5	9.7	9.4	9.3	9.4	7.3	7.0	7.1
4	10.6	10.3	10.4	9.6	9.0	9.4	9.4	9.1	9.3	7.3	7.1	7.2
5	10.7	10.3	10.5	9.1	8.7	8.9	9.3	8.9	9.0	7.6	7.2	7.4
6	11.1	10.5	10.9	8.8	8.5	8.7	9.1	8.8	8.9	7.9	7.3	7.5
7	11.5	10.8	11.2	8.9	8.7	8.8	8.9	8.7	8.8	8.1	7.6	7.8
8	11.6	11.0	11.3	9.0	8.6	8.8	8.9	8.6	8.7	8.4	7.6	8.0
9	11.7	10.9	11.3	8.8	8.1	8.6	8.8	8.4	8.6	8.4	7.8	8.1
10	11.5	10.9	11.2	8.8	8.1	8.5	8.4	8.0	8.1	8.2	7.6	7.9
11	11.3	10.4	11.0	9.1	8.8	8.9	8.3	8.1	8.2	7.9	7.5	7.6
12	10.7	10.2	10.5	9.5	9.1	9.3	8.4	8.1	8.2	7.7	7.2	7.5
13	10.5	10.1	10.3	9.6	9.4	9.5	8.1	7.8	7.9	8.1	6.7	7.3
14	10.6	9.9	10.3	9.6	9.4	9.5	8.0	7.6	7.7	8.2	6.8	7.8
15	10.2	9.9	10.1	9.6	9.3	9.4	7.8	7.1	7.6	7.1	4.4	5.9
16	10.6	10.1	10.4	9.5	9.1	9.3	7.8	7.6	7.7	6.3	5.9	6.1
17	10.6	10.2	10.4	9.4	9.1	9.2	7.7	7.5	7.6	6.9	6.3	6.6
18	10.7	10.3	10.4	9.2	8.1	8.8	7.7	7.3	7.6	6.8	6.2	6.5
19	10.7	10.3	10.5	8.9	8.6	8.7	7.6	7.2	7.3	6.6	6.1	6.3
20	10.7	10.4	10.5	9.4	9.0	9.2	7.6	7.4	7.5	6.2	5.9	6.0
21	---	---	---	9.4	9.2	9.3	7.9	7.6	7.8	6.0	5.7	5.8
22	---	---	---	9.5	9.3	9.3	7.9	7.7	7.8	6.3	5.8	6.1
23	---	---	---	9.8	9.5	9.7	7.8	7.7	7.8	7.0	6.4	6.8
24	---	---	---	9.9	9.6	9.7	7.8	7.5	7.6	7.2	6.9	7.0
25	---	---	---	9.8	9.3	9.6	7.9	7.6	7.7	7.1	6.9	7.1
26	---	---	---	9.5	9.1	9.3	8.1	7.8	7.9	6.9	6.6	6.7
27	---	---	---	9.3	8.9	9.1	8.2	7.8	8.0	7.0	6.7	6.8
28	10.0	9.6	9.8	9.2	8.9	9.0	8.2	7.8	8.0	7.3	7.0	7.1
29	9.8	9.5	9.7	9.1	8.9	9.0	8.2	6.5	7.5	7.3	7.1	7.2
30	---	---	---	9.1	8.9	9.0	6.7	4.4	5.9	7.5	6.9	7.2
31	---	---	---	9.2	9.0	9.1	---	---	---	7.7	7.5	7.6
MONTH	11.7	9.5	10.6	10.1	8.1	9.2	9.4	4.4	8.1	8.4	4.4	7.0

08062500 TRINITY RIVER NEAR ROSSER, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.7	7.7	7.7	5.3	5.0	5.1	5.5	4.5	4.9	7.8	7.0	7.2
2	7.7	6.9	7.3	5.3	5.0	5.1	5.6	4.8	5.2	7.1	6.4	6.9
3	7.1	6.7	6.9	5.9	5.4	5.6	5.9	5.6	5.8	6.8	6.6	6.7
4	7.0	6.8	6.8	6.4	5.9	6.1	6.1	5.4	5.8	6.7	4.6	5.6
5	7.5	6.9	7.2	6.4	6.1	6.2	6.3	6.0	6.2	6.1	5.2	5.7
6	7.5	6.3	7.1	6.5	6.2	6.4	6.3	6.0	6.2	6.5	6.1	6.3
7	6.7	6.0	6.5	6.5	6.2	6.3	6.4	6.0	6.2	7.0	6.6	6.8
8	7.0	6.3	6.7	6.4	6.0	6.2	6.5	6.2	6.4	7.2	6.8	7.0
9	7.0	6.6	6.8	6.2	5.9	6.0	6.6	6.4	6.5	7.6	6.9	7.1
10	7.0	6.8	6.9	6.1	5.9	6.0	6.6	6.4	6.5	7.9	7.0	7.4
11	6.9	6.6	6.8	6.2	5.8	6.0	6.6	6.4	6.5	9.1	7.1	7.8
12	7.0	6.7	6.8	6.3	6.0	6.1	6.6	6.4	6.5	7.0	4.1	5.4
13	7.0	6.8	6.9	---	---	---	6.5	6.2	6.3	6.3	5.1	5.8
14	7.0	6.8	6.9	---	---	---	6.2	5.7	6.0	6.8	6.2	6.5
15	6.9	6.8	6.8	---	---	---	6.6	5.7	6.2	7.2	6.6	6.9
16	6.8	6.4	6.6	---	---	---	6.9	6.3	6.6	7.4	6.9	7.2
17	6.4	6.3	6.4	6.4	6.1	6.3	7.1	6.6	6.9	7.4	7.1	7.2
18	6.4	6.3	6.4	6.4	6.2	6.3	7.2	6.8	7.1	7.4	7.1	7.2
19	6.5	6.4	6.4	6.4	5.9	6.2	7.3	7.1	7.2	7.7	7.1	7.3
20	6.4	6.3	6.4	6.3	5.8	6.1	7.1	6.0	6.6	7.6	7.0	7.2
21	6.3	5.0	5.8	6.5	6.2	6.4	6.7	6.2	6.4	7.4	6.5	7.1
22	6.1	5.6	5.9	6.5	6.2	6.4	6.8	6.4	6.6	6.0	4.1	5.0
23	6.4	5.9	6.2	6.6	6.1	6.3	6.8	6.6	6.7	6.2	5.1	5.6
24	6.2	5.8	6.1	6.9	6.4	6.7	6.9	6.6	6.8	7.1	6.0	6.7
25	5.8	5.1	5.5	6.5	6.2	6.4	7.1	6.7	6.9	7.6	7.2	7.4
26	5.6	4.4	5.3	6.6	6.3	6.4	7.2	6.8	7.1	7.5	7.3	7.4
27	5.6	4.9	5.3	6.6	6.4	6.5	7.4	6.8	7.1	7.8	7.5	7.6
28	5.8	5.2	5.5	6.4	6.1	6.3	7.8	7.1	7.5	8.0	7.4	7.7
29	5.8	5.5	5.7	6.2	4.2	5.1	9.3	7.2	7.8	8.3	7.8	8.1
30	5.7	5.3	5.5	5.3	4.0	4.7	10.6	7.3	8.3	8.9	8.2	8.6
31	---	---	---	5.8	5.1	5.6	10.4	7.5	8.6	---	---	---
MONTH	7.7	4.4	6.4	6.9	4.0	6.0	10.6	4.5	6.6	9.1	4.1	6.9
YEAR	11.7	3.9	8.1									

08062700 TRINITY RIVER AT TRINIDAD, TX
(National stream-quality accounting network)

LOCATION.--Lat 32°08'05", long 96°06'20", Henderson County, Hydrologic Unit 12030105, on left bank at pumping station of Texas Power and Light Co., near southwest boundary of Trinidad, 0.5 mi downstream from St. Louis Southwestern Railway Lines bridge, 0.9 mi downstream from bridge on State Highway 31, 8 mi upstream from Cedar Creek, and at mile 391.2.

DRAINAGE AREA.--8,538 mi², not including 1,007 mi² upstream from Cedar Creek Reservoir.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year. Records of gage height collected in this vicinity for period October 1913 to September 1915 are contained in reports of U.S. Army Corps of Engineers, and records collected since October 1915 are contained in reports of the National Weather Service.

REVISED RECORDS.-- WDR TX-89-1: 1988. WDR TX-90-1: 1989.

GAGE.--Water-stage recorder. Datum of gage is 239.21 ft above National Geodetic Vertical Datum of 1929. Prior to May 3, 1967, at site 0.9 mi upstream at datum 1.28 ft higher.

REMARKS.--No estimated daily discharges. Records good. The spillway outflow from Cedar Creek Reservoir (station 08062650) enters the Trinity River 13 mi upstream from this station. There are many diversions above station for municipal supply for the cities of Fort Worth, Dallas, and by several smaller towns. Low flows are maintained by sewage effluent from the Dallas-Fort Worth metroplex. There are 62 floodwater-retarding structures with a combined detention capacity of 38,690 acre-ft in the drainage basin above this station. These structures control runoff from 126² above this station. For regulation by upstream reservoirs, see Trinity River near Rosser (station 08062500). Gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1908, 49.8 ft Apr. 25, 1942 (present site and datum), from records of the National Weather Service. A flood in 1908 reached a stage of 48.3 ft, present site and datum, from records of the National Weather Service.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	988	38600	5870	26700	29100	32300	10400	6460	12400	12400	2610	862
2	964	46300	7740	23500	25500	28000	9900	5010	12200	13900	4880	877
3	977	46700	8110	20800	21800	24500	9620	3770	12400	14500	4210	1210
4	967	42500	9540	20000	18600	22800	9380	3740	13000	14700	3660	2250
5	964	36600	8950	19600	17300	23400	9140	3780	13300	13300	2660	3190
6	942	30100	6830	18500	17500	27000	8630	3680	12700	8970	1490	1720
7	970	23600	5770	17600	17100	29800	8040	3530	11500	6260	1180	1100
8	910	19300	4270	17200	16600	28200	8080	3360	11600	4780	1080	945
9	914	17100	6680	16800	16300	24800	7760	3280	10800	3540	1010	902
10	903	16000	11800	16600	16000	29300	6640	3210	9780	2380	984	885
11	893	15300	13400	16400	15600	35900	5720	3160	10300	1760	976	887
12	889	14300	15300	16900	15200	37200	5950	2960	12200	1540	980	1860
13	872	13600	16800	17300	15700	32700	5150	1740	12400	1380	990	3830
14	839	13300	16700	16800	16600	28400	4460	1870	12200	1240	1380	1970
15	858	13200	16300	16400	17400	23300	3340	3030	11800	1170	1510	1080
16	849	13200	15800	16100	17000	18400	3580	6090	10300	1100	1210	939
17	856	13100	14600	16000	16400	16300	3980	6560	7570	1090	1070	883
18	851	13100	12900	16200	15700	15800	4100	7410	5460	1070	1010	876
19	854	13900	11900	16600	14700	15700	5260	10900	4860	1160	966	861
20	833	16600	12400	17500	13700	15200	5460	13400	4580	1490	1060	855
21	841	16400	26300	18900	12700	14700	6690	14800	4170	1410	2050	857
22	863	15600	42700	20100	12900	14000	5690	16000	3930	1200	1760	1500
23	856	15100	54000	20200	16100	13100	4770	15800	3790	1100	1220	2800
24	879	14500	61100	20200	18900	12400	4150	13600	3480	1140	1030	1830
25	910	13300	66700	20000	29900	12100	3710	10600	3130	1110	957	1070
26	967	11600	65900	19400	35800	12900	3540	11300	3540	1030	959	889
27	1300	8900	57600	20200	38800	13400	3410	12900	5490	961	1030	867
28	7280	6480	48300	30200	40700	12700	3300	13300	7660	969	1000	829
29	10300	4600	41200	35700	36300	12000	3480	13500	9630	1310	944	862
30	12300	3290	36200	34600	---	11400	4760	12900	11000	2980	911	834
31	18800	---	32400	32200	---	10800	---	12800	---	2340	867	---
TOTAL	73389	566170	754060	635200	595900	648500	178090	244440	267170	123280	47644	40320
MEAN	2367	18870	24320	20490	20550	20920	5936	7885	8906	3977	1537	1344
MAX	18800	46700	66700	35700	40700	37200	10400	16000	13300	14700	4880	3830
MIN	833	3290	4270	16000	12700	10800	3300	1740	3130	961	867	829
AC-FT	145600	1123000	1496000	1260000	1182000	1286000	353200	484800	529900	244500	94500	79970

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued
(National stream-quality accounting network)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1992, BY WATER YEAR (WY)

MEAN	2407	3646	4090	3252	4670	5288	5324	9386	6902	2494	1398	1186
MAX	11390	20160	24320	20490	20550	20920	16570	47120	26790	11800	6886	3347
(WY)	1974	1975	1992	1992	1992	1992	1990	1990	1989	1982	1982	1974
MIN	417	403	460	415	424	542	798	693	526	394	394	448
(WY)	1976	1967	1967	1967	1967	1967	1978	1971	1972	1972	1967	1972

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1965 - 1992	
ANNUAL TOTAL	2243148		4174163			
ANNUAL MEAN	6146		11400		4166	
HIGHEST ANNUAL MEAN					11400	1992
LOWEST ANNUAL MEAN					854	1978
HIGHEST DAILY MEAN	66700	Dec 25	66700	Dec 25	94100	May 7 1990
LOWEST DAILY MEAN	833	Oct 20	829	Sep 28	312	Aug 9 1972
ANNUAL SEVEN-DAY MINIMUM	849	Oct 14	849	Oct 14	326	Jul 7 1972
INSTANTANEOUS PEAK FLOW			70300	Dec 25	94500	May 7 1990
INSTANTANEOUS PEAK STAGE			44.18	Dec 25	48.11	May 7 1990
INSTANTANEOUS LOW FLOW			474	Oct 20		
ANNUAL RUNOFF (AC-FT)	4449000		8279000		3018000	
10 PERCENT EXCEEDS	14800		26800		11000	
50 PERCENT EXCEEDS	2100		9260		1160	
90 PERCENT EXCEEDS	904		941		482	

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: May 1966 to current year. Pesticide analyses: November 1977 to June 1982. Sediment analyses: November 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: September 1967 to September 1981, May 1986 to current year.
PH: September 1967 to October 1969, May 1986 to current year.
WATER TEMPERATURE: September 1967 to September 1981, May 1986 to current year.
DISSOLVED OXYGEN: September 1967 to October 1969, May 1986 to current year.

INSTRUMENTATION.--From April 1967 to October 1969, a four-parameter water-quality monitor continuously recorded specific conductance, pH, water temperature, and dissolved oxygen. Since May 1986, a four-parameter water quality monitor continuously records specific conductance, pH, water temperature, and dissolved oxygen at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,000 micromhos Dec. 28, 1977; minimum daily, 170 micromhos May 4, 1990.
pH (1967-69, 1986-90): Maximum, 8.8 units July 28, 1988; minimum, 5.7 units Aug. 13, 1988.
WATER TEMPERATURE: Maximum daily, 34.0°C July 17, 1979, July 9, 13, 1980; minimum daily, 2.5°C Dec. 24, 1989.
DISSOLVED OXYGEN: Maximum, 15.6 mg/L Sept. 15, 1988; minimum, 0.0 mg/L May 3, 1987.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 781 microsiemens July 27; minimum, 194 microsiemens Dec. 21.
pH: Maximum, 8.5 units Feb. 9-12; minimum, 7.2 units on July 29, Aug. 10.
WATER TEMPERATURE: Maximum, 32.0°C July 27, Aug. 10; minimum, 8.5°C Feb. 7.
DISSOLVED OXYGEN: Maximum, 11.4 mg/L Feb. 10; minimum, 3.2 mg/L Oct. 28.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV												
26...	1015	12000	360	7.9	11.5	89	9.8	90	0.6	K1400	480	130
JAN												
29...	1120	35800	268	7.9	9.5	56	10.6	92	1.8	470	1000	100
APR												
14...	1050	4390	424	8.0	19.5	110	7.5	82	1.4	--	--	160
JUN												
24...	1100	3560	550	7.9	27.0	140	5.7	72	2.0	210	140	180
JUL												
22...	1045	1200	646	7.8	27.0	150	6.3	80	1.3	920	92	180

DATE	HARD-NESS NONCARB DISSOLV FID. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV												
26...	21	45	3.9	21	0.8	5.2	0	131	110	34	19	0.30
JAN												
29...	18	36	3.1	13	0.6	4.0	0	103	83	26	14	0.20
APR												
14...	29	58	3.9	24	0.8	4.6	0	161	130	39	22	0.40
JUN												
24...	35	58	7.4	39	1	6.0	0	172	140	51	48	0.30
JUL												
22...	46	61	5.4	62	2	7.7	0	158	130	76	62	0.80

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
NOV											
26...	6.6	235	205	1.17	1.18	0.030	0.020	1.20	1.20	0.050	0.050
JAN											
29...	6.6	157	159	0.580	--	0.040	<0.010	0.620	1.10	0.060	0.020
APR											
14...	3.3	239	244	1.86	1.87	0.040	0.030	1.90	1.90	0.050	0.050
JUN											
24...	6.6	312	315	2.66	2.66	0.040	0.040	2.70	2.70	0.080	0.090
JUL											
22...	8.6	410	399	7.43	7.24	0.070	0.060	7.50	7.30	0.090	0.070

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
NOV 26...	0.65	0.70	0.390	0.240	0.210	0.230	0.64	129	4180	92	--
JAN 29...	0.44	0.50	0.120	0.100	0.090	0.130	0.28	52	5350	95	20
APR 14...	0.35	0.40	0.390	0.370	0.340	0.370	1.0	300	3560	94	10
JUN 24...	0.32	0.40	0.550	0.520	0.520	0.530	1.6	441	4240	96	30
JUL 22...	0.91	1.0	1.60	1.50	1.50	1.50	4.6	298	966	100	20

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)
NOV 26...	--	--	--	--	--	--	--	--	--	--	--
JAN 29...	34	<3	32	5	<1	<10	2	<1	<1.0	260	<6
APR 14...	50	<3	13	9	<1	<10	3	<1	<1.0	500	<6
JUN 24...	55	<3	13	6	1	<10	3	<1	<1.0	470	<6
JUL 22...	56	<3	9	10	2	10	6	<1	<1.0	530	<6

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	73389	415	232	46000	30	5860	46	9130	130
NOV.	1991	566170	317	179	273000	17	25800	33	50700	120
DEC.	1991	754060	283	160	325000	14	29100	29	59800	110
JAN.	1992	635200	329	186	318000	18	30400	35	59200	120
FEB.	1992	595900	319	180	289000	17	27400	33	53800	120
MAR.	1992	648500	345	194	340000	19	33600	36	63700	120
APR.	1992	178090	419	236	113000	26	12700	45	21800	140
MAY	1992	244440	387	218	144000	23	15300	41	27300	130
JUNE	1992	267170	432	242	175000	28	20100	47	33800	140
JULY	1992	123280	438	246	81800	30	9970	48	16000	140
AUG.	1992	47644	539	301	38700	41	5320	61	7830	150
SEPT	1992	40320	558	312	33900	44	4740	63	6880	160
TOTAL		4174163	**	**	2179000	**	220000	**	410000	**
WTD.AVG.		11400	343	193	**	20	**	36	**	120

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued
(National stream-quality accounting network)

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	e620	245	234	238	466	304	367	351	338	347
2	626	592	608	263	245	255	356	300	325	349	340	348
3	673	627	650	271	257	262	356	346	352	348	340	346
4	692	670	683	292	273	284	373	351	363	339	333	335
5	681	667	672	315	293	303	357	344	351	333	332	332
6	692	677	683	336	315	326	353	343	348	349	335	346
7	---	---	e670	337	334	336	366	352	357	349	347	348
8	---	---	e680	334	329	331	467	372	454	348	347	347
9	---	---	e670	329	327	328	461	371	417	350	340	348
10	---	---	e660	332	327	330	328	276	309	352	350	351
11	---	---	e650	350	332	336	297	277	288	352	331	344
12	---	---	e680	355	350	353	315	297	305	332	331	331
13	---	---	e690	356	354	355	340	316	324	349	337	346
14	---	---	e690	359	354	356	354	341	348	350	349	350
15	---	---	e680	360	357	359	361	354	357	353	350	351
16	---	---	e690	360	358	359	378	360	362	355	353	354
17	---	---	e700	360	354	357	398	380	388	354	347	351
18	---	---	e680	357	343	350	410	398	401	351	346	348
19	---	---	e670	358	304	343	407	387	391	351	330	343
20	---	---	e680	320	304	307	392	327	384	335	330	332
21	---	---	e680	337	325	334	305	194	224	337	335	336
22	---	---	e690	349	338	344	224	200	211	338	337	338
23	---	---	e700	354	349	351	210	197	201	338	336	337
24	---	---	e680	356	353	355	231	211	226	338	336	338
25	731	720	e670	354	351	352	232	229	231	341	338	340
26	726	685	704	378	340	358	253	233	242	342	336	339
27	704	666	680	387	378	382	277	255	265	336	318	331
28	702	249	459	425	388	401	299	277	288	303	218	250
29	274	250	264	456	427	445	315	302	308	270	253	262
30	300	239	259	458	450	453	323	315	319	300	271	283
31	242	236	239	---	---	---	335	322	324	326	300	310
MONTH	731	236	627	458	234	341	467	194	324	355	218	334

e Estimated

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	346	327	337	343	320	333	398	393	397	534	418	466
2	356	347	352	345	338	343	398	393	396	440	408	430
3	357	351	353	342	339	340	399	396	397	405	386	391
4	367	361	365	339	335	337	401	397	399	407	388	395
5	364	345	356	335	307	327	407	397	400	420	392	406
6	355	346	347	308	303	305	400	391	395	439	420	426
7	370	362	367	334	308	319	408	391	399	460	442	457
8	369	367	368	344	335	339	421	400	412	453	406	435
9	369	367	367	383	323	366	432	407	420	424	405	413
10	370	367	368	323	281	301	420	404	411	428	419	424
11	368	362	365	279	260	267	445	411	420	432	425	428
12	363	341	360	310	266	284	450	413	434	436	427	432
13	337	324	328	332	312	323	421	409	412	452	434	443
14	336	320	330	344	332	338	444	411	423	618	453	489
15	344	320	328	385	345	363	471	446	455	689	456	556
16	347	345	346	394	385	389	589	474	533	528	418	473
17	358	347	349	393	389	392	490	454	468	446	376	407
18	362	359	361	392	357	367	475	451	463	414	370	389
19	375	365	373	380	356	362	474	460	465	414	307	376
20	377	373	375	389	380	384	476	458	465	314	304	310
21	377	375	376	407	391	401	463	354	393	324	315	320
22	375	285	349	402	396	399	430	413	420	350	323	340
23	286	247	262	397	393	395	430	423	427	393	351	366
24	269	250	260	399	391	394	429	425	427	412	388	400
25	250	228	237	392	381	390	426	419	423	423	411	415
26	242	224	232	371	353	359	435	421	426	423	325	372
27	238	229	232	398	358	367	437	430	434	366	334	356
28	289	239	269	400	392	396	435	422	428	385	363	376
29	319	290	303	404	395	399	429	407	419	409	354	368
30	---	---	---	405	402	403	521	413	430	427	395	410
31	---	---	---	407	398	403	---	---	---	404	382	394
MONTH	377	224	332	407	260	358	589	354	426	689	304	408

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued
(National stream-quality accounting network)

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	445	409	429	326	294	311	524	440	482	677	644	655
2	433	423	426	328	292	302	496	385	431	697	652	675
3	430	372	415	373	330	352	437	361	389	722	647	676
4	401	344	375	415	375	395	403	360	374	733	695	722
5	423	397	405	404	400	402	452	409	433	680	327	497
6	449	423	436	441	401	415	445	428	434	415	338	373
7	468	450	458	441	414	421	449	429	439	400	361	387
8	462	403	424	418	413	416	499	449	467	441	398	414
9	439	420	426	434	404	411	580	502	539	508	447	476
10	447	435	442	480	439	463	631	582	607	581	510	542
11	450	405	442	561	482	518	662	631	646	661	581	627
12	402	388	396	607	564	592	686	664	675	689	664	669
13	418	372	403	635	605	615	709	687	701	715	420	595
14	420	412	416	652	635	640	718	704	712	424	379	403
15	433	418	424	666	653	660	703	660	679	442	425	433
16	445	431	437	691	662	675	689	631	668	470	442	454
17	503	445	467	697	686	691	670	587	636	508	471	489
18	539	504	521	692	663	680	616	589	603	546	509	520
19	545	537	539	708	646	694	630	587	605	597	549	577
20	546	537	540	714	654	695	641	627	631	633	597	613
21	548	539	542	717	677	709	662	635	647	667	612	646
22	552	539	550	697	632	667	674	564	642	698	669	681
23	549	528	543	654	638	643	592	542	568	720	434	634
24	555	546	550	729	659	702	627	577	605	516	390	474
25	562	525	545	700	669	684	601	563	576	---	---	e530
26	567	503	552	715	649	676	586	558	566	---	---	e540
27	533	378	480	781	670	723	612	587	595	---	---	e560
28	379	339	355	749	648	706	661	614	638	---	---	e580
29	379	338	353	731	605	683	688	663	679	---	---	e600
30	338	298	321	729	618	683	706	684	696	---	---	e620
31	---	---	---	689	502	625	704	683	698	---	---	---
MONTH	567	298	454	781	292	576	718	360	583	733	327	555
YEAR	781	194	444									

e Estimated

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued
(National stream-quality accounting network)

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

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

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued
(National stream-quality accounting network)

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

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

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued
(National stream-quality accounting network)

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.5	20.5	20.5	26.5	26.0	26.0	30.0	29.0	29.5	28.0	27.0	27.5
2	21.5	21.0	21.5	27.5	26.5	27.0	29.5	28.0	28.5	28.5	26.5	27.5
3	22.0	21.5	22.0	28.5	27.5	28.0	28.5	27.5	28.0	28.0	26.5	27.5
4	23.0	22.0	22.5	29.0	28.0	28.5	29.0	28.0	28.5	28.0	26.5	27.0
5	24.0	23.0	23.5	29.0	28.5	29.0	30.0	28.5	29.0	27.0	26.0	26.5
6	25.0	24.0	24.5	29.0	28.5	28.5	30.0	29.0	29.5	27.0	26.0	26.5
7	25.0	24.5	25.0	29.0	28.0	28.5	31.0	29.5	30.0	28.5	26.5	27.5
8	25.0	24.0	24.5	29.0	28.5	28.5	31.5	29.5	30.5	29.0	27.5	28.0
9	25.5	25.0	25.0	29.5	28.5	29.0	31.5	30.0	31.0	29.0	28.0	28.5
10	26.0	25.0	25.5	29.5	28.5	29.0	32.0	30.5	31.0	28.5	28.0	28.5
11	26.5	25.5	26.0	29.5	28.5	29.0	31.5	30.5	31.0	28.0	27.0	27.5
12	26.5	25.5	26.0	30.0	29.0	29.5	31.0	30.0	30.5	28.0	26.5	27.5
13	27.0	26.0	26.5	30.0	29.0	29.5	30.5	29.5	30.5	27.5	26.0	26.5
14	27.0	26.5	26.5	30.5	28.5	29.5	30.5	29.0	30.0	26.5	25.5	26.0
15	27.5	26.5	27.0	30.5	28.5	29.5	29.5	28.5	29.0	27.5	26.0	26.5
16	27.5	27.0	27.5	30.0	29.0	29.5	29.5	27.5	28.5	27.0	26.0	26.5
17	28.0	27.0	27.5	30.0	29.0	29.0	28.5	27.0	28.0	27.5	26.0	27.0
18	29.0	28.0	28.5	29.0	28.0	28.5	27.5	26.5	27.5	28.0	27.0	27.5
19	29.5	28.5	29.0	29.5	28.0	28.5	27.5	26.5	26.5	28.5	27.5	28.0
20	29.5	29.0	29.0	28.5	28.0	28.0	27.0	25.5	26.5	29.0	27.5	28.0
21	29.0	28.5	29.0	29.0	28.0	28.0	27.0	26.0	26.5	28.5	27.5	28.0
22	28.5	27.5	28.0	29.0	27.0	28.0	27.0	26.0	26.5	28.0	27.0	27.5
23	28.0	27.0	27.5	29.5	27.5	28.5	28.0	26.5	27.0	27.5	25.5	27.0
24	28.5	27.0	28.0	30.0	28.5	29.5	28.5	27.0	27.5	25.5	24.5	25.0
25	28.5	27.5	28.0	31.0	29.5	30.5	29.0	27.0	28.0	25.5	24.0	25.0
26	28.5	27.5	28.0	31.5	30.0	31.0	29.5	28.0	29.0	26.0	24.0	25.0
27	28.5	26.5	28.0	32.0	30.5	31.0	29.0	28.0	28.5	---	---	---
28	27.5	26.5	27.0	31.0	30.0	31.0	28.0	26.5	27.5	---	---	---
29	28.0	26.5	27.0	31.0	29.0	30.0	28.0	26.5	27.5	---	---	---
30	26.5	25.5	26.0	30.5	30.0	30.0	28.0	26.5	27.5	---	---	---
31	---	---	---	30.0	29.0	29.5	28.0	27.0	27.5	---	---	---
MONTH	29.5	20.5	26.0	32.0	26.0	29.0	32.0	25.5	28.5	29.0	24.0	27.0
YEAR	32.0	8.5	21.0									

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.6	7.7	8.1	7.7	7.4	7.5	9.5	8.7	9.2	9.6	9.5	9.6
2	9.1	7.5	8.2	7.8	7.5	7.6	9.6	9.3	9.4	9.6	9.5	9.6
3	9.0	7.6	8.3	8.7	7.9	8.4	10.0	9.5	9.7	9.6	9.5	9.5
4	9.3	7.5	8.3	8.9	8.6	8.7	10.1	9.8	10.0	9.7	9.6	9.6
5	8.9	7.5	8.2	9.0	8.9	8.9	10.2	10.1	10.2	9.6	9.5	9.6
6	9.4	7.5	8.4	8.9	8.8	8.9	10.2	10.1	10.1	9.5	9.3	9.4
7	9.8	7.5	8.3	8.8	8.6	8.7	10.1	9.9	10.0	9.3	9.1	9.2
8	9.5	7.5	8.3	9.3	8.8	9.1	9.8	9.2	9.4	9.2	8.9	9.1
9	9.4	7.9	8.8	9.4	9.3	9.3	9.2	8.6	8.9	9.4	9.2	9.3
10	9.7	8.1	8.9	9.5	9.3	9.4	9.0	8.1	8.7	9.6	9.4	9.5
11	9.7	8.3	8.9	9.4	9.1	9.4	8.4	8.2	8.3	9.8	9.6	9.7
12	9.5	8.1	8.8	9.1	9.0	9.1	8.3	8.1	8.2	9.9	9.7	9.8
13	9.3	7.7	8.5	9.0	8.9	9.0	8.3	8.1	8.2	10.0	9.8	9.9
14	9.0	7.9	8.4	9.0	8.8	8.9	8.5	8.0	8.3	10.2	10.0	10.1
15	9.2	7.5	8.4	8.8	8.6	8.7	9.0	8.5	8.7	10.6	10.1	10.3
16	9.9	7.8	8.7	8.6	8.3	8.4	9.4	9.0	9.2	10.8	10.6	10.7
17	9.6	7.6	8.5	8.4	8.1	8.2	9.5	9.3	9.4	10.8	10.7	10.8
18	9.3	7.7	8.4	8.1	7.3	7.6	9.5	9.5	9.5	10.9	10.8	10.9
19	9.2	8.0	8.6	8.2	7.4	7.6	9.8	9.5	9.7	11.1	10.9	11.0
20	9.4	7.3	8.7	8.5	8.1	8.3	10.0	9.8	9.9	11.1	10.9	11.0
21	9.2	7.9	8.5	8.1	8.0	8.0	10.6	9.9	10.4	10.9	10.6	10.8
22	8.7	7.5	7.9	8.4	8.1	8.2	10.3	10.1	10.2	10.8	10.6	10.7
23	8.1	7.4	7.7	9.0	8.4	8.7	10.1	9.7	9.9	10.7	10.5	10.6
24	8.1	7.0	7.5	9.3	9.0	9.1	9.7	9.3	9.4	10.8	10.5	10.6
25	8.6	7.1	7.9	9.6	9.3	9.5	9.5	9.4	9.4	10.9	10.4	10.7
26	8.1	7.8	7.9	9.8	9.6	9.7	9.5	9.4	9.4	10.7	10.3	10.6
27	7.9	7.5	7.7	9.8	9.6	9.7	9.6	9.4	9.5	10.4	10.3	10.4
28	7.4	3.1	4.7	9.6	9.2	9.5	9.7	9.6	9.6	10.9	10.3	10.6
29	4.7	3.9	4.3	9.2	8.9	9.1	9.7	9.7	9.7	10.4	9.9	10.1
30	6.7	4.7	5.6	8.9	8.7	8.8	9.8	9.7	9.7	9.8	9.5	9.7
31	7.4	6.6	6.9	---	---	---	9.8	9.6	9.7	9.6	9.4	9.5
MONTH	9.9	3.1	7.9	9.8	7.3	8.7	10.6	8.0	9.4	11.1	8.9	10.1

08062700 TRINITY RIVER AT TRINIDAD, TX--Continued
(National stream-quality accounting network)

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.6	9.4	9.5	9.2	9.0	9.1	9.0	8.9	8.9	6.9	4.9	5.9
2	9.7	9.5	9.6	9.2	8.9	9.1	9.0	8.9	9.0	6.8	6.3	6.5
3	9.7	9.5	9.6	9.1	9.0	9.0	9.2	9.0	9.1	7.2	6.8	7.0
4	9.7	9.4	9.6	9.1	8.9	9.0	9.3	9.2	9.3	7.3	6.9	7.2
5	10.3	9.6	9.9	8.9	8.7	8.8	9.3	9.0	9.1	7.3	6.7	7.0
6	10.6	10.1	10.4	8.7	8.4	8.5	9.0	8.8	8.9	7.7	7.2	7.4
7	10.8	10.3	10.6	8.4	8.2	8.3	8.9	8.6	8.8	8.0	7.5	7.7
8	11.1	10.6	10.8	8.2	8.1	8.1	8.7	8.5	8.6	8.1	7.6	7.8
9	11.1	10.8	11.0	8.4	7.7	7.9	8.7	8.3	8.5	8.3	7.7	8.0
10	11.4	10.9	11.1	9.2	8.4	8.9	8.3	8.0	8.2	8.4	7.9	8.1
11	11.2	10.6	10.8	9.1	8.9	9.0	8.0	7.5	7.8	8.3	7.8	8.0
12	10.6	10.2	10.3	8.8	8.6	8.7	7.8	7.5	7.7	8.0	7.5	7.7
13	10.1	9.8	9.9	9.0	8.6	8.8	7.8	7.6	7.7	7.5	6.8	7.2
14	---	---	---	9.1	8.9	8.9	7.7	7.5	7.6	6.9	6.3	6.7
15	---	---	---	8.9	8.6	8.7	7.6	7.1	7.4	6.6	5.5	6.1
16	---	---	---	8.6	8.5	8.5	7.1	6.7	7.0	6.3	3.7	5.0
17	---	---	---	8.5	8.3	8.4	7.4	7.2	7.4	5.6	4.0	5.1
18	---	---	---	8.7	8.4	8.6	7.5	7.3	7.4	5.8	5.6	5.8
19	---	---	---	8.7	8.1	8.6	7.5	7.3	7.4	5.8	5.2	5.5
20	---	---	---	8.4	8.0	8.2	7.4	7.0	7.2	5.9	5.6	5.8
21	---	---	---	8.6	8.3	8.5	7.8	7.3	7.6	5.8	5.6	5.7
22	---	---	---	8.8	8.6	8.7	7.6	7.3	7.5	5.8	5.4	5.5
23	---	---	---	9.1	8.8	8.9	7.7	7.5	7.6	5.5	5.3	5.4
24	---	---	---	9.3	9.1	9.2	7.5	7.3	7.4	6.2	5.5	5.8
25	---	---	---	9.4	9.2	9.3	7.6	7.3	7.5	6.3	6.1	6.2
26	---	---	---	9.5	9.2	9.3	7.8	7.4	7.6	6.3	5.8	6.0
27	---	---	---	9.2	8.8	9.1	8.1	7.6	7.9	5.9	5.7	5.7
28	---	---	---	8.9	8.6	8.7	8.0	7.6	7.9	6.3	5.9	6.1
29	9.2	9.1	9.2	8.8	8.6	8.7	7.8	7.3	7.6	6.8	6.3	6.6
30	---	---	---	8.8	8.7	8.8	7.9	7.1	7.6	6.8	6.5	6.7
31	---	---	---	9.0	8.8	8.9	---	---	---	6.8	6.4	6.6
MONTH	11.4	9.1	10.2	9.5	7.7	8.7	9.3	6.7	8.0	8.4	3.7	6.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.1	6.8	7.0	5.6	5.1	5.3	5.6	4.8	5.3	7.5	6.9	7.2
2	7.2	7.1	7.1	5.6	5.2	5.4	5.2	4.2	4.6	7.6	6.6	7.1
3	7.1	6.4	6.9	5.3	5.0	5.2	5.4	4.6	4.9	7.0	6.5	6.7
4	6.4	6.2	6.3	5.8	5.3	5.4	5.7	5.3	5.5	6.5	5.6	6.3
5	6.4	6.2	6.3	5.9	5.6	5.7	5.8	5.5	5.6	5.5	4.3	4.7
6	6.6	6.3	6.5	5.9	5.5	5.7	6.1	5.6	5.9	5.7	4.8	5.3
7	6.7	6.5	6.6	5.9	5.8	5.8	6.4	6.1	6.2	6.2	5.7	6.0
8	6.6	5.5	6.0	5.9	5.7	5.8	6.7	6.3	6.4	6.4	6.1	6.3
9	6.3	6.0	6.1	5.8	5.6	5.7	6.7	6.3	6.5	6.6	6.2	6.4
10	6.3	6.2	6.3	5.6	5.5	5.5	6.9	6.3	6.5	6.8	6.4	6.6
11	6.6	5.8	6.1	5.5	5.4	5.5	6.8	6.3	6.5	7.1	6.6	6.8
12	6.4	6.1	6.2	5.7	5.4	5.5	6.7	6.3	6.5	6.8	6.3	6.7
13	6.1	5.9	6.0	5.7	5.5	5.6	6.8	6.3	6.6	6.2	4.3	5.0
14	6.3	6.2	6.2	5.8	5.6	5.7	6.8	6.4	6.5	5.5	4.4	5.1
15	6.3	6.1	6.2	5.9	5.7	5.8	6.4	6.3	6.4	6.1	5.6	5.9
16	6.2	6.0	6.1	6.0	5.8	5.9	6.8	6.4	6.5	6.4	6.1	6.3
17	6.0	5.8	5.9	6.0	5.8	5.9	7.0	6.4	6.6	6.5	6.3	6.4
18	5.7	5.5	5.6	6.2	5.7	6.0	7.4	6.6	6.9	6.8	6.4	6.6
19	5.6	5.5	5.6	6.1	5.7	6.0	7.2	6.7	6.9	7.0	6.5	6.7
20	5.7	5.5	5.6	6.0	5.7	5.8	7.6	6.8	7.2	7.1	6.6	6.8
21	5.7	5.6	5.6	6.3	6.0	6.2	7.1	6.7	6.9	7.0	6.5	6.8
22	5.7	5.3	5.6	6.4	6.3	6.3	6.7	6.2	6.4	6.7	6.4	6.6
23	5.6	5.1	5.4	6.4	6.2	6.3	6.7	6.2	6.4	6.4	4.3	5.4
24	5.6	5.3	5.5	6.7	6.3	6.4	6.8	6.4	6.5	5.6	4.4	5.2
25	5.4	5.1	5.2	6.7	6.3	6.5	7.1	6.5	6.8	---	---	---
26	5.3	4.8	5.1	6.5	6.2	6.3	7.3	6.6	6.9	---	---	---
27	5.0	3.7	4.6	6.6	6.1	6.3	7.3	6.5	6.8	---	---	---
28	4.9	4.1	4.6	6.6	6.1	6.3	7.3	6.6	6.9	---	---	---
29	5.5	4.7	5.1	6.6	5.8	6.1	7.6	6.7	7.1	---	---	---
30	5.1	4.8	5.0	6.0	4.9	5.6	7.8	6.9	7.3	---	---	---
31	---	---	---	4.8	4.6	4.8	7.9	7.0	7.5	---	---	---
MONTH	7.2	3.7	5.9	6.7	4.6	5.8	7.9	4.2	6.4	7.6	4.3	6.2
YEAR	11.4	3.1	7.7									

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.--January 1965 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1969 to September 1985.

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

REMARKS.--The reservoir is formed by a rolled earthfill dam 17,539 ft long. The spillway is located on the right bank 5.5 mi upstream from the dam and discharges into the Trinity River through a cut channel 2 mi long. Deliberate impoundment began July 2, 1965, and the dam was completed in February 1966. The spillway is 474 ft long and has eight 40- by 24-foot radial gates and two automatically operated 40- by 8.5-foot 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 County Water Control and Improvement District No. 1 and was built for municipal and industrial supply and for recreational purposes. The area and capacity tables were based on a survey during the period 1940-58. Water is diverted from the reservoir for municipal and industrial uses by lakeside developments and by the cities of Arlington, Fort Worth, Mansfield, Kemp, Trinidad, and Mabank. Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	340.0	-
Top of radial gates	325.0	785,100
Top of automatic gates	322.5	696,400
Top of conservation pool	322.0	679,200
Crest of spillway (automatic gates)	314.0	441,000
Crest of spillway (radial gates)	302.0	197,800
Lowest gated outlet (invert)	263.5	430

COOPERATION.--Records of diversions provided by the Tarrant County Water Control and Improvement District No. 1. The area and capacity tables were provided by Freese and Nichols, Consulting Engineers, for Tarrant County Water Control and Improvement District No. 1.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 722,000 acre-ft June 4, 1973 (elevation, 323.24 ft); minimum since first appreciable storage in 1966, 332,900 acre-ft Mar. 19, 1967 (elevation, 309.42 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 709,800 acre-ft Feb. 24 at 1800 hours (elevation, 322.89 ft); minimum, 636,000 acre-ft Oct. 23 (elevation, 320.69 ft).

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

320.0	613,800	322.0	679,200
321.0	646,000	323.0	713,500

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	648000	700800	683300	682000	683300	690200	680600	676900	683700	680900	671900	658000
2	647700	705000	682700	683300	681600	684400	679900	677600	683700	678900	672600	658000
3	646000	700200	685700	683700	679200	680900	679600	679900	683300	679600	672600	661600
4	649300	699500	687100	682000	683300	686800	679600	679200	683300	678200	672600	660600
5	647000	697100	685400	679200	679900	687800	678900	679900	682300	677200	671600	659600
6	646000	694000	682300	678900	680300	686800	679900	678200	684700	676600	671300	660000
7	644400	693300	679200	679200	679600	682300	679900	677200	686100	675900	670600	659000
8	643800	688500	679600	680900	679900	680300	679900	675900	686100	675200	669900	658300
9	644100	684000	684400	681600	679600	691600	679200	674600	688800	674900	669600	658000
10	644100	680900	686100	682000	680300	679200	679200	674600	688800	673900	668900	658300
11	643800	678600	686400	682000	684700	690900	679600	676900	688800	673300	668900	657000
12	643500	678200	686100	679900	688500	688800	679600	674900	685700	672600	671600	656300
13	642200	677900	684400	678900	688800	684400	678900	674900	684700	671300	669900	655300
14	642200	677600	684400	678600	687500	680600	678200	675900	684000	670300	669300	655300
15	641800	677600	682000	678900	684700	679900	678200	675600	683700	669600	668300	655000
16	640200	677900	678600	678900	681600	680900	678200	674900	682700	670300	667300	653700
17	639300	679900	678200	678900	680300	678900	678200	678200	680300	667300	666600	653000
18	639900	683300	678600	680900	678900	678200	677600	682000	682300	667900	666600	653300
19	640200	698400	678900	684000	678900	678200	679900	682300	681300	668600	665900	652700
20	639300	696000	692300	685700	678900	678600	679600	682300	682000	668900	665600	651000
21	638600	695300	702600	686400	680900	678600	679600	678200	681300	668300	665300	654000
22	637300	693300	700800	687800	694300	680300	678600	678900	680900	667600	664600	653000
23	636000	689500	700500	690200	701200	678900	679600	679600	680600	667900	663600	651000
24	637300	686100	701200	690900	705000	678900	681300	679900	678900	667300	662300	650300
25	637000	681300	697800	691200	703900	684400	679200	681600	679900	666600	662600	648700
26	640600	679200	697800	691200	703200	680900	678900	684400	678600	665900	665000	649700
27	641800	679600	695700	696400	702600	679200	677600	685400	678900	667300	662300	648400
28	648400	679200	692300	690200	700800	679200	677200	685700	682000	670300	661000	647700
29	670900	679600	687500	688800	696000	680300	678600	681600	680300	669600	659300	646400
30	692600	684400	682300	687500	---	680600	678600	682000	682700	668600	659300	645400
31	699500	---	678900	685700	---	680300	---	682700	---	670300	658300	---
MAX	699500	705000	702600	696400	705000	691600	681300	685700	688800	680000	672600	661600
MIN	636000	677600	678200	678600	678900	678200	677200	674600	678600	665900	658300	645400
(†)	322.59	322.15	321.99	322.19	322.49	322.03	321.98	322.10	322.10	321.73	321.37	320.98
(ϕ)	+51100	-15100	-5500	+6800	+10300	-15700	-1700	+4100	0	-12400	-12000	-12900

CAL YR 1991 MAX 705000 MIN 625700 (ϕ) +53200
WTR YR 1992 MAX 705000 MIN 636000 (ϕ) -3000

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

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.

PERIOD OF RECORD.--August 1962 to current year. Prior to October 1970, published as Navarro Mills Reservoir.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Sept. 8, 1962, nonrecording gage in low-water channel at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam 7,570 ft long, including a 240-foot off-channel gated spillway with six 40.0- by 29.0-foot tainter gates. From Aug. 27, 1962, to Mar. 14, 1963, lake was operated as a detention basin only. Deliberate impoundment began Mar. 15, 1963, and dam was completed in September 1963. Low-flow outlet works consist of two 36-inch-diameter gate-controlled conduits. Lake was built for flood control and water conservation. Capacity table prior to September 1976 is based on survey made in February 1956 by U.S. Army Corps of Engineers. Capacity table after Aug. 31, 1976, is based on a sedimentation survey made in September 1972. Flow is affected at times by discharge from the flood-detention pools of 51 floodwater-retarding structures with a combined detention capacity of 26,160 acre-ft. These structures control runoff from [illegible] mi² in the Richland Creek drainage basin. An unknown amount of water is diverted for municipal and industrial uses. Gage-height telemeter at station. Figures given herein represent total contents. Data regarding dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	457.0	-
Design flood	451.9	329,500
Top of gates (top of flood-control storage pool)	443.0	206,200
Top of conservation pool	424.5	56,960
Crest of spillway	414.0	18,840
Lowest gated outlet (invert)	400.0	1,150

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 183,300 acre-ft May 18, 1968 (elevation, 440.36 ft); minimum since since initial filling in May 1965, 32,490 acre-ft Dec. 28, 1978 (elevation, 418.89 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 174,600 acre-ft Mar. 16 (elevation, 440.10 ft); minimum daily, 49,740 acre-ft Sept. 30 (elevation, 423.03 ft).

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

426.0	64,810	434.0	119,500	439.0	163,700
429.0	82,620	436.0	136,300	440.0	173,600
432.0	103,800	438.0	154,300	441.0	183,900

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62190	73300	58240	165000	141700	144000	123100	58900	67790	57830	54310	52100
2	61660	73890	58390	166300	142300	144600	119800	58850	69250	57570	54860	52050
3	61030	74370	58440	166100	143300	145500	116200	59620	69640	57520	54900	52200
4	60510	74610	58440	163700	149000	155100	112700	68800	68510	57420	54810	52100
5	59780	74910	58440	160400	152700	158800	109300	67670	66840	57220	54660	52050
6	59210	75090	58490	157300	153000	160200	106000	65470	65250	57010	54560	51910
7	58590	74790	58540	154000	150500	161000	102400	63360	67670	56860	54410	51860
8	58290	73240	58700	150900	147000	161500	98660	61660	67560	56660	54310	51760
9	58240	71830	68570	147500	143300	170800	95040	60560	66120	56510	54160	51610
10	58180	70390	70270	144000	139900	172100	91420	59520	64440	56360	54060	51570
11	58180	69020	71020	140700	136600	173100	87900	58490	62820	56060	54110	51570
12	58130	67670	71940	137700	133200	173400	84400	58080	61400	55800	54010	51570
13	58030	66290	72590	134300	129900	173800	81010	58030	60190	55600	53910	51420
14	57980	64920	72820	130900	126600	174100	77600	57930	58950	55350	53770	51420
15	57830	63630	73000	127100	123300	174400	74370	57720	58180	55100	53620	51370
16	57720	62660	71940	123200	120000	174600	71310	58590	57780	55000	53470	51280
17	57670	64060	70100	119700	116600	172800	68910	63570	57520	54900	53370	51230
18	57570	63680	68290	121200	112700	170000	66400	69990	57420	54610	53080	51130
19	57570	63360	70670	118700	109000	166600	64920	71600	57370	54660	53420	51080
20	57470	63740	83340	115400	105500	163200	62400	71250	57220	54810	53320	50940
21	57420	63840	128700	115200	102100	159800	60560	70620	57220	54810	53270	50840
22	57370	63410	139400	119000	102500	156400	59260	69820	57620	54760	53180	50600
23	57370	61980	144000	119500	102200	153000	58490	67670	57570	54610	53030	50460
24	57320	60450	146900	120000	110100	149600	58340	65470	57670	54410	52830	50310
25	57220	59160	149700	120400	132800	146400	58240	64540	57720	54410	52830	50260
26	57670	58590	153800	123100	137700	143100	58030	64490	57670	54510	52830	50120
27	59470	58290	157200	134500	140100	139900	58030	64650	57620	54260	52640	50070
28	60560	57980	159100	137200	141800	136700	57980	67230	58130	54510	52490	49930
29	64440	57880	160600	139200	143100	133500	58850	69700	58130	54310	52340	49780
30	68800	58080	161800	140400	---	130100	58900	69420	58030	54210	52200	49740
31	71480	---	162800	141200	---	126500	---	68460	---	54360	52150	---
MAX	71480	75090	162800	166300	153000	174600	123100	71600	69640	57830	54900	52200
MIN	57220	57880	58240	115200	102100	126500	57980	57720	57220	54210	52150	49740
(†)	427.19	424.72	438.90	436.56	436.77	434.86	424.88	426.66	424.71	423.98	423.53	423.03
(ϕ)	+8780	-13400	+104700	-21600	+1900	-16600	-67600	+9560	-10430	-3670	-2210	-2410

CAL YR 1991 MAX 162800 MIN 48820 (ϕ) +113900
WTR YR 1992 MAX 174600 MIN 49740 (ϕ) -12960

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

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.

PERIOD OF RECORD.--October 1960 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1980 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 367.52 ft above National Geodetic Vertical Datum of 1929. Nov. 21, 1960, to Sept. 30, 1982, water-stage recorder at same site and at 3.00-foot higher datum. Prior to Nov. 21, 1960, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since Mar. 15, 1963, flow has been regulated by Navarro Mills Lake (station 08063050), 1.7 mi upstream. Flow may be slightly affected at times by discharge from the flood-detention pool of one floodwater-retarding structure with a conservation capacity of 297 acre-ft. This structure controls runoff from a 1.28 mi² area below Navarro Mills Lake and above this station. Several observations of water temperature were made during the year. Gage-height telemeter at station.

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 exglended 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e503	41	.08	3.0	12	22	1490	37	709	134	.80	.27
2	e503	5.2	.07	10	11	18	1480	34	515	95	1.0	.30
3	e502	1.1	.04	352	11	18	1460	47	141	6.6	1.4	1.3
4	e502	.39	20	1400	109	260	1440	388	646	7.0	.89	.54
5	e501	.36	51	1830	155	178	1420	805	897	6.5	.73	.33
6	e501	.41	49	1800	335	43	1470	958	891	6.5	.55	.24
7	e500	294	46	1780	1370	25	1520	948	953	6.5	.46	.21
8	e309	833	44	1760	1940	20	1500	831	1010	6.2	.44	.19
9	e3.0	817	433	1750	1920	364	1480	561	900	6.0	.37	.18
10	e1.4	806	100	1730	1890	180	1450	554	881	5.7	.34	.17
11	e.98	796	64	1710	1870	109	1430	549	901	6.0	.41	.29
12	e.92	788	56	1690	1850	83	1410	287	777	5.9	1.4	.17
13	e.93	777	53	1670	1830	71	1390	30	655	5.7	1.0	.17
14	e.97	778	51	1650	1810	65	1370	60	649	5.5	.64	.13
15	e.98	778	51	1790	1790	63	1340	113	508	5.2	.47	.19
16	e1.1	782	598	1910	1770	63	1270	115	250	5.0	.44	.16
17	e1.1	839	1070	1880	1740	776	1110	82	185	4.6	.40	.13
18	e1.2	819	1050	2020	1860	1520	1100	25	60	5.1	.39	.11
19	e1.3	633	1150	1930	1900	1520	1100	16	58	5.5	.82	.09
20	e1.3	5.4	1010	1860	1660	1510	1110	303	39	5.8	.66	.09
21	e1.3	1.2	1430	1370	1640	1500	868	1070	12	5.9	.44	.06
22	e1.3	305	681	129	1710	1490	658	1130	15	5.1	.34	.07
23	e1.3	831	115	33	1020	1480	436	1050	12	4.9	.34	.07
24	1.3	816	37	18	184	1460	173	1030	11	4.9	.26	.06
25	1.5	704	29	14	874	1450	48	1270	8.9	5.1	.24	.10
26	4.2	469	48	44	164	1440	40	981	8.9	5.2	.22	.16
27	6.9	330	60	404	77	1430	38	328	8.2	5.5	.22	.14
28	4.1	329	29	68	62	1420	36	135	13	7.9	.29	.13
29	97	201	14	38	36	1410	87	89	10	6.9	.28	.17
30	91	.19	4.3	21	---	1390	46	389	47	1.1	.23	.19
31	32	---	2.2	15	---	1440	---	712	---	.79	.19	---
TOTAL	4078.08	13780.25	8345.69	32679.0	31600	22818	29770	14927	11771.0	387.59	16.66	6.41
MEAN	132	459	269	1054	1090	736	992	482	392	12.5	.54	.21
MAX	503	839	1430	2020	1940	1520	1520	1270	1010	134	1.4	1.3
MIN	.92	.19	.04	3.0	11	18	36	16	8.2	.79	.19	.06
AC-FT	8090	27330	16550	64820	62680	45260	59050	29610	23350	769	33	13

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1992#, BY WATER YEAR (WY)

MEAN	47.9	124	134	143	170	167	198	279	393	124	15.8	25.8
MAX	400	1366	1050	1054	1090	971	992	980	1356	773	310	269
(WY)	1974	1968	1975	1992	1992	1970	1992	1980	1975	1968	1991	1974
MIN	.000	.000	.000	.058	.066	.22	.023	.019	.000	.000	.068	.068
(WY)	1964	1964	1964	1964	1964	1971	1964	1964	1964	1970	1981	1968

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1964 - 1992#	
ANNUAL TOTAL	57941.89		170179.68			
ANNUAL MEAN	159		465		151	
HIGHEST ANNUAL MEAN					561	1968
LOWEST ANNUAL MEAN					.20	1964
HIGHEST DAILY MEAN	1430	Dec 21	2020	Jan 18	2180	Jun 12 1990
LOWEST DAILY MEAN	.00	Sep 19	.04	Dec 3	.00	Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	.01	Sep 18	.08	Sep 19	.00	Oct 1 1963
INSTANTANEOUS PEAK FLOW			2630	Dec 21	3850	Nov 24 1974
INSTANTANEOUS PEAK STAGE			20.50	Dec 21	22.85	Nov 24 1974
INSTANTANEOUS LOW FLOW			.01	Sep 14	.00	at times
ANNUAL RUNOFF (AC-FT)	114900		337600		109600	
10 PERCENT EXCEEDS	626		1500		603	
50 PERCENT EXCEEDS	2.7		60		1.9	
90 PERCENT EXCEEDS	.32		.29		.01	

Period of regulated streamflow.

08063700 BARDWELL LAKE NEAR ENNIS, TX

LOCATION.--Lat 32°15'00", long 96°38'49", Ellis County, Hydrologic Unit 12030109, in intake structure of Bardwell Dam on Waxahachie Creek, 5 mi south of Ennis, and 5.6 mi upstream from mouth.

DRAINAGE AREA.--178 mi².

PERIOD OF RECORD.--November 1965 to current year. Prior to October 1970, published as Bardwell Reservoir.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Apr. 25, 1966, nonrecording gage on intake structure at same datum.

REMARKS.--The lake is formed by a rolled earthfill dam 15,400 ft long, including a 350-foot uncontrolled off-channel concrete-gravity spillway with ogee weir section. Deliberate impoundment began Nov. 20, 1965, and dam was completed Mar. 27, 1966. Controlled low-flow outlet works consists of a 10.0-foot-diameter concrete conduit with two 5.0- by 10.0-foot sluice gates. Lake was built for flood control and water conservation. Capacity table beginning October 1976 is based on a survey completed in 1972. Runoff from 81.4 mi² above Bardwell Lake is modified by Lake Waxahachie, with a capacity of 13,500 acre-ft at spillway elevation. The city of Waxahachie diverts water from Lake Waxahachie and returns an unknown amount of effluent to Waxahachie Creek. Inflow is affected at times by discharge from flood-detention pools of 23 floodwater-retarding structures with a combined detention capacity of 15,370 acre-ft. These structures control runoff from 52.4 mi² in the Chambers Creek watershed. Gage-height telemeter at station. Figures given herein represent total contents. Data regarding the dam and lake are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	460.0	-
Design flood	455.9	-
Crest of spillway (top of flood-control pool)	439.0	137,600
Top of conservation pool	421.0	52,300
Lowest gated outlet (invert)	391.0	690

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 112,100 acre-ft May 22, 1990 (elevation, 434.54 ft); minimum since initial filling, 39,720 acre-ft Nov. 10, 1978 (elevation, 417.21 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 56,520 acre-ft Apr. 15 (elevation, 422.16 ft): minimum daily, 47,270 acre-ft Dec. 25 (elevation, 419.56 ft).

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

419.0	45,390	422.0	55,920
420.0	48,780	423.0	59,680
421.0	52,290		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52650	80740	55920	107000	78310	78530	57860	53080	63430	54090	54420	52260
2	52610	81940	55330	108100	78880	79410	56330	53110	67930	53840	54930	52110
3	52580	83150	54520	108300	79500	80340	55370	53470	68660	53620	55000	52680
4	52580	84230	53650	106700	80920	85270	54710	53730	68250	53400	55000	52680
5	52430	85360	53360	103800	81720	87330	54160	53360	66200	53080	55080	52650
6	52330	86460	53220	100900	82340	88350	53580	53010	65320	52970	55080	52650
7	52260	87610	52970	98320	82430	89090	53150	52860	63740	52900	55080	52610
8	52150	86920	52860	95420	81540	89650	52930	52790	62180	52830	55080	52540
9	52150	84860	56670	92380	80520	96150	52830	52760	60560	52760	55080	52500
10	52150	82120	57450	89280	78710	97140	52720	52680	58960	52680	54710	52470
11	52150	79500	57940	86320	77740	98030	52540	52790	57750	52610	54710	52500
12	52110	76910	58770	83330	76420	98820	52580	52790	56740	52500	54780	52400
13	52080	74680	59380	80520	74210	99420	52610	52720	55810	52400	54740	52400
14	52010	72470	59450	76950	72090	99920	52610	53290	54780	52360	54740	52360
15	51940	70220	59380	74380	70010	100300	52720	53080	53910	52290	54640	52330
16	51830	68820	58770	71630	67730	100700	52790	53220	53330	52260	54490	52290
17	51790	67440	57900	69230	65280	99720	52930	54090	52970	52260	54160	52220
18	51790	65520	57040	68700	63000	97090	53010	54890	52790	52180	53940	52180
19	51720	64250	57710	67120	60440	93770	53470	55330	52650	52680	53690	52180
20	51720	63860	66320	64890	58880	90400	53290	55400	52650	53040	53470	52040
21	51650	64410	86410	64180	57410	87010	53010	54670	52860	53110	53220	52470
22	51580	64570	91100	65640	58160	83960	52760	54120	52930	53110	52970	52540
23	51580	63470	93630	66080	59110	80560	52720	53870	53260	53080	52650	52330
24	51620	62370	95280	66560	62490	77260	52680	53580	53330	53040	52540	52180
25	51620	61290	96890	67000	71840	74470	52580	54450	53400	52970	52540	52110
26	51900	60250	98920	68620	74170	71710	52500	56550	53470	52930	52540	52180
27	54820	59220	100500	72890	75640	69310	52470	57900	53470	53440	52470	52040
28	58130	58050	101800	74730	76820	66840	52290	59260	54380	53760	52360	52010
29	69310	57190	103100	76080	77780	64570	52970	60370	54640	53910	52290	51860
30	75680	56740	104300	77040	---	61750	53080	60900	54520	53870	52260	51760
31	78360	---	105500	77740	---	59600	---	61600	---	54120	52180	---
MAX	78360	87610	105500	108300	82430	100700	57860	61600	68660	54120	55080	52680
MIN	51580	56740	52860	64180	57410	59600	52290	52680	52650	52180	52180	51760
(†)	427.56	422.22	433.28	427.42	427.43	422.98	421.22	423.50	421.62	421.51	420.97	420.85
(ϕ)	+25710	-21620	+48760	-27760	+40	-18180	-6520	+8520	-7080	-400	-1940	-420

CAL YR 1991 MAX 105500 MIN 47510 (ϕ) +57990
WTR YR 1992 MAX 108300 MIN 51580 (ϕ) -890

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

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.

PERIOD OF RECORD.--October 1963 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1980 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 370.18 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records poor. Since November 1965, flow regulated by Bardwell Lake (station 08063700) 0.8 mi upstream. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--2 years (1964-65) 2,386 ft³/s (1,729,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1964-65).--Maximum discharge 2,960 ft³/s Feb. 9, 1965 (gage height, 17.55 ft); no flow at times most years.

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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	22	618	5.3	1.1	2.4	929	.26	.01	202	.00	.03
2	.00	3.3	619	5.0	.67	2.0	760	.07	.04	151	.08	.04
3	.00	2.9	617	308	.54	2.0	494	.00	.00	100	.01	1.2
4	.00	2.6	540	1120	1.9	21	336	66	425	99	.00	.12
5	.00	2.6	306	1610	2.0	35	337	201	1000	99	.01	.08
6	.00	2.3	214	1760	.62	3.1	338	125	994	39	.00	.05
7	.00	2.1	268	1750	148	2.3	260	40	987	.01	.00	.03
8	.00	638	268	1730	585	2.0	131	.73	981	.01	.00	.02
9	.00	1350	273	1710	714	31	91	.40	975	.01	.00	.02
10	.00	1580	277	1700	999	21	88	.36	925	.01	.00	.02
11	.00	1660	271	1690	1350	2.1	90	.42	757	.01	.00	.02
12	.00	1540	268	1670	1350	2.1	39	.17	580	.01	.12	.02
13	.00	1300	268	1660	1320	2.6	2.4	42	509	.01	.19	.02
14	.00	1300	269	1640	1310	2.6	.74	81	504	.01	35	.02
15	.00	1290	267	1550	1300	2.4	.23	123	443	.01	87	.02
16	.00	1290	479	1410	1290	2.2	.16	184	298	.01	87	.02
17	.00	1280	627	1310	1280	625	.07	63	168	.01	86	.02
18	.00	1260	626	1310	1270	1490	.09	1.7	103	.01	85	.02
19	.00	1180	629	1310	1260	1690	.47	.44	58	.04	85	.02
20	.00	611	313	1290	1020	1680	100	170	22	.04	84	.01
21	.00	8.8	631	901	808	1670	197	487	21	.01	84	.97
22	.00	245	477	151	807	1650	139	379	8.7	.00	84	.09
23	.00	653	122	4.4	357	1630	97	205	.23	.00	83	.01
24	.00	649	33	3.7	13	1610	81	205	.28	.00	32	.01
25	.00	651	5.9	3.0	179	1440	51	206	.08	.00	.18	.01
26	.00	646	7.2	5.8	163	1280	22	84	.04	.00	.07	.01
27	.34	637	7.0	26	9.4	1260	.17	.61	.02	.02	.03	.01
28	.01	634	5.8	9.8	3.7	1250	.06	1.6	2.6	.00	.02	.01
29	41	632	5.1	1.6	2.6	1240	2.3	.31	.16	.00	.03	.01
30	430	625	5.2	1.4	---	1220	.52	.01	76	.00	.03	.01
31	184	---	5.2	1.3	---	1060	---	.03	---	.00	.03	---
TOTAL	655.35	21697.6	9321.4	27647.3	17545.53	20930.8	4587.21	2668.11	9838.16	690.23	832.80	2.94
MEAN	21.1	723	301	892	605	675	153	86.1	328	22.3	26.9	.098
MAX	430	1660	631	1760	1350	1690	929	487	1000	202	87	1.2
MIN	.00	2.1	5.1	1.3	.54	2.0	.06	.00	.00	.00	.00	.01
AC-FT	1300	43040	18490	54840	34800	41520	9100	5290	19510	1370	1650	5.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1992#, BY WATER YEAR (WY)

MEAN	23.7	82.7	74.2	99.3	110	129	104	166	218	31.3	4.99	8.12
MAX	299	723	394	892	605	675	590	827	773	370	71.8	178
(WY)	1974	1992	1986	1992	1992	1992	1977	1973	1989	1981	1973	1976
MIN	.000	.014	.018	.022	.022	.024	.19	.12	.004	.000	.000	.000
(WY)	1967	1970	1990	1967	1967	1967	1967	1988	1967	1966	1966	1966

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1966 - 1992#	
ANNUAL TOTAL	43052.09		116417.43			
ANNUAL MEAN	118		318		87.2	
HIGHEST ANNUAL MEAN					318	1992
LOWEST ANNUAL MEAN					.063	1967
HIGHEST DAILY MEAN	1660	Nov 11	1760	Jan 6	1880	Jun 25 1981
LOWEST DAILY MEAN	.00	Aug 8	.00	Oct 1	.00	Oct 4 1965
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 28	.00	Oct 1	.00	Oct 7 1965
INSTANTANEOUS PEAK FLOW			1770	Jan 5	1960	Jun 25 1981
INSTANTANEOUS PEAK STAGE			15.90	Mar 18	18.13	Jun 25 1981
INSTANTANEOUS LOW FLOW			.00	Oct 1	.00	*
ANNUAL RUNOFF (AC-FT)	85390		230900		63180	
10 PERCENT EXCEEDS	361		1290		273	
50 PERCENT EXCEEDS	.50		9.1		1.3	
90 PERCENT EXCEEDS	.00		.00		.00	

Period of regulated streamflow.
* No flow at times most years.

08064100 Chambers Creek near Rice, Tex.

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.--September 1983 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 340.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair including those of estimated daily discharges. Flow from 178² above this station is affected by storage in Bardwell Lake on Waxahachie Creek. Flood releases from Bardwell Lake will sustain flows at this site from time to time. In addition, flow is affected at times by discharge from the flood-detention pools of numerous floodwater-retarding structures in the drainage basin above this station. Gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood information for the next downstream station, Chambers Creek near Corsicana, (08064500) indicates that the maximum stage since at least 1870 occurred in August 1887, and that other significant floods occurred in December 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 crop land flooding.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	7260	983	1600	832	1240	1110	251	567	1010	45	3.9
2	16	4690	987	1440	682	932	1000	183	4500	714	46	3.8
3	14	2640	1140	1200	603	775	747	150	6360	456	153	7.6
4	11	1960	993	1650	1230	3670	546	178	3300	372	66	12
5	8.9	1640	721	1990	3310	5990	535	434	2030	326	32	6.5
6	7.2	1310	469	2190	1910	3100	536	368	1820	267	19	4.7
7	6.0	1060	538	2100	1080	1350	507	236	1650	162	16	4.1
8	5.5	1110	526	2060	1210	941	377	99	1590	134	14	3.9
9	4.8	1770	2160	1980	1260	2820	299	78	1470	112	11	3.1
10	4.2	1890	4760	1900	1290	5490	289	69	1430	94	11	2.5
11	3.9	1990	3250	1850	1640	2100	282	65	1200	80	10	2.3
12	3.8	1900	1490	1850	2200	1160	251	62	1040	67	11	35
13	3.3	1610	1470	1850	1990	845	170	79	859	55	16	26
14	3.1	1570	1100	1800	1840	667	161	344	789	46	15	10
15	2.7	1540	866	1710	1960	569	156	1060	728	39	163	5.8
16	2.4	1520	869	1570	1800	505	143	661	563	34	166	4.1
17	2.2	2270	1030	1450	1630	733	134	1190	404	31	166	3.5
18	2.1	2470	984	2400	1560	1760	132	1830	293	29	164	3.5
19	5.5	1810	1640	4020	1500	1970	144	2460	258	32	166	2.9
20	9.6	2120	4670	2320	1370	1930	198	3080	180	81	169	2.5
21	5.6	1440	22700	1670	1090	1890	363	2100	170	111	171	2.2
22	4.9	772	19600	2130	2100	1860	323	1720	180	49	169	2.9
23	5.2	1160	7650	1580	3440	1830	252	1090	256	47	166	2.7
24	5.8	1080	6230	812	1540	1800	241	776	316	38	134	1.5
25	5.8	1020	4790	612	6560	1720	184	687	276	28	12	1.1
26	5.7	977	4060	538	7250	1530	160	2240	230	22	6.6	.99
27	498	950	4290	4470	4780	1500	78	1140	297	19	5.8	.80
28	3440	926	3750	5400	2440	1480	68	751	700	25	5.2	.72
29	5100	907	2960	2750	1680	1460	296	2000	1230	30	4.7	.59
30	15300	954	2350	1520	---	1440	409	1110	1920	21	4.3	e.49
31	12100	---	1920	1090	---	1320	---	635	---	22	4.1	---
TOTAL	36606.2	54316	110946	61502	61777	56377	10091	27126	36606	4553	2141.7	161.69
MEAN	1181	1811	3579	1984	2130	1819	336	875	1220	147	69.1	5.39
MAX	15300	7260	22700	5400	7250	5990	1110	3080	6360	1010	171	35
MIN	2.1	772	469	538	603	505	68	62	170	19	4.1	.49
AC-FT	72610	107700	220100	122000	122500	111800	20020	53800	72610	9030	4250	321

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1992, BY WATER YEAR (WY)

MEAN	362	306	851	509	756	702	360	905	900	60.8	28.4	33.5
MAX	1499	1811	3579	1984	2130	1819	1235	2932	2560	194	142	149
(WY)	1986	1992	1992	1992	1992	1992	1990	1989	1986	1989	1991	1991
MIN	.000	1.72	1.45	12.0	107	45.3	92.6	7.86	2.21	.081	.000	.000
(WY)	1989	1989	1989	1984	1984	1986	1987	1988	1984	1988	1988	1985

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1984 - 1992	
ANNUAL TOTAL	266034.25		462203.59			
ANNUAL MEAN	729		1263		480	
HIGHEST ANNUAL MEAN					1263	1992
LOWEST ANNUAL MEAN					96.6	1984
HIGHEST DAILY MEAN	22700	Dec 21	22700	Dec 21	22700	Dec 21 1991
LOWEST DAILY MEAN	.00	Jul 20	.49	Sep 30	.00	Aug 6 1985
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 20	.88	Sep 24	.00	Aug 6 1985
INSTANTANEOUS PEAK FLOW			34900	Dec 21	43400	Jun 6 1986
INSTANTANEOUS PEAK STAGE			32.57	Dec 21	32.57	Dec 21 1991
INSTANTANEOUS LOW FLOW					.00	*
ANNUAL RUNOFF (AC-FT)	527700		916800		347800	
10 PERCENT EXCEEDS	1640		2670		1200	
50 PERCENT EXCEEDS	153		684		38	
90 PERCENT EXCEEDS	2.2		4.9		.08	

* No flow at times most years.

08064100 Chambers Creek near Rice, Tex.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: October 1983 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1983 to current year.
WATER TEMPERATURE: October 1983 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (1983-90): Maximum daily, 2,510 microsiemens Nov. 21, 1988; minimum daily, 187 microsiemens Dec. 18, 1984.
WATER TEMPERATURE (1983-89): Maximum daily, 38.0°C Aug. 16, 1987; minimum daily, 0.0°C Feb. 7, 1989.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,210 microsiemens Sept. 30; minimum, 254 microsiemens Feb. 25.
WATER TEMPERATURE: Maximum, 31.0°C Aug. 14; minimum, 7.0°C Jan. 17.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT											
30...	1612	18600	238	7.9	12.0	110	580	9.6	89	1.9	100
DEC											
18...	1645	976	433	8.2	10.0	20	69	9.3	82	0.4	180
FEB											
06...	1315	1710	424	8.1	11.0	40	35	11.1	102	1.7	190
MAR											
26...	1730	1520	395	8.0	16.5	15	59	9.8	101	1.0	180
MAY											
20...	1615	2960	449	8.0	23.0	45	350	7.1	84	1.9	180
JUL											
07...	1715	157	618	8.1	29.0	15	46	6.9	91	2.7	230

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT											
30...	24	39	1.8	7.5	0.3	5.0	81	28	5.5	0.30	9.9
DEC											
18...	19	67	3.0	19	0.6	4.3	160	45	15	0.40	8.2
FEB											
06...	37	69	3.4	19	0.6	3.1	150	65	17	0.30	8.9
MAR											
26...	26	67	2.8	15	0.5	2.6	150	38	17	0.30	5.8
MAY											
20...	69	65	3.5	21	0.7	3.7	110	73	18	0.40	10
JUL											
07...	78	81	5.7	38	1	4.0	150	110	37	0.30	7.8

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
OCT											
30...	146	1040	23	1020	0.150	0.120	0.270	0.100	1.1	1.2	0.500
DEC											
18...	259	128	<1	--	2.02	0.080	2.10	0.090	0.61	0.70	0.180
FEB											
06...	275	990	125	865	0.680	0.010	0.690	0.040	1.2	1.2	0.490
MAR											
26...	240	143	38	105	0.580	0.040	0.620	0.120	0.18	0.30	0.040
MAY											
20...	260	888	100	788	2.83	0.170	3.00	0.110	0.49	0.60	0.090
JUL											
07...	374	99	16	83	0.046	0.040	0.086	0.100	1.4	1.5	0.080

08064100 Chambers Creek near Rice, Tex.--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT											
30...	0.200	16	--	--	--	--	--	--	--	--	--
DEC											
18...	0.090	7.5	4	50	<0.5	<1.0	<5	<3	<10	6	<10
FEB											
06...	0.010	14	--	--	--	--	--	--	--	--	--
MAR											
26...	0.060	5.3	--	--	--	--	--	--	--	--	--
MAY											
20...	0.050	16	4	36	<0.5	<1.0	<5	<3	<10	41	<10
JUL											
07...	0.070	8.4	2	58	<0.5	<1.0	<5	<3	<10	8	<10

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
30...	--	--	--	--	--	--	--	--	--	--
DEC										
18...	9	6	<0.1	<10	<10	<1	<1.0	470	<6	4
FEB										
06...	--	--	--	--	--	--	--	--	--	--
MAR										
26...	--	--	--	--	--	--	--	--	--	--
MAY										
20...	11	1	<0.1	<10	<10	<1	<1.0	480	<6	6
JUL										
07...	11	11	<0.1	<10	<10	<1	<1.0	670	<6	18

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	36606.2	279	163	16100	12	1210	37	3620	100
NOV.	1991	54316	339	198	29000	16	2360	46	6680	120
DEC.	1991	110946	323	189	56500	15	4540	43	13000	120
JAN.	1992	61502	383	224	37200	19	3210	53	8720	140
FEB.	1992	61777	392	229	38200	20	3380	54	9040	140
MAR.	1992	56377	395	231	35200	20	3090	55	8300	140
APR.	1992	10091	557	327	8900	35	967	83	2260	190
MAY	1992	27126	451	264	19400	25	1820	64	4670	160
JUNE	1992	36606	381	223	22000	19	1910	52	5180	140
JULY	1992	4553	483	283	3480	29	351	70	860	170
AUG.	1992	2141.7	416	244	1410	23	132	59	340	150
SEPT	1992	161.69	877	517	226	71	31	140	63	270
TOTAL		462203.59	**	**	268000	**	23000	**	62700	**
WTD.AVG.		1263	367	214	**	18	**	50	**	130

08064100 Chambers Creek near Rice, Tex.--Continued

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY EQUIVALENT MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e432	295	388	e365	e537	e450	405	669	539	e351	e828	847
2	431	304	422	408	e582	497	405	e738	322	387	669	930
3	432	306	429	442	605	e535	424	e770	334	413	e397	982
4	e433	316	416	e382	568	e331	e448	800	379	e415	400	1030
5	e449	322	425	e364	408	325	e458	580	358	e420	486	e1000
6	e450	333	413	372	460	382	474	417	354	431	562	e950
7	459	352	e420	374	519	e425	493	475	e370	e600	e635	e930
8	462	366	e428	e376	e540	e465	528	637	e382	606	e690	906
9	471	e350	417	373	e528	386	624	e795	e382	610	748	930
10	482	310	336	371	465	343	625	e830	e371	635	e784	973
11	e495	e311	384	e375	422	392	e633	845	e366	662	835	1040
12	509	312	e421	e376	414	443	e697	855	365	e705	e882	e800
13	e520	318	449	373	433	490	822	851	375	728	920	e850
14	e528	e323	459	376	428	e507	e840	487	e383	732	977	905
15	542	322	e460	380	e430	e580	e860	367	e382	749	e500	843
16	554	e322	463	378	e427	614	e880	e404	382	764	e370	810
17	569	346	425	384	e416	632	914	e422	404	776	387	787
18	581	e362	430	e314	417	450	e920	e434	441	e783	324	742
19	e588	363	e380	e368	416	393	e877	e445	448	e790	304	e740
20	e583	377	381	e396	415	e380	846	448	485	792	327	e740
21	568	400	e319	399	439	e378	506	e432	e519	606	346	738
22	580	440	e274	390	e370	e385	472	383	567	630	e364	e780
23	590	e420	269	475	e350	385	500	e430	663	674	e381	839
24	579	e412	277	532	392	389	537	e470	488	e759	e394	883
25	553	376	e270	e557	254	401	645	e510	582	801	e417	e925
26	e550	370	283	e560	305	396	e719	e400	581	e823	e474	e984
27	494	420	297	301	350	389	793	437	534	e835	e530	e1040
28	348	e422	e304	e355	381	391	916	488	e513	856	e587	e1110
29	e260	381	e309	e410	e405	e397	880	432	522	871	e641	1170
30	265	e385	323	464	---	e411	615	466	e390	e875	e70[illegible]	1210
31	274	---	338	504	---	424	---	510	---	870	770	---
MEAN	485	355	374	403	437	431	659	556	439	676	569	914
MAX	590	440	463	560	605	632	920	855	663	875	977	1210
MIN	260	295	269	301	254	325	405	367	322	351	304	738

WTR YR 1992 MEAN 525 MAX 1210 MIN 254

e Estimated

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	11.0	12.0	---	---	---	18.0	22.0	21.0	---	---	27.0
2	25.0	12.0	12.0	12.0	---	16.0	16.0	---	20.0	28.0	28.0	27.0
3	25.0	11.0	10.0	12.0	13.0	---	16.0	---	23.0	29.0	---	26.0
4	---	10.0	10.0	---	12.0	---	---	24.0	23.0	---	29.0	27.0
5	---	12.0	11.0	---	14.0	15.0	---	24.0	23.0	---	29.0	---
6	---	12.0	11.0	12.0	15.0	17.0	16.0	24.0	24.0	29.0	30.0	---
7	20.0	11.0	---	12.0	10.0	---	17.0	22.0	---	28.0	---	---
8	22.0	11.0	---	---	---	---	18.0	23.0	---	29.0	---	28.0
9	23.0	---	17.0	12.0	---	17.0	20.0	---	---	29.0	30.0	29.0
10	23.0	11.0	16.0	11.0	11.0	15.0	21.0	---	---	30.0	---	27.0
11	---	---	15.0	---	11.0	13.0	---	24.0	---	29.0	29.5	26.0
12	21.0	13.0	---	---	11.0	13.0	---	25.0	27.0	---	---	---
13	---	12.0	16.0	10.0	12.0	13.0	24.0	26.0	28.0	29.0	29.0	---
14	---	---	15.0	10.0	14.0	---	---	25.0	---	29.0	31.0	28.0
15	22.0	14.0	---	8.0	---	---	---	23.0	---	29.0	---	28.0
16	20.0	---	12.0	8.0	---	18.0	---	---	27.0	28.0	---	27.0
17	21.0	15.0	12.0	7.0	---	18.0	23.0	---	28.0	30.0	28.0	27.0
18	23.0	---	10.0	---	13.0	17.0	---	---	28.0	---	28.0	27.0
19	---	14.0	---	---	13.0	16.0	---	---	29.0	---	26.0	---
20	---	14.0	10.0	---	13.0	---	20.0	23.0	28.0	28.0	26.0	---
21	20.0	14.0	---	8.0	13.0	---	20.0	---	---	26.0	27.0	27.0
22	22.0	13.0	---	9.0	---	---	22.0	23.0	26.0	27.0	---	---
23	21.0	---	11.0	9.0	---	15.0	27.0	---	26.0	28.0	---	25.0
24	23.0	---	11.0	10.0	15.0	15.0	21.0	---	28.0	---	---	23.0
25	24.0	12.0	---	---	10.0	16.0	21.0	---	29.0	28.0	---	---
26	---	12.0	10.0	---	10.0	17.0	---	22.0	29.0	---	---	---
27	22.0	14.0	10.0	10.0	11.0	16.0	27.0	21.0	29.0	---	---	---
28	19.0	---	---	---	14.0	16.0	22.0	22.0	---	28.0	---	---
29	---	10.0	---	---	---	---	22.0	19.0	26.0	28.0	---	23.0
30	15.0	---	11.0	11.0	---	---	21.0	19.0	---	---	---	23.0
31	12.0	---	11.0	16.0	---	18.0	---	19.0	---	29.0	27.0	---
MEAN	21.0	12.5	12.0	10.5	12.5	16.0	20.5	22.5	26.0	28.5	28.5	26.5
MAX	25.0	15.0	17.0	16.0	15.0	18.0	27.0	26.0	29.0	30.0	31.0	29.0
MIN	12.0	10.0	10.0	7.0	10.0	13.0	16.0	19.0	20.0	26.0	26.0	23.0

WTR YR 1992 MEAN 19.5 MAX 31.0 MIN 7.0

08064550 RICHLAND-CHAMBERS RESERVOIR NEAR KERENS, TX

LOCATION.--Lat 32°02'25", long 96°12'23", Navarro County, Hydrologic Units 12030108 and 12030109, on upper floor of pumphouse, on left bank of Chambers Creek arm of Richland-Chambers Reservoir, 7.0 mi south of intersection of State Highway 31 and Farm Road 309 in Kerens, and 14.4 mi upstream from dam on Richland Creek.

DRAINAGE AREA.--1,957 mi².

PERIOD OF RECORD.--November 1988 to current year.

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

REMARKS.--The reservoir is formed by a rolled earthfill dam 31,000 ft long. Deliberate impoundment of water began July 14, 1987, and the dam was completed in December 1988. A gated concrete spillway is located near the left end of dam. The spillway 1,155 ft long and contains twenty-four 40- x 29.4-foot radial gates. The low flow outlet works consist of two 3- X 5-foot outlets at elevation 266.0 ft, one 1.5- X 2.5-foot outlet, and one 1- X 1 foot outlet at elevation 285.0 ft. Each of the low flow outlets are controlled by sluice gates. The dam is owned by Tarrant County Water Control and Improvement District No. 1, and was built for municipal and industrial water supply and for recreation. The area and capacity tables were prepared by Freese and Nichols, Consulting Engineers for Tarrant County Water Control and Improvement District No. 1, who provided copies of the tables. Flow from 464 mi² above the dam is controlled by Bardwell and Navarro Mills Lakes. Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	330.0	-
Top of gates	317.34	1,290,000
Top of conservation pool	315.0	1,182,000
Crest of spillway	290.0	370,200
Lowest gated outlet	266.0	43,240

COOPERATION.--Capacity table was prepared by Freese and Nichols, Consulting Engineer for Tarrant County Water Control and Improvement District No. 1.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents 1,267,000 acre-ft Dec. 22, 1991 (elevation, 316.85 ft); minimum contents, 233,600 acre-ft Dec. 8, 1988 (elevation, 283.02 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,267,000 acre-ft Dec. 22 at 1900 hrs (elevation, 316.85 ft); minimum, 1,101,000 acre-ft Sep. 30 (elevation, 313.15 ft).

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

313.0	1,095,000	316.0	1,227,000
314.0	1,138,000	317.0	1,274,000
315.0	1,182,000		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1182000	1227000	1186000	1202000	1201000	1210000	1181000	1181000	1200000	1188000	1157000	1127000
2	1182000	1212000	1186000	1204000	1197000	1206000	1182000	1179000	1206000	1187000	1157000	1130000
3	1183000	1207000	1185000	1204000	1195000	1201000	1182000	1180000	1207000	1184000	1156000	1129000
4	1180000	1203000	1184000	1204000	1196000	1205000	1180000	1186000	1212000	1184000	1155000	1127000
5	1180000	1201000	1181000	1204000	1207000	1217000	1180000	1189000	1214000	1183000	1154000	1126000
6	1179000	1199000	1181000	1207000	1211000	1219000	1180000	1183000	1214000	1182000	1153000	1125000
7	1180000	1195000	1181000	1210000	1206000	1214000	1180000	1182000	1212000	1179000	1152000	1125000
8	1179000	1191000	1183000	1212000	1202000	1204000	1181000	1181000	1214000	1179000	1151000	1124000
9	1179000	1189000	1198000	1213000	1202000	1207000	1182000	1180000	1214000	1178000	1150000	1123000
10	1177000	1188000	1209000	1213000	1202000	1214000	1182000	1180000	1211000	1177000	1148000	1121000
11	1176000	1187000	1211000	1215000	1202000	1217000	1182000	1181000	1207000	1174000	1147000	1120000
12	1176000	1187000	1211000	1215000	1202000	1206000	1182000	1181000	1203000	1173000	1147000	1120000
13	1175000	1186000	1210000	1215000	1205000	1197000	1182000	1181000	1197000	1171000	1146000	1119000
14	1174000	1185000	1207000	1213000	1203000	1190000	1182000	1181000	1192000	1170000	1145000	1118000
15	1173000	1184000	1203000	1210000	1204000	1184000	1182000	1181000	1189000	1170000	1143000	1117000
16	1173000	1184000	1200000	1211000	1205000	1180000	1182000	1184000	1188000	1168000	1142000	1116000
17	1171000	1190000	1200000	1212000	1207000	1180000	1182000	1188000	1185000	1168000	1139000	1116000
18	1170000	1194000	1202000	1219000	1205000	1185000	1180000	1195000	1183000	1166000	1139000	1115000
19	1168000	1202000	1210000	1225000	1202000	1187000	1181000	1197000	1182000	1166000	1138000	1114000
20	1168000	1197000	1243000	1226000	1197000	1189000	1181000	1200000	1181000	1166000	1137000	1114000
21	1167000	1196000	1262000	1224000	1192000	1192000	1181000	1200000	1179000	1166000	1136000	1114000
22	1166000	1191000	1262000	1225000	1201000	1193000	1183000	1204000	1180000	1166000	1136000	1113000
23	1166000	1189000	1214000	1221000	1207000	1196000	1182000	1205000	1181000	1165000	1136000	1111000
24	1166000	1187000	1200000	1216000	1211000	1198000	1181000	1202000	1181000	1164000	1135000	1108000
25	1165000	1188000	1197000	1209000	1229000	1200000	1178000	1210000	1181000	1163000	1133000	1108000
26	1169000	1186000	1200000	1210000	1246000	1201000	1178000	1214000	1180000	1162000	1132000	1107000
27	1169000	1185000	1202000	1219000	1252000	1196000	1177000	1213000	1180000	1162000	1131000	1105000
28	1174000	1185000	1201000	1223000	1226000	1193000	1177000	1208000	1182000	1160000	1130000	1104000
29	1195000	1183000	1202000	1221000	1213000	1187000	1180000	1207000	1183000	1159000	1129000	1102000
30	1205000	1186000	1202000	1210000	---	1185000	1180000	1206000	1186000	1158000	1128000	1101000
31	1231000	---	1201000	1206000	---	1183000	---	1204000	---	1155000	1127000	---
MAX	1231000	1227000	1262000	1226000	1252000	1219000	1183000	1214000	1214000	1188000	1157000	1130000
MIN	1165000	1183000	1181000	1202000	1192000	1180000	1177000	1179000	1179000	1155000	1127000	1101000
(†)	316.09	315.09	315.42	315.53	315.69	315.03	314.95	315.46	315.03	314.35	313.75	313.15
(ϕ)	+48000	-45000	+15000	+5000	+7000	-30000	-3000	+24000	-18000	-31000	-28000	-26000

CAL YR 1991 MAX 1262000 MIN 1099000 (ϕ) +102000
WTR YR 1992 MAX 1262000 MIN 1101000 (ϕ) -82000

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

08064700 TEHUACANA CREEK NEAR STREETMAN, TX

LOCATION.--Lat 31°50'54", long 96°17'23", Freestone County, Hydrologic Unit 12030201, at downstream side of bridge on U.S. Highway 75, 2.8 mi southeast of Streetman, 3.1 mi downstream from Chicago, Rock Island, and Pacific Railroad Co. bridge, 3.8 mi upstream from Caney Creek, and 25 mi upstream from mouth.

DRAINAGE AREA.--142 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1968 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum gage is 287.58 ft above National Geodetic Vertical Datum of of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1932 reached a stage of about 24 ft, from information by State Department of Highways and Public Transporation.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct. 31	2230	2,570	21.03	Feb. 25	1130	8,920	23.27
Dec. 21	1000	34,700	26.40	May 18	0145	3,610	22.09
Jan. 18	1645	2,760	20.95	May 26	0245	2,550	20.37
Jan. 27	1100	5,020	22.46	June 1	1715	2,960	21.39
Feb. 22	1900	3,260	21.93				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	968	320	29	36	31	10	5.2	2340	5.1	.98	e.17
2	5.9	97	149	28	26	26	9.3	4.3	1120	3.8	4.8	e.15
3	5.8	37	135	35	22	24	9.1	4.0	192	3.2	2.3	e.15
4	5.7	23	46	27	227	716	9.0	116	48	4.0	e1.2	e.15
5	6.1	18	25	22	1670	638	8.5	23	24	3.9	e1.1	e.15
6	5.7	15	18	20	357	105	8.4	9.0	18	2.5	e1.1	e.15
7	5.4	14	16	19	77	44	8.3	5.7	20	1.8	e1.1	e.15
8	5.3	13	14	20	37	29	8.1	4.1	55	1.6	e.98	e.15
9	5.2	13	64	21	25	83	7.8	3.3	20	1.4	e.96	e.13
10	5.2	12	94	18	20	316	7.4	2.6	13	1.3	e.92	e.11
11	5.1	12	36	16	17	56	7.0	2.5	9.9	1.2	e.85	e.11
12	4.7	12	77	21	16	29	6.7	2.5	8.7	1.1	e.82	e.10
13	4.3	12	426	40	35	22	6.4	2.5	7.7	.97	e.74	e.08
14	4.0	12	81	26	31	18	6.1	2.5	6.7	.86	e.72	e.08
15	3.9	11	30	18	26	17	5.9	2.5	6.2	.83	e.62	e.08
16	4.0	10	18	15	22	15	5.7	3.7	5.7	.66	e.52	e.08
17	3.8	99	13	14	16	14	5.6	929	5.1	.46	e.49	e.08
18	3.5	166	14	1700	13	121	5.7	2310	4.7	3.9	e.41	e.08
19	3.2	453	891	874	11	72	6.6	264	4.3	4.3	e.33	e.08
20	3.2	716	1550	116	11	24	7.1	46	3.9	2.1	e.29	e.08
21	3.2	90	20000	68	9.9	17	6.6	25	3.6	1.6	e.26	e.08
22	2.9	33	4890	1400	1460	14	6.1	414	3.5	1.5	e.23	e.08
23	2.7	21	1320	225	1100	13	5.4	74	4.5	1.3	e.22	e.07
24	2.9	16	196	61	184	12	5.0	50	13	1.2	e.17	e.06
25	2.8	13	86	32	6730	11	4.6	547	6.8	.91	e.14	e.06
26	3.4	12	91	32	1510	11	4.1	1730	5.1	.60	e.17	e.06
27	3.3	11	418	3050	149	10	3.8	192	4.2	.62	e.19	e.06
28	2.7	11	207	630	65	11	3.5	137	4.9	.56	e.19	e.06
29	437	11	82	215	40	17	6.1	1140	7.3	.52	e.19	e.06
30	1080	20	48	102	---	16	5.8	136	7.5	.49	e.19	e.06
31	774	---	35	60	---	12	---	51	---	.47	e.19	---
TOTAL	2410.9	2951	31390	8954	13942.9	2544	199.7	8238.4	3973.3	54.75	23.37	2.96
MEAN	77.8	98.4	1013	289	481	82.1	6.66	266	132	1.77	.75	.099
MAX	1080	968	20000	3050	6730	716	10	2310	2340	5.1	4.8	.17
MIN	2.7	10	13	14	9.9	10	3.5	2.5	3.5	.46	.14	.06
AC-FT	4780	5850	62260	17760	27660	5050	396	16340	7880	109	46	5.9
CFSM	.55	.69	7.13	2.03	3.39	.58	.05	1.87	.93	.01	.01	.00
IN.	.63	.77	8.22	2.35	3.65	.67	.05	2.16	1.04	.01	.01	.00

e Estimated

08064700 TEHUACANA CREEK NEAR STREETMAN, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1992, BY WATER YEAR (WY)

MEAN	60.7	54.3	148	65.7	151	128	87.8	240	73.6	4.56	19.7	33.7
MAX	379	371	1013	289	930	1048	557	2927	388	35.1	234	547
(WY)	1974	1975	1992	1992	1986	1990	1976	1989	1981	1976	1983	1974
MIN	.000	.000	.077	.12	1.08	.49	.000	.020	.042	.000	.000	.000
(WY)	1981	1981	1990	1971	1981	1971	1971	1971	1971	1978	1969	1980

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1969 - 1992	
ANNUAL TOTAL	76895.07		74685.28			
ANNUAL MEAN	211		204		88.7	
HIGHEST ANNUAL MEAN					274	1989
LOWEST ANNUAL MEAN					12.6	1971
HIGHEST DAILY MEAN	20000	Dec 21	20000	Dec 21	42000	May 4 1989
LOWEST DAILY MEAN	.57	Aug 10	.06	Sep 24	.00	Oct 1 1968
ANNUAL SEVEN-DAY MINIMUM	.72	Jul 28	.06	Sep 24	.00	Jul 21 1969
INSTANTANEOUS PEAK FLOW			34700	Dec 21	85700	May 17 1989
INSTANTANEOUS PEAK STAGE			26.40	Dec 21	30.20	May 17 1989
INSTANTANEOUS LOW FLOW			.06	Sep 23	.00	*
ANNUAL RUNOFF (AC-FT)	152500		148100		64280	
ANNUAL RUNOFF (CFSM)	1.48		1.44		.62	
ANNUAL RUNOFF (INCHES)	20.14		19.57		8.49	
10 PERCENT EXCEEDS	323		280		52	
50 PERCENT EXCEEDS	9.6		9.9		1.8	
90 PERCENT EXCEEDS	.92		.19		.00	

* No flow at times most years.

08064700 TEHUACANA CREEK NEAR STREETMAN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: February 1968 to September 1985, and October 1990 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT											
31...	1217	114	196	7.5	11.0	170	160	8.6	88	2.3	59
DEC											
18...	1010	12	599	7.2	10.5	55	17	9.4	84	<0.1	170
FEB											
05...	1430	2050	126	7.6	7.5	150	170	10.6	89	2.0	43
MAR											
26...	1100	11	1110	7.5	17.0	50	14	9.4	98	1.3	310
MAY											
21...	1045	25	446	7.5	24.0	110	35	6.3	76	2.3	120
JUL											
08...	1145	1.6	1650	7.8	29.5	10	14	6.2	83	1.8	400

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT											
31...	12	16	4.7	13	0.7	6.0	47	20	18	0.10	8.8
DEC											
18...	72	43	14	54	2	7.1	94	65	81	0.20	12
FEB											
05...	5	12	3.1	6.7	0.4	3.7	38	9.4	6.5	0.10	7.9
MAR											
26...	130	79	27	110	3	9.7	180	150	170	0.30	9.9
MAY											
21...	40	32	10	37	1	4.9	82	53	52	0.20	10
JUL											
08...	180	100	36	180	4	6.3	220	250	260	0.20	13

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L)	RESIDUE FIXED NON FILTER-ABLE (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
OCT											
31...	115	557	<1	--	0.020	0.110	0.130	0.140	1.3	1.4	0.430
DEC											
18...	334	4	<1	--	0.048	0.020	0.068	0.050	0.95	1.0	0.130
FEB											
05...	72	635	55	580	0.080	0.040	0.120	0.090	0.91	1.0	0.120
MAR											
26...	662	36	22	14	0.028	0.040	0.068	0.040	0.56	0.60	0.050
MAY											
21...	249	84	28	56	0.057	0.040	0.097	0.120	0.78	0.90	0.130
JUL											
08...	976	44	8	36	--	0.020	<0.050	0.100	1.4	1.5	0.090

DATE	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT											
31...	0.210	19	--	--	--	--	--	--	--	--	--
DEC											
18...	0.080	12	<1	64	<0.5	<1.0	<5	<3	<10	230	<10
FEB											
05...	0.070	17	--	--	--	--	--	--	--	--	--
MAR											
26...	0.030	9.4	--	--	--	--	--	--	--	--	--
MAY											
21...	0.070	12	<1	52	<0.5	1.0	<5	<3	<10	130	<10
JUL											
08...	0.050	9.0	1	140	<0.5	3.0	<5	<3	10	/	<10

08064700 TEHUACANA CREEK NEAR STREETMAN, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
31...	--	--	--	--	--	--	--	--	--	--
DEC										
18...	11	250	<0.1	<10	10	<1	<1.0	470	<6	5
FEB										
05...	--	--	--	--	--	--	--	--	--	--
MAR										
26...	--	--	--	--	--	--	--	--	--	--
MAY										
21...	10	110	<0.1	<10	<10	<1	<1.0	370	<6	10
JUL										
08...	30	490	<0.1	<10	<10	<1	2.0	1200	<6	36

08065000 TRINITY RIVER NEAR OAKWOOD, TX

LOCATION.--Lat 31°38'54", long 95°47'21", Anderson County, Hydrologic Unit 12030201, on left bank at downstream side of bridge on U.S. Highways 79 and 84, 1.5 mi upstream from Missouri Pacific Railroad Co. bridge, 6 mi northeast of Oakwood, and at mile 313.4.

DRAINAGE AREA.--12,833 mi².

PERIOD OF RECORD.--October 1923 to September 1924 (monthly discharge only), October 1924 to current year. Records of January 1905 to September 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.

REVISED RECORDS.--WSP 1442: 1934. See also PERIOD OF RECORD. WSP 1922: Drainage area. WRD TX-81-1: 1980 (M,m).

GAGE.--Water-stage recorder. Datum of gage is 175.06 ft above National Geodetic Vertical Datum 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.

REMARKS.--Records good, except those for estimated daily discharges, which are fair. Twenty-one major reservoirs with a capacity of 4,200,000 acre-ft, of which 1,362,000 acre-ft is for flood control, partly regulate the flow. Streamflow is affected at times by discharge from the flood-detention pools of 252 floodwater-retarding structures with a combined detention capacity of 183,300 acre-ft. These structures control runoff from 614 mi² in the Richland, Chambers and Tomahawk Creeks drainage basins. The Industrial Generating Co. at Fairfield, makes a minor diversion from the river at a site about 34 mi upstream. The diversion to Big Brown Lake is used to maintain the normal pool elevation for that lake. Gage-height telemeter at station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--30 years (water 1924-53), 5,045 ft³/s (3,655,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1924-53).--Maximum discharge, 153,000 ft³/s Apr. 29, 1942 (gage height 51.64 ft); minimum observed, 28 ft³/s Aug. 24, 1925.

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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1440	13100	8730	51900	42900	55000	15300	5600	17100	8680	2860	872
2	1100	14400	8240	47400	42600	49300	14400	6340	17300	9730	2530	843
3	1050	16200	9260	42700	40300	43100	13300	6130	17300	10700	3930	915
4	1020	20900	9850	38000	38000	40100	12300	5610	17000	11400	4610	1100
5	985	39000	10300	35100	36200	38700	11700	4970	16800	11800	4190	1570
6	962	50400	10500	33000	33700	35600	11200	5960	16400	11900	3610	2920
7	941	47300	10200	31500	31800	33800	10800	6730	15800	10800	2550	1720
8	928	40900	8530	30200	30300	33200	10100	6030	15200	8460	1710	1720
9	920	35900	6900	28900	29100	33700	9630	5230	14700	6150	1340	1180
10	866	32300	7950	27800	28300	34400	9360	4570	14100	4480	1180	1090
11	867	29500	10600	26500	27200	34100	8870	3980	13600	3270	1130	931
12	853	27700	12500	25600	25800	33600	8110	3590	13000	2340	1280	909
13	835	26000	13900	24700	24600	34400	7720	3400	12700	1890	1080	1050
14	829	24300	15000	24000	23700	37300	7330	2810	12800	1660	1080	2850
15	806	22700	15800	23300	22800	38400	6730	2130	13100	1470	1160	3070
16	806	20900	16700	22800	22300	36700	5990	2720	13100	1330	1560	1860
17	799	19300	17400	22600	21800	34200	5520	4970	12200	1250	1530	1150
18	802	18100	17900	23100	21500	32400	5740	7250	10600	1230	1280	935
19	783	17300	18600	23600	21400	29900	5880	9020	8190	1370	1120	870
20	782	17500	19300	23700	21200	27700	6290	10900	6030	1260	1060	843
21	778	17100	22500	23900	21000	25300	6720	12500	4990	1650	998	819
22	757	17300	27700	25000	21600	22900	7340	13500	4510	1760	1470	812
23	770	17800	77400	26800	22700	20700	7220	13900	4190	1600	2050	943
24	793	18400	103000	28500	22800	18800	6440	14400	3990	1430	1700	2160
25	796	18700	99400	29900	25600	17200	5680	14800	3830	1320	1270	2520
26	827	18500	88500	30500	28600	e16000	4860	15100	3440	1370	1060	1720
27	954	18100	84200	30800	34400	e15600	4170	15000	3560	1290	962	1120
28	1190	17000	80400	30700	47700	e15500	3890	15500	4430	1180	973	905
29	4560	14800	74600	30800	55400	e15400	4270	16200	6310	1070	1010	847
30	9040	11600	66800	32600	---	15500	4770	16700	7540	1120	980	825
31	11400	---	58900	38300	---	15600	---	16900	---	2140	924	---
TOTAL	50239	703000	1031560	934200	865300	934100	241630	272440	323810	127100	54187	41069
MEAN	1621	23430	33280	30140	29840	30130	8054	8788	10790	4100	1748	1369
MAX	11400	50400	103000	51900	55400	55000	15300	16900	17300	11900	4610	3070
MIN	757	11600	6900	22600	21000	15400	3890	2130	3440	1070	924	812
AC-FT	99650	1394000	2046000	1853000	1716000	1853000	479300	540400	642300	252100	107500	81460

e Estimated

08065000 TRINITY RIVER NEAR OAKWOOD, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1992#, BY WATER YEAR (WY)

MEAN	2654	4030	5318	4501	5662	5994	6491	11680	8169	2742	1540	1523
MAX	14250	25900	33280	30140	29840	30130	23710	56050	33550	12590	7050	7361
(WY)	1974	1975	1992	1992	1992	1992	1977	1990	1957	1982	1982	1962
MIN	131	165	235	400	553	286	318	812	332	126	101	116
(WY)	1957	1956	1956	1957	1967	1956	1956	1971	1954	1956	1956	1956

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1954 - 1992#	
ANNUAL TOTAL	3159177		5578635			
ANNUAL MEAN	8655		15240		5020	
HIGHEST ANNUAL MEAN					15240	1992
LOWEST ANNUAL MEAN					700	1956
HIGHEST DAILY MEAN	103000	Dec 24	103000	Dec 24	106000	May 7 1990
LOWEST DAILY MEAN	722	Aug 9	757	Oct 22	85	Oct 14 1956
ANNUAL SEVEN-DAY MINIMUM	748	Aug 6	780	Oct 19	93	Aug 12 1956
INSTANTANEOUS PEAK FLOW			106000	Dec 24	107000	May 7 1990
INSTANTANEOUS PEAK STAGE			49.55	Dec 24	49.61	May 7 1990
ANNUAL RUNOFF (AC-FT)	6266000		11070000		3637000	
10 PERCENT EXCEEDS	18200		34600		14100	
50 PERCENT EXCEEDS	3840		10600		1460	
90 PERCENT EXCEEDS	861		960		422	

Period of regulated streamflow.

08065200 UPPER KEECHI CREEK NEAR OAKWOOD, TX

LOCATION.--Lat 31°34'11", long 95°53'17", Leon County, Hydrologic Unit 12030201, at right bank at downstream side of bridge on U.S. Highway 79, 1.9 mi upstream from Missouri Pacific Railroad Co. bridge, 2 mi southwest of Oakwood, 11 mi upstream from Buffalo Creek, and 21 mi upstream from mouth.

DRAINAGE AREA.--150 mi².

PERIOD OF RECORD.--April 1962 to current year.
Water-quality records: Chemical analyses: June 1962 to April 1964, November 1967 to September 1975.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 240.11 ft above National Geodetic Vertical Datum of 1929.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1900, about 21 ft in 1932, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 21	Unknown	13,300	15.58	Feb. 25	1800	4,500	14.06

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	399	e30	e88	140	139	56	40	208	17	4.5	2.5
2	8.6	122	e61	e110	108	110	49	31	267	15	19	2.7
3	7.7	58	e145	312	95	102	52	68	247	12	77	27
4	6.7	e39	e86	265	167	380	50	67	141	11	34	20
5	5.8	e30	55	134	448	1120	46	57	54	9.9	15	7.0
6	5.1	e33	46	105	782	879	46	36	37	9.3	7.5	4.8
7	4.5	e27	42	95	666	399	46	28	32	8.8	5.4	4.3
8	4.5	e20	42	99	280	162	45	25	49	8.0	4.8	3.5
9	4.5	e18	85	104	132	142	43	22	49	7.5	4.0	2.9
10	4.5	e20	828	83	101	234	40	21	28	7.4	3.7	2.5
11	4.5	e20	930	69	91	204	38	20	24	7.0	12	2.1
12	4.6	e19	478	139	94	130	35	21	21	7.0	21	1.9
13	4.2	e22	293	166	105	103	34	21	18	6.9	9.1	1.7
14	4.3	23	310	124	109	89	32	20	17	6.5	6.5	1.6
15	4.5	23	252	82	108	80	31	19	16	6.1	5.2	1.4
16	4.7	23	99	65	85	72	30	19	14	5.9	4.2	1.3
17	4.7	36	77	64	76	67	35	51	14	5.5	3.5	1.2
18	5.3	73	e73	279	67	136	47	198	13	7.5	3.1	1.1
19	5.6	76	e125	602	57	229	49	247	12	13	2.9	.95
20	6.0	92	e500	795	52	265	76	621	12	9.9	2.9	.78
21	6.4	e248	e2200	405	49	101	50	254	12	8.8	2.9	.70
22	6.8	e326	e8000	327	254	81	37	52	12	8.2	2.9	.67
23	7.4	e96	e3900	712	699	69	30	37	13	7.8	2.7	.73
24	7.4	e45	e2800	629	857	60	28	33	17	7.3	2.6	.72
25	7.3	e35	e1200	229	2470	58	27	29	18	6.8	2.5	.65
26	7.7	e33	e450	123	1580	54	24	28	18	6.4	2.4	.76
27	9.8	e35	e800	257	749	48	23	33	15	5.9	2.2	.97
28	9.7	e41	e1200	447	369	95	24	88	17	5.4	2.2	1.2
29	69	e33	e1600	642	179	177	87	173	23	5.2	2.2	1.2
30	272	e30	e390	363	---	120	62	192	19	4.9	2.2	1.2
31	456	---	e125	196	---	72	---	121	---	4.6	2.1	---
TOTAL	969.5	2095	27222	8110	10969	5977	1272	2672	1437	252.5	272.2	100.03
MEAN	31.3	69.8	878	262	378	193	42.4	86.2	47.9	8.15	8.78	3.33
MAX	456	399	8000	795	2470	1120	87	621	267	17	77	27
MIN	4.2	18	30	64	49	48	23	19	12	4.6	2.1	.65
AC-FT	1920	4160	53990	16090	21760	11860	2520	5300	2850	501	540	198
CFSM	.21	.47	5.85	1.74	2.52	1.29	.28	.57	.32	.05	.06	.02
IN.	.24	.52	6.75	2.01	2.72	1.48	.32	.66	.36	.06	.07	.02

e Estimated

08065200 UPPER KEECHI CREEK NEAR OAKWOOD, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1992, BY WATER YEAR (WY)

MEAN	39.5	52.1	104	88.7	118	121	127	154	72.0	15.1	5.55	17.5
MAX	371	513	878	403	378	461	574	1413	517	128	54.5	246
(WY)	1974	1975	1992	1991	1992	1973	1966	1965	1976	1981	1979	1974
MIN	.000	.000	.36	4.03	8.28	11.2	8.41	1.82	.48	.000	.000	.000
(WY)	1964	1964	1964	1964	1964	1967	1971	1972	1963	1964	1963	1963

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1963 - 1992	
ANNUAL TOTAL	69296.5		61348.23			
ANNUAL MEAN	190		168		76.1	
HIGHEST ANNUAL MEAN					168	1965
LOWEST ANNUAL MEAN					4.52	1963
HIGHEST DAILY MEAN	8000	Dec 22	8000	Dec 22	9530	Apr 25 1966
LOWEST DAILY MEAN	3.2	Aug 10	.65	Sep 25	.00	Oct 1 1962
ANNUAL SEVEN-DAY MINIMUM	3.5	Aug 5	.72	Sep 20	.00	Oct 1 1962
INSTANTANEOUS PEAK FLOW			13300	Dec 21	24000	May 16 1965
INSTANTANEOUS PEAK STAGE			15.58	Dec 21	15.58	Dec 21 1991
INSTANTANEOUS LOW FLOW					.00	*
ANNUAL RUNOFF (AC-FT)	137400		121700		55120	
ANNUAL RUNOFF (CFSM)	1.27		1.12		.51	
ANNUAL RUNOFF (INCHES)	17.19		15.21		6.89	
10 PERCENT EXCEEDS	479		372		130	
50 PERCENT EXCEEDS	42		35		11	
90 PERCENT EXCEEDS	5.6		2.9		.07	

* No flow at times most years.

08065350 TRINITY RIVER NEAR CROCKETT, TX
(National stream-quality accounting network)

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.--January 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 141.15 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 13, 1983, water-stage recorder at site 1,000 ft downstream at datum 4.56 ft lower.

REMARKS.-- Records good, except those for estimated daily discharges, which are fair. For statement regarding regulation by upstream reservoirs, see station 08065000. Flow from 44 mi² of Elkhart Creek basin is affected by storage in Houston County lake near Crockett (capacity 19,500 acre-ft). There are many diversions above station for irrigation, municipal, and industrial uses. Gage-height telemeter at station.

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 Highways and Public Transportation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3130	14700	14600	69400	30300	40200	18700	5700	20000	9490	2180	1030
2	2310	16400	11500	62700	32600	46300	18100	6560	20300	11000	2490	1040
3	1990	17900	11800	56800	35100	51000	17100	7100	20500	12300	2550	1280
4	1930	19500	12700	51300	36500	51600	15800	6930	20300	13400	4140	1530
5	1840	22000	13200	46800	38700	53200	15000	5970	20000	14200	4460	1580
6	1780	25700	13600	43700	39400	49400	14400	5850	19700	14600	3950	2030
7	1740	29600	13400	40600	38400	45900	13800	7110	19100	14500	3070	2910
8	1700	33800	11800	37600	36600	42600	13100	7330	18400	12600	2170	2480
9	1690	36400	9480	34600	34800	40100	12300	6330	17900	9460	1660	1720
10	1640	37300	8880	31500	32000	37900	11700	5220	17300	6960	1420	1320
11	1570	37000	11200	29300	29800	36300	11300	4490	16800	5260	1360	1220
12	1560	35800	14500	28300	28400	35300	10700	3880	16200	3960	1410	1140
13	1520	33700	17100	27500	27600	34200	10100	3480	15600	3170	1400	1060
14	1500	30900	18800	26500	26700	33500	9510	3200	15500	2780	e1370	1350
15	1470	28600	19700	25700	25900	33500	8710	2510	15600	2500	e1380	2700
16	1430	26900	20300	24800	25100	34500	7730	2110	15800	2240	e1390	2250
17	1420	25200	20900	24100	24200	34800	6760	3240	15700	1970	1520	1470
18	1420	23600	21400	24800	23600	34800	6540	6090	14600	1810	1520	1160
19	1430	22600	22100	26000	23200	34000	6910	8860	12500	1650	1390	994
20	1410	23000	23300	25800	22800	32300	8100	11500	8940	1460	1300	905
21	1410	22600	27600	25600	22600	29900	8780	14300	6460	1430	1250	865
22	1390	22000	35200	26100	24200	28000	8590	15800	5440	1570	1210	831
23	1370	21800	42900	26500	27400	25900	8760	16400	4910	1740	1620	808
24	1390	22000	49300	26600	26800	23700	8120	16600	4610	1670	1890	1060
25	1430	22100	85100	27000	30100	21700	7070	16700	4400	1580	1610	1810
26	1460	22100	106000	27600	34400	20000	6080	17000	4080	1520	1350	1910
27	1570	21900	100000	28400	35500	18800	4940	17300	3750	1540	1210	1470
28	1790	21500	93500	29100	34800	18200	4240	17900	4010	1480	1120	1180
29	2710	20700	88700	29100	36600	18600	4440	18700	5660	1390	1120	1060
30	7460	18600	83700	29100	---	18800	5270	19500	7710	1330	1170	940
31	12000	---	76500	29400	---	18900	---	19900	---	1380	1120	---
TOTAL	68460	755900	1098760	1042300	884100	1043900	302650	303560	391770	161940	56800	43103
MEAN	2208	25200	35440	33620	30490	33670	10090	9792	13060	5224	1832	1437
MAX	12000	37300	106000	69400	39400	53200	18700	19900	20500	14600	4460	2910
MIN	1370	14700	8880	24100	22600	18200	4240	2110	3750	1330	1120	808
AC-FT	135800	1499000	2179000	2067000	1754000	2071000	600300	602100	777100	321200	112700	85490

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1992, BY WATER YEAR (WY)

MEAN	1613	2429	3463	3170	4101	6360	3668	5682	4727	1959	1233	1022
MAX	6338	25200	35440	33620	30490	33670	22750	62100	29570	15030	6057	4259
(WY)	1985	1992	1992	1992	1992	1992	1990	1990	1989	1989	1989	1991
MIN	779	963	874	1003	1265	2180	1508	1310	1005	677	683	656
(WY)	1988	1964	1964	1964	1965	1986	1964	1965	1964	1964	1964	1965

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1964 - 1992	
ANNUAL TOTAL	3843430		6153243			
ANNUAL MEAN	10530		16810		3283	
HIGHEST ANNUAL MEAN					16810	1992
LOWEST ANNUAL MEAN					1272	1964
HIGHEST DAILY MEAN	106000	Dec 26	106000	Dec 26	109000	May 10 1990
LOWEST DAILY MEAN	1050	Aug 9	808	Sep 23	555	Jul 25 1964
ANNUAL SEVEN-DAY MINIMUM	1100	Aug 6	946	Sep 18	566	Sep 16 1964
INSTANTANEOUS PEAK FLOW			109000	Dec 26	109000	May 10 1990
INSTANTANEOUS PEAK STAGE			48.50	Dec 26	48.54	May 10 1990
INSTANTANEOUS LOW FLOW					275	Aug 13 1964
ANNUAL RUNOFF (AC-FT)	7623000		12200000		2378000	
10 PERCENT EXCEEDS	23200		36300		7940	
50 PERCENT EXCEEDS	4980		13400		970	
90 PERCENT EXCEEDS	1480		1390		619	

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: February 1964 to current year. Chemical and biochemical analyses: February 1968 to current year. Pesticide analyses: November 1971 to July 1981. Sediment records: November 1972 to September 1977.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1964 to current year.
pH: March 1975 to current year.
WATER TEMPERATURE: February 1964 to September 1971, March 1975 to current year.
DISSOLVED OXYGEN: March 1975 to current year.
SUSPENDED-SEDIMENT DISCHARGE: July 1972 to September 1977.

INSTRUMENTATION.--Beginning March 1975, a four-parameter water-quality monitor continuously records specific conductance pH, water temperature, and dissolved oxygen at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Where maximum or minimum specific conductance values are not shown, mean value is estimated. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,370 microsiemens Sept. 22, 1964; minimum, 96 microsiemens March 29, 1989.
pH: Maximum, 9.6 units Aug. 11, 12, 1981; minimum, 5.9 units Aug. 12, 1977.
WATER TEMPERATURE (1975-87): 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, 720 microsiemens Oct. 27; minimum, 176 microsiemens Dec. 22-23.
pH: Maximum, 8.2 units Oct. 12, 13, 15, 17, 18, Aug. 17, Sept. 20; minimum, 7.0 units Nov. 9-10, 14-15, Dec. 16.
WATER TEMPERATURE: Maximum, 32.0°C Sept. 20; minimum, 6.5°C Jan. 20.
DISSOLVED OXYGEN: Maximum, 11.1 mg/L Nov. 2, Jan. 4-5; minimum, 4.5 mg/L, Oct. 28.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
FEB												
06...	1305	39400	306	7.7	10.5	10.0	90	1.2	110	15	40	3.6
MAR												
30...	1314	18800	342	7.6	16.5	8.5	87	1.9	130	19	45	4.0
MAY												
15...	1134	2420	442	7.6	24.5	7.2	86	1.2	150	16	53	4.6
JUL												
06...	1116	14600	342	7.6	28.5	5.4	70	1.0	130	15	47	3.8
AUG												
21...	1428	1250	680	7.4	27.5	8.6	109	2.2	180	44	62	5.9
SEP												
18...	1004	1210	566	7.8	27.0	6.3	80	1.0	140	29	49	4.7

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
FEB												
06...	15	0.6	4.3	100	32	17	0.20	6.4	178	0.510	0.040	0.550
MAR												
30...	19	0.7	3.5	110	34	25	0.30	6.5	203	0.880	0.040	0.920
MAY												
15...	29	1	4.7	130	43	29	0.40	5.5	250	2.27	0.030	2.30
JUL												
06...	19	0.7	4.5	120	39	21	0.30	7.0	213	0.500	0.160	0.660
AUG												
21...	63	2	7.8	130	73	69	0.80	9.6	372	6.78	0.020	6.80
SEP												
18...	53	2	7.5	110	63	57	0.50	8.7	312	5.88	0.020	5.90

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
FEB												
06...	0.040	0.46	0.50	0.120	0.110	--	--	--	--	--	--	--
MAR												
30...	0.040	0.46	0.50	0.200	0.160	--	--	--	--	--	--	--
MAY												
15...	0.030	0.57	0.60	0.520	0.410	--	--	--	--	--	--	--
JUL												
06...	0.140	0.76	0.90	0.540	0.050	2	52	<0.5	<1.0	<5	<3	<10
AUG												
21...	0.030	0.57	0.60	1.50	1.30	--	--	--	--	--	--	--
SEP												
18...	0.030	0.77	0.80	1.40	1.10	4	52	<0.5	1.0	<5	<3	10

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
FEB 06...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 30...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 15...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 06...	22	<10	5	3	1.9	<10	<10	<1	<1.0	360	<6	7
AUG 21...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	100	10	9	10	0.1	<10	<10	<1	1.0	400	7	43

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	68460	563	315	58200	54	10000	65	12000	150
NOV.	1991	755900	321	185	377000	19	38700	35	70900	120
DEC.	1991	1098760	268	155	459000	14	42400	29	85100	100
JAN.	1992	1042300	308	177	499000	18	49300	33	93300	110
FEB.	1992	884100	287	166	395000	16	37500	31	73500	110
MAR.	1992	1043900	294	170	479000	16	46100	32	89200	110
APR.	1992	302650	380	218	178000	25	20800	42	34100	130
MAY	1992	303560	360	206	169000	23	19200	39	32200	120
JUNE	1992	391770	387	221	234000	27	28200	43	45000	130
JULY	1992	161940	407	232	101000	30	13100	45	19700	130
AUG.	1992	56800	559	313	48000	53	8070	64	9820	150
SEPT	1992	43103	531	298	34700	48	5580	60	7030	150
TOTAL		6153243	**	**	3032000	**	319000	**	572000	**
WTD.AVG.		16810	317	183	**	19	**	34	**	110

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	406	395	400	303	266	282	382	362	370	278	256	269
2	416	406	408	271	258	262	391	383	387	289	267	281
3	472	417	453	264	260	262	416	386	403	298	281	290
4	477	442	450	271	263	268	381	314	335	308	293	301
5	561	487	539	280	271	275	341	318	331	319	307	314
6	561	538	547	279	276	277	360	338	347	324	316	320
7	566	539	547	283	279	281	361	347	352	327	309	321
8	603	569	586	292	284	287	350	339	344	326	310	320
9	624	600	611	369	264	301	362	346	353	328	316	321
10	661	632	649	449	260	323	369	332	356	328	322	325
11	676	660	667	325	316	321	454	333	403	336	328	330
12	665	650	659	336	325	328	387	312	342	336	332	333
13	671	654	662	356	329	333	331	314	321	334	332	333
14	678	663	669	404	333	341	349	327	336	331	330	331
15	676	665	669	346	338	343	366	334	350	329	327	328
16	684	670	675	359	347	350	375	308	363	330	327	328
17	696	678	686	361	354	356	383	365	373	331	330	331
18	696	667	681	355	354	355	385	340	376	331	319	327
19	687	666	674	356	345	354	392	315	381	321	305	312
20	688	681	685	344	329	338	397	348	385	315	306	311
21	693	680	684	334	327	331	343	227	282	316	306	312
22	712	693	702	327	308	314	225	176	204	305	297	300
23	715	706	710	323	308	311	220	176	192	297	295	295
24	715	709	712	333	318	326	223	188	207	298	295	297
25	717	714	716	341	330	335	221	192	208	304	298	298
26	719	712	715	348	341	344	239	220	228	305	298	301
27	720	701	713	351	348	350	239	229	233	303	301	302
28	702	687	696	351	348	349	238	222	232	307	303	305
29	694	651	683	356	346	351	251	235	242	307	305	306
30	665	472	626	366	357	359	253	236	247	305	294	301
31	436	278	317	---	---	---	268	241	258	294	276	286
MONTH	720	278	619	449	258	320	454	176	314	336	256	311

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued
(National stream-quality accounting network)

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	275	267	270	230	221	226	358	346	350	410	387	401
2	273	267	269	238	230	234	358	355	357	403	386	396
3	277	269	272	250	238	243	364	358	359	426	380	396
4	286	278	282	258	250	254	367	358	363	500	425	461
5	298	287	289	269	258	263	368	360	363	423	372	394
6	302	288	295	272	269	271	367	362	364	416	384	402
7	304	301	303	286	273	277	371	366	367	416	372	396
8	314	305	308	292	285	288	374	366	369	367	343	348
9	313	306	309	289	283	286	380	369	375	379	347	361
10	313	306	309	285	283	284	381	377	379	405	380	391
11	324	314	318	293	285	289	393	378	385	425	404	413
12	330	324	327	306	294	299	398	384	392	416	390	404
13	328	325	327	309	304	307	392	377	383	407	391	403
14	330	327	329	304	290	298	393	379	384	---	---	e440
15	329	318	326	292	283	287	406	395	402	---	---	e470
16	319	312	315	289	282	284	404	383	390	---	---	e510
17	314	312	313	303	289	296	388	382	384	---	---	e525
18	319	312	315	311	303	307	399	388	394	624	450	544
19	325	319	322	326	311	318	463	401	419	469	415	441
20	330	325	327	337	326	332	468	379	414	437	337	379
21	334	328	331	340	336	338	390	345	360	350	325	338
22	341	264	316	342	336	338	441	396	428	346	290	311
23	282	250	265	346	338	342	439	412	422	311	296	303
24	294	282	289	355	348	352	436	354	383	331	311	317
25	283	216	245	364	354	357	406	379	399	340	332	336
26	215	199	206	361	353	357	413	395	404	359	340	352
27	215	200	206	356	352	354	409	404	407	365	357	361
28	221	215	218	355	329	347	424	407	414	361	336	350
29	225	220	221	334	329	331	424	404	416	330	298	308
30	---	---	---	345	328	337	403	383	392	314	299	304
31	---	---	---	346	343	344	---	---	---	327	316	323
MONTH	341	199	290	364	221	305	468	345	387	624	290	390

e Estimated

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	351	323	333	372	350	361	686	661	670	649	607	626
2	353	340	349	359	313	344	719	657	687	606	597	602
3	347	331	337	334	314	325	714	662	684	610	469	558
4	353	347	350	322	295	303	667	466	610	578	482	519
5	349	341	345	343	296	318	464	400	447	636	585	613
6	346	320	332	383	344	362	429	396	416	---	---	e650
7	357	338	350	404	384	394	413	373	385	---	---	e690
8	375	357	367	394	387	389	395	378	384	---	---	e710
9	387	375	382	434	394	408	436	381	404	688	582	641
10	403	371	391	440	424	430	468	438	453	581	491	548
11	376	369	372	436	427	432	475	458	467	487	402	445
12	384	372	377	---	---	e435	466	444	456	---	---	e410
13	385	377	381	---	---	e440	515	453	478	---	---	e425
14	387	358	373	---	---	e445	513	405	471	---	---	e440
15	371	351	356	---	---	e460	525	415	480	---	---	e530
16	376	371	373	---	---	e480	589	528	555	---	---	e590
17	394	372	379	---	---	e520	646	591	619	---	---	e670
18	413	396	406	---	---	e540	670	646	662	635	516	574
19	414	405	409	---	---	e560	---	---	e670	515	374	466
20	464	415	438	---	---	e575	---	---	e685	370	280	333
21	517	465	485	---	---	e590	---	---	e670	---	---	e350
22	540	520	534	---	---	e600	---	---	e6[illegible]	---	---	e365
23	547	539	544	666	601	621	---	---	e650	---	---	e380
24	545	539	542	677	649	663	---	---	e640	---	---	e395
25	551	542	547	680	659	671	---	---	e630	---	---	e410
26	---	---	e550	685	668	676	---	---	e655	---	---	e425
27	---	---	e555	688	679	683	---	---	e680	---	---	e440
28	563	554	559	685	636	655	709	681	696	---	---	e450
29	561	533	551	662	634	650	683	608	649	---	---	e460
30	548	374	481	656	624	634	627	596	609	500	458	467
31	---	---	---	692	660	679	652	623	635	---	---	---
MONTH	563	320	425	692	295	505	719	373	576	688	280	506
YEAR	720	176	413									

e Estimated

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued
(National stream-quality accounting network)

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

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

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued
(National stream-quality accounting network)

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.5	23.0	23.0	17.5	16.5	17.0	15.0	14.5	15.0	10.5	10.0	10.0
2	24.5	23.0	23.5	16.5	14.5	16.0	14.5	13.5	14.0	11.0	10.5	10.5
3	24.5	23.5	24.0	14.5	12.5	13.5	13.5	12.5	13.0	11.0	10.5	11.0
4	25.5	23.5	24.5	12.5	11.0	12.0	12.5	11.5	12.0	11.0	11.0	11.0
5	25.0	23.5	24.0	11.0	10.0	10.5	11.5	11.0	11.0	11.5	11.0	11.5
6	23.5	22.5	23.0	10.5	10.0	10.5	11.0	10.5	11.0	11.5	11.5	11.5
7	23.0	21.5	22.5	11.0	10.5	11.0	11.5	11.0	11.0	12.0	11.5	11.5
8	22.5	21.0	22.0	11.0	10.0	10.5	12.0	11.5	12.0	12.0	12.0	12.0
9	22.0	20.5	21.5	10.0	10.0	10.0	13.5	12.0	13.0	12.5	12.0	12.5
10	22.0	20.5	21.5	10.0	9.5	9.5	15.0	13.0	14.0	12.5	12.0	12.0
11	22.5	21.0	22.0	10.0	9.5	10.0	15.5	15.0	15.0	12.0	11.5	11.5
12	23.0	21.5	22.5	11.0	10.0	10.5	16.0	15.5	15.5	11.5	11.0	11.0
13	23.5	22.0	23.0	12.0	11.0	11.5	15.5	15.5	15.5	11.0	10.5	11.0
14	24.0	22.5	23.0	12.5	12.0	12.0	15.5	15.5	15.5	10.5	10.0	10.5
15	23.0	22.0	22.5	14.0	12.5	13.5	15.5	15.0	15.0	10.0	9.0	9.5
16	22.5	21.5	22.0	14.5	14.0	14.5	15.0	14.5	15.0	9.0	8.5	9.0
17	22.0	21.0	21.5	15.5	14.5	15.0	14.5	14.0	14.0	8.5	7.5	8.0
18	22.0	21.0	21.5	16.0	15.5	15.5	14.5	13.0	14.0	7.5	7.0	7.0
19	22.0	21.0	21.5	16.5	16.0	16.0	14.0	13.0	13.5	7.0	7.0	7.0
20	22.0	21.0	21.5	16.0	15.5	16.0	14.0	12.0	13.5	7.0	6.5	7.0
21	22.0	21.0	21.5	15.5	15.0	15.5	13.0	12.0	12.5	7.5	7.0	7.0
22	21.5	21.0	21.5	15.0	14.5	14.5	13.0	13.0	13.0	8.0	7.5	7.5
23	22.5	21.5	21.5	14.5	13.5	14.0	13.5	13.0	13.0	9.0	8.0	8.5
24	23.0	22.0	22.5	13.5	12.5	13.0	13.0	12.0	12.5	9.5	9.0	9.0
25	23.5	22.5	23.0	12.5	12.0	12.0	12.0	11.5	11.5	9.5	9.0	9.5
26	23.5	23.0	23.0	12.0	11.5	12.0	11.5	11.0	11.0	10.5	9.5	10.0
27	23.5	22.5	23.0	12.0	11.5	12.0	11.0	10.5	11.0	10.5	10.5	10.5
28	23.5	22.5	23.0	13.0	12.0	12.5	10.5	10.0	10.5	10.5	10.5	10.5
29	23.0	22.0	23.0	14.0	13.0	13.5	10.0	10.0	10.0	10.5	10.5	10.5
30	22.0	20.5	21.5	15.0	14.0	14.5	10.5	9.5	10.0	11.0	10.5	11.0
31	20.0	18.0	18.5	---	---	---	10.5	9.5	10.0	11.5	11.0	11.5
MONTH	25.5	18.0	22.5	17.5	9.5	13.0	16.0	9.5	13.0	12.5	6.5	10.0

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued
(National stream-quality accounting network)

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.5	22.0	22.0	28.5	27.5	28.0	31.5	30.0	30.5	30.0	27.0	28.0
2	22.5	22.0	22.0	28.5	27.5	28.0	31.0	29.5	30.5	29.0	27.0	28.0
3	23.0	22.0	22.5	28.0	27.5	27.5	30.5	29.5	30.0	28.0	25.5	27.0
4	23.0	22.0	22.5	28.5	27.5	28.0	30.0	29.0	29.5	27.0	25.5	26.0
5	24.0	23.0	23.5	29.0	28.0	28.5	29.5	29.0	29.5	28.0	26.5	27.0
6	24.5	24.0	24.0	29.5	28.5	29.0	30.0	29.0	29.5	---	---	---
7	25.0	24.0	24.5	29.5	29.0	29.0	30.5	29.5	29.5	---	---	---
8	25.5	24.5	25.0	30.0	29.0	29.5	30.5	29.5	30.0	---	---	---
9	26.0	25.0	25.5	30.0	29.5	29.5	31.5	29.5	30.5	29.0	28.0	28.5
10	26.5	25.5	26.0	30.5	29.5	29.5	31.5	30.0	31.0	30.0	28.0	29.0
11	26.5	26.0	26.0	30.0	29.5	30.0	31.5	30.5	31.0	30.0	28.0	29.0
12	27.0	26.5	26.5	---	---	---	30.0	29.5	29.5	---	---	---
13	27.5	26.5	27.0	---	---	---	30.5	29.0	29.5	---	---	---
14	27.5	26.5	27.0	---	---	---	30.0	29.0	29.5	---	---	---
15	27.5	27.0	27.0	---	---	---	30.0	28.5	29.0	---	---	---
16	28.0	27.0	27.5	---	---	---	29.5	28.0	29.0	---	---	---
17	28.0	27.0	27.5	---	---	---	29.0	27.5	28.5	---	---	---
18	28.5	28.0	28.5	---	---	---	28.5	27.0	28.0	30.5	27.5	29.0
19	29.0	28.0	28.5	---	---	---	---	---	---	31.5	27.0	29.0
20	29.5	28.5	29.0	---	---	---	---	---	---	32.0	27.5	30.0
21	29.5	29.0	29.0	---	---	---	---	---	---	---	---	---
22	29.0	29.0	29.0	---	---	---	---	---	---	---	---	---
23	29.5	28.5	29.0	29.5	28.5	29.0	---	---	---	---	---	---
24	29.5	28.5	29.0	30.5	28.5	29.5	---	---	---	---	---	---
25	30.0	29.0	29.5	31.0	29.5	30.0	---	---	---	---	---	---
26	---	---	---	31.0	29.5	30.0	---	---	---	---	---	---
27	---	---	---	31.0	29.5	30.5	---	---	---	---	---	---
28	29.5	28.5	29.0	31.0	30.0	30.5	28.5	26.5	27.5	---	---	---
29	29.5	28.5	29.0	31.5	30.0	30.5	28.0	26.5	27.5	---	---	---
30	29.0	27.5	28.5	31.0	29.5	30.5	28.0	26.5	27.5	24.0	23.0	23.5
31	---	---	---	31.5	29.5	30.5	28.0	26.5	27.5	---	---	---
MONTH	30.0	22.0	26.5	31.5	27.5	29.5	31.5	26.5	29.5	32.0	23.0	28.0
YEAR	32.0	6.5	19.5									

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued
(National stream-quality accounting network)

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5.9	5.5	5.7	10.5	9.2	9.7	10.0	9.8	9.9	9.0	8.2	8.6
2	6.7	5.3	5.9	11.1	7.8	10.4	10.0	9.9	10.0	9.9	9.1	9.5
3	7.2	6.4	6.7	7.3	7.1	7.2	10.0	9.8	9.9	10.7	10.0	10.4
4	7.8	7.1	7.4	7.4	7.0	7.2	10.2	9.5	9.9	11.1	10.7	10.9
5	8.0	7.6	7.8	7.4	6.8	7.2	9.4	9.0	9.2	11.1	10.1	10.6
6	6.9	6.5	6.8	7.3	6.8	7.0	9.0	8.6	8.8	10.2	10.0	10.1
7	7.1	6.5	6.8	7.6	7.3	7.4	8.6	8.2	8.4	10.0	9.8	10.0
8	7.3	6.7	6.9	---	---	---	8.2	7.8	8.0	9.8	9.7	9.8
9	7.5	6.9	7.1	---	---	---	7.7	7.5	7.6	10.3	9.7	10.0
10	8.2	7.2	7.6	---	---	---	7.6	7.2	7.4	10.1	10.0	10.1
11	9.2	7.9	8.4	---	---	---	7.6	7.1	7.4	10.1	9.9	10.0
12	9.8	8.7	9.1	---	---	---	7.9	7.1	7.6	10.0	9.7	9.9
13	8.5	7.0	7.7	---	---	---	7.7	5.9	6.5	9.7	9.5	9.6
14	8.3	7.0	7.5	---	---	---	8.3	5.5	7.0	9.6	9.5	9.5
15	8.4	7.1	7.7	---	---	---	8.9	8.0	8.5	9.6	9.4	9.5
16	8.6	7.4	8.0	---	---	---	8.8	7.9	8.3	9.6	9.4	9.5
17	9.2	6.2	8.0	---	---	---	9.3	7.6	8.3	9.6	9.5	9.5
18	9.7	6.0	8.2	---	---	---	7.9	6.9	7.5	9.6	9.4	9.5
19	10.5	8.3	9.1	---	---	---	7.2	5.3	6.1	9.6	9.4	9.5
20	9.2	7.5	8.2	8.5	7.7	---	6.9	4.7	5.3	9.7	9.5	9.6
21	9.6	6.8	7.8	8.8	8.2	8.6	6.9	6.2	6.5	9.6	9.5	9.6
22	8.2	6.3	7.1	8.9	8.4	8.7	6.4	6.2	6.3	9.6	9.3	9.5
23	7.7	5.4	6.2	9.1	8.4	8.6	6.2	5.8	6.0	9.4	9.2	9.3
24	6.7	5.2	5.8	9.6	9.1	9.4	6.0	5.9	6.0	9.6	9.4	9.5
25	6.9	5.1	5.8	9.8	9.6	9.7	6.2	6.0	6.1	9.8	9.5	9.6
26	6.4	5.0	5.4	9.7	9.5	9.6	6.3	6.2	6.3	9.7	9.6	9.7
27	6.0	4.6	5.0	10.0	9.6	9.8	6.5	6.3	6.4	9.7	9.5	9.6
28	6.1	4.5	5.2	10.3	9.9	10.1	7.0	6.5	6.7	9.7	9.5	9.6
29	7.0	5.3	6.3	10.1	9.8	9.9	7.3	7.0	7.2	9.9	9.8	9.8
30	6.7	6.3	6.6	9.8	9.5	9.6	7.6	7.3	7.5	10.1	9.8	9.9
31	9.2	6.3	7.9	---	---	---	8.1	7.7	7.8	10.2	9.9	10.0
MONTH	10.5	4.5	7.1	11.1	6.8	8.8	10.2	4.7	7.6	11.1	8.2	9.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	10.1	10.0	10.0	9.6	9.4	9.5	8.6	8.3	8.5	7.3	7.1	7.2
2	10.0	9.9	9.9	9.5	9.3	9.4	8.4	8.3	8.3	7.3	6.9	7.2
3	9.9	9.8	9.8	9.3	9.1	9.2	8.6	8.3	8.4	7.4	7.1	7.2
4	9.9	9.8	9.8	9.1	9.0	9.1	8.6	8.3	8.4	7.2	6.2	6.7
5	10.0	9.8	9.9	9.1	8.9	9.0	8.5	8.3	8.4	6.8	6.4	6.6
6	10.0	9.7	---	9.0	8.8	8.8	8.4	8.3	8.4	7.0	6.7	6.9
7	9.9	9.7	9.8	8.8	8.6	8.7	8.6	8.4	8.5	7.4	7.0	7.2
8	10.1	9.8	10.0	8.6	8.5	8.6	8.5	8.4	8.5	7.6	7.2	7.4
9	10.1	9.9	10.0	8.5	8.3	8.5	8.4	8.3	8.3	7.8	7.6	7.7
10	10.3	10.1	10.2	8.7	8.2	8.4	8.3	8.1	8.2	7.7	7.5	7.6
11	10.3	10.2	10.3	9.1	8.8	9.0	8.2	8.0	8.1	7.5	7.4	7.5
12	10.3	10.2	10.3	9.3	9.1	9.2	8.1	7.9	8.0	7.4	7.3	7.4
13	10.2	10.0	10.1	9.6	9.2	9.4	8.1	7.8	7.9	7.4	7.3	---
14	10.0	9.8	9.9	9.7	9.3	9.5	7.9	7.7	7.8	---	---	---
15	9.8	9.5	9.7	9.6	9.2	9.4	7.7	7.6	7.7	---	---	---
16	9.7	9.4	9.5	9.3	9.0	9.2	7.7	7.6	---	---	---	---
17	9.9	9.6	9.7	9.0	8.6	8.9	7.6	7.5	7.5	---	---	---
18	9.9	9.7	9.8	8.6	8.3	8.5	7.5	7.4	7.4	6.9	6.5	---
19	10.1	9.7	9.9	8.4	8.2	8.3	7.4	7.3	7.4	6.9	6.1	6.5
20	10.3	9.9	10.1	8.3	8.1	8.2	7.4	7.1	7.3	6.9	6.3	6.8
21	10.4	10.1	10.2	8.2	8.1	8.1	7.6	7.3	7.4	6.7	6.5	6.6
22	10.3	9.7	10.0	8.1	7.9	8.0	7.6	7.4	7.5	6.7	6.4	6.5
23	9.9	9.6	9.7	8.2	7.9	8.1	7.5	7.4	7.5	6.9	6.6	6.8
24	9.8	9.7	9.7	8.5	8.2	8.4	7.6	7.4	7.5	6.9	6.7	6.8
25	9.6	9.2	9.3	8.6	8.4	8.5	7.6	7.4	7.5	6.7	6.6	6.6
26	9.3	9.1	9.2	8.7	8.4	8.6	7.7	7.4	7.5	6.6	6.5	6.5
27	9.7	9.3	9.5	8.8	8.6	8.7	7.7	7.4	7.6	6.9	6.6	6.7
28	9.9	9.6	9.7	8.8	8.6	8.7	7.7	7.5	7.6	7.0	6.8	6.9
29	9.8	9.6	9.7	8.7	8.5	8.6	7.6	7.3	7.5	7.0	6.8	6.9
30	---	---	---	8.6	8.5	---	7.3	7.1	7.1	7.3	6.9	7.1
31	---	---	---	8.7	8.4	8.5	---	---	---	7.3	7.2	7.3
MONTH	10.4	9.1	9.8	9.7	7.9	8.8	8.6	7.1	7.9	7.8	6.1	7.0

08065350 TRINITY RIVER NEAR CROCKETT, TX--Continued
(National stream-quality accounting network)

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.3	7.2	7.3	6.2	5.9	6.0	7.6	7.2	7.4	9.6	8.3	8.8
2	7.3	7.1	7.2	6.2	6.0	6.1	7.1	6.6	6.8	9.3	7.9	8.5
3	7.2	7.1	7.2	6.3	6.1	6.2	6.9	6.6	6.7	8.4	7.3	7.9
4	7.2	7.0	7.1	6.4	6.2	6.3	6.8	6.5	6.6	7.9	7.3	7.6
5	7.1	7.0	7.1	6.3	6.2	6.3	6.6	6.3	6.4	8.0	7.1	7.6
6	7.0	6.8	6.9	6.3	6.2	6.2	6.6	6.3	6.4	---	---	---
7	6.9	6.7	6.8	6.3	6.2	6.3	6.8	6.5	6.6	---	---	---
8	6.9	6.7	6.8	6.4	6.3	6.3	6.8	6.6	6.7	---	---	---
9	6.8	6.7	6.8	6.4	6.2	6.3	6.8	6.6	6.7	7.0	6.8	6.9
10	6.7	6.5	6.7	6.6	6.4	6.5	7.0	6.6	6.8	7.0	6.8	6.9
11	6.7	6.4	6.6	6.7	6.6	6.6	7.1	6.5	6.8	7.2	6.8	6.9
12	6.6	6.5	6.6	---	---	---	6.7	6.4	6.6	---	---	---
13	6.6	6.5	6.6	---	---	---	7.4	6.5	---	---	---	---
14	6.7	6.5	6.6	---	---	---	7.6	6.5	7.1	---	---	---
15	6.8	6.6	6.7	---	---	---	8.4	6.6	7.5	---	---	---
16	7.0	6.7	6.8	---	---	---	8.9	7.6	8.2	---	---	---
17	6.9	6.7	6.8	---	---	---	8.8	7.6	8.1	---	---	---
18	6.6	6.5	6.6	---	---	---	---	---	---	8.7	7.8	8.4
19	6.6	6.3	6.5	---	---	---	---	---	---	8.7	6.0	---
20	6.3	6.1	6.2	---	---	---	---	---	---	---	---	---
21	6.1	6.0	6.1	---	---	---	---	---	---	---	---	---
22	6.3	6.0	6.2	---	---	---	---	---	---	---	---	---
23	6.3	6.2	6.3	7.3	7.0	---	---	---	---	---	---	---
24	6.3	6.2	6.3	7.3	7.0	7.1	---	---	---	---	---	---
25	6.3	6.2	6.3	7.3	7.0	7.2	---	---	---	---	---	---
26	---	---	---	7.4	7.0	7.2	---	---	---	---	---	---
27	---	---	---	7.4	7.0	7.2	---	---	---	---	---	---
28	6.7	6.6	---	7.5	7.0	7.2	8.6	7.6	---	---	---	---
29	6.6	6.4	6.5	7.8	7.0	7.3	9.0	7.6	8.3	---	---	---
30	6.4	5.7	6.1	8.3	7.1	7.6	9.3	7.9	8.6	7.9	7.6	---
31	---	---	---	8.5	7.2	7.8	9.8	8.2	8.8	---	---	---
MONTH	7.3	5.7	6.7	8.5	5.9	6.7	9.8	6.3	7.2	9.6	6.0	7.7
YEAR	11.1	4.5	8.0									

08065800 BEDIAS CREEK NEAR MADISONVILLE, TX

LOCATION.--Lat 30°53'03", long 95°46'39", Madison-Walker County line, Hydrologic Unit 12030202, on right bank at downstream side of bridge on U.S. Highways 75 and 190, 0.5 mi upstream from Interstate Highway 45, 1.5 mi downstream from Caney Creek, and 9.5 mi southeast of Madisonville.

DRAINAGE AREA.--321 mi².

PERIOD OF RECORD.--October 1967 to current year. Water-quality records.--Chemical analyses: July 1962 to April 1965; January 1968 to September 1974. Chemical and biochemical analyses: September 1970 to September 1974; April 1985 to June 1988. Pesticide analyses: April 1985 to April 1988. Specific conductance: October 1984 to September 1987. Water temperature: October 1984 to September 1987. Suspended sediment discharge: October 1984 to September 1986.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 150.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair, except those for estimated daily discharges, which are poor. No known diversions above station. Flow may be slightly affected at times by discharge from the flood-detention pools of three floodwater-retarding structures with a combined detention capacity of 1,290 acre-ft. These structures control runoff from 2.71 mi² in the upper Caney Creek and Iown Branch drainage basins. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1910, 34 ft in May 1922 (discharge unknown), from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,400 ft³/s :

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 22	0900	9,860	20.31	Feb. 25	unknown	15,100	21.62
Jan. 19	1900	4,020	18.03	Mar. 5	1200	9,260	20.14
Feb. 5	2200	6,540	19.22	June 4	0100	3,630	17.79
Feb. 23	0800	10,700	20.53				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	9.7	e12	91	125	141	86	12	194	7.8	.73	.39
2	.13	13	e18	70	88	99	50	15	1100	4.8	.66	.31
3	.07	4.5	e14	91	99	78	35	36	3090	3.8	5.0	.31
4	.03	2.5	e9.0	184	874	877	26	91	3130	3.1	3.4	.41
5	.01	1.9	e8.0	113	4220	5920	21	21	1460	20	1.4	18
6	.01	1.5	e7.5	90	4730	3490	20	11	194	25	.81	15
7	.01	1.2	e7.0	139	2360	1700	19	8.2	84	7.2	.60	4.2
8	.00	1.4	e6.5	114	835	627	17	6.9	74	3.6	.51	1.8
9	.00	1.4	e6.0	82	197	178	16	5.9	55	2.3	.43	1.0
10	.00	1.4	e15	67	114	109	15	5.6	35	1.7	.39	.64
11	.00	1.4	35	54	86	82	13	5.2	25	1.4	.33	.42
12	.00	1.3	37	247	86	66	12	4.8	19	1.2	.27	.29
13	.00	1.2	11	658	140	54	10	4.3	15	.97	.27	.24
14	.00	1.2	42	895	437	47	9.1	3.8	12	.80	.27	.32
15	.00	1.2	53	374	323	42	8.0	6.2	10	.66	.32	.35
16	.00	1.3	23	105	282	38	7.6	8.2	9.0	.56	.77	.32
17	.00	1.7	12	67	225	34	8.8	7.0	7.6	.62	.64	.25
18	.00	1.9	7.7	803	128	43	14	95	6.4	24	.38	.24
19	.00	5.0	41	2600	126	115	184	506	5.6	85	.31	.20
20	.00	5.8	338	2870	78	237	1530	741	4.9	140	.29	.17
21	.00	126	1480	1310	53	77	1310	478	4.4	39	.24	.16
22	.00	340	8070	643	1510	45	581	108	4.1	16	.24	.16
23	.00	93	4840	812	7330	34	104	49	4.0	6.3	.25	.16
24	.00	31	3480	1010	3360	28	52	30	4.2	6.0	.27	.16
25	.01	18	1850	374	8400	25	35	153	6.5	7.3	.32	.43
26	.04	12	735	124	5590	21	29	388	8.4	3.3	.44	.33
27	.07	9.6	1190	365	2590	18	55	131	5.6	2.2	.44	.14
28	.11	7.9	2520	766	1150	48	27	126	4.8	1.7	.43	.05
29	.36	e7.5	1710	1240	278	245	18	47	3.8	1.1	.38	.07
30	1.1	e7.0	522	724	---	538	14	96	11	.94	.33	.05
31	2.0	---	147	204	---	332	---	52	---	.82	.49	---
TOTAL	4.42	712.5	27246.7	17286	45814	15388	4326.5	3252.1	9587.3	419.17	21.61	46.57
MEAN	.14	23.7	879	558	1580	496	144	105	320	13.5	.70	1.55
MAX	2.0	340	8070	2870	8400	5920	1530	741	3130	140	5.0	18
MIN	.00	1.2	6.0	54	53	18	7.6	3.8	3.8	.56	.24	.05
AC-FT	8.8	1410	54040	34290	90870	30520	8580	6450	19020	831	43	92
CFSM	.00	.07	2.74	1.74	4.92	1.55	.45	.33	1.00	.04	.00	.00
IN.	.00	.08	3.16	2.00	5.31	1.78	.50	.38	1.11	.05	.00	.01

e Estimated

08065800 BEDIAS CREEK NEAR MADISONVILLE, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992, BY WATER YEAR (WY)

MEAN	225	137	178	307	316	276	284	341	260	24.6	22.3	105
MAX	3021	688	879	2015	1580	909	1333	1046	1745	260	216	1551
(WY)	1985	1986	1992	1991	1992	1973	1969	1969	1968	1979	1974	1974
MIN	.000	.025	.22	1.99	5.41	3.13	2.30	5.30	.82	.013	.000	.000
(WY)	1979	1989	1968	1971	1971	1971	1981	1988	1988	1977	1969	1969

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1968 - 1992	
ANNUAL TOTAL	128985.34		124104.87			
ANNUAL MEAN	353		339		206	
HIGHEST ANNUAL MEAN					423	1985
LOWEST ANNUAL MEAN					35.8	1984
HIGHEST DAILY MEAN	23000	Jan 10	8400	Feb 25	23000	Jan 10 1991
LOWEST DAILY MEAN	.00	Oct 8	.00	Oct 8	.00	Aug 31 1968
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 8	.00	Oct 8	.00	Aug 31 1968
INSTANTANEOUS PEAK FLOW			15100	Feb 25	33800	Sep 14 1974
INSTANTANEOUS PEAK STAGE			21.62	Feb 25	25.07	Sep 14 1974
INSTANTANEOUS LOW FLOW					.00	at times
ANNUAL RUNOFF (AC-FT)	255800		246200		149000	
ANNUAL RUNOFF (CFSM)	1.10		1.06		.64	
ANNUAL RUNOFF (INCHES)	14.95		14.38		8.70	
10 PERCENT EXCEEDS	847		819		415	
50 PERCENT EXCEEDS	20		12		8.0	
90 PERCENT EXCEEDS	.44		.19		.03	

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 downstream 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.--December 1965 to current year.
Water-quality records.--Chemical analyses: December 1963 to September 1969. Chemical and biochemical analyses: October 1969 to September 1974.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 139.85 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Low flow is sustained by sewage effluent that enters the creek upstream from this station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 21	Unknown	3,500	13.87	Feb. 25	0200	3,820	14.50
Feb. 12	1600	3,040	13.25	Mar. 4	Unknown	4,390	15.33
Feb. 22	1400	3,130	13.41	Apr. 20	0200	3,840	14.53

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	2.1	1.9	e9.5	e7.5	e18	14	7.5	58	84	.80	.86
2	1.1	1.6	9.8	e8.8	e6.5	e12	11	5.6	32	6.7	1.5	1.1
3	1.2	1.1	11	e11	e20	e10	10	4.8	17	18	4.5	23
4	1.2	1.0	4.9	e9.2	e1000	e2600	9.1	4.3	8.2	6.8	2.6	98
5	1.2	.87	3.2	e8.5	e1300	e1200	9.1	4.0	4.2	2.4	1.7	24
6	1.2	.85	2.6	e8.0	179	189	17	3.5	3.4	1.7	1.2	4.8
7	1.2	.85	2.3	e7.8	75	91	11	3.1	3.1	1.4	1.1	2.8
8	1.2	.89	2.2	e200	60	64	9.0	3.0	2.9	1.2	1.0	2.1
9	1.1	.96	25	e60	53	47	8.1	2.9	2.7	1.1	.97	1.7
10	1.1	1.0	15	e30	49	36	7.6	2.9	2.5	1.0	.92	1.5
11	1.1	1.0	6.5	e20	47	27	7.1	3.0	2.5	.98	.92	15
12	1.1	1.0	5.1	e600	968	25	6.7	3.0	2.1	.92	.94	3.3
13	1.1	1.0	4.8	e100	308	22	6.3	3.0	16	.91	.99	1.8
14	1.0	1.0	4.3	e25	84	19	6.0	2.7	15	.86	.88	1.4
15	.96	.95	3.5	e14	49	18	5.7	2.6	3.2	.86	.75	.99
16	.85	.85	2.9	e9.0	26	16	5.6	2.6	2.0	.86	.65	.79
17	.85	3.7	2.6	e8.0	31	15	5.4	3.3	1.6	.86	.60	.68
18	.81	7.0	7.8	e700	20	15	6.6	4.9	1.4	.86	.60	.66
19	.77	14	44	e500	12	15	378	6.0	1.3	1.2	.66	.58
20	.77	24	30	e100	8.7	13	1270	12	1.2	2.3	.70	.41
21	.77	6.1	1980	e20	7.7	13	91	10	1.2	1.7	.68	.58
22	.77	3.1	e1000	e70	1250	13	36	4.9	1.3	4.7	.65	1.0
23	.73	2.0	e200	e45	276	12	21	3.5	1.7	7.6	.65	.61
24	.69	1.6	e100	e20	427	11	15	3.0	1.6	2.7	.61	.54
25	.69	1.4	e30	e10	1750	11	11	2.5	1.5	2.3	.60	.62
26	.69	1.2	e30	e7.5	e276	10	7.7	2.5	1.4	2.0	.51	.83
27	.69	1.3	e50	e90	e37	9.8	6.1	3.0	1.4	1.3	.51	.76
28	.66	1.5	e25	e70	e21	224	5.1	240	1.4	1.0	.51	.76
29	.63	1.4	e18	e20	e17	88	11	26	1.4	.87	.51	.84
30	.93	1.3	e15	e14	---	40	12	10	63	.80	.51	.78
31	1.2	---	e12	e9.0	---	19	---	23	---	.80	.52	---
TOTAL	29.36	86.62	3649.4	2804.3	8365.4	4902.8	2019.2	413.1	256.2	160.68	30.24	192.79
MEAN	.95	2.89	118	90.5	288	158	67.3	13.3	8.54	5.18	.98	6.43
MAX	1.2	24	1980	700	1750	2600	1270	240	63	84	4.5	98
MIN	.63	.85	1.9	7.5	6.5	9.8	5.1	2.5	1.2	.80	.51	.41
AC-FT	58	172	7240	5560	16590	9720	4010	819	508	319	60	382
CFSM	.02	.05	2.07	1.59	5.06	2.77	1.18	.23	.15	.09	.02	.11
IN.	.02	.06	2.38	1.83	5.46	3.20	1.32	.27	.17	.10	.02	.13

e Estimated

08066170 KICKAPOO CREEK NEAR ONALASKA, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1992, BY WATER YEAR (WY)

MEAN	16.4	28.4	43.2	69.4	70.6	63.6	57.7	69.2	62.3	13.0	8.35	12.9
MAX	144	163	151	320	288	236	270	202	365	100	51.4	107
(WY)	1974	1975	1983	1974	1992	1990	1979	1982	1973	1989	1975	1973
MIN	.31	.82	1.72	1.49	1.54	.76	1.13	.86	.31	.083	.32	.37
(WY)	1988	1991	1981	1971	1971	1971	1971	1988	1971	1971	1988	1989

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1967 - 1992		
ANNUAL TOTAL	18872.61		22910.09				
ANNUAL MEAN	51.7		62.6		42.7		
HIGHEST ANNUAL MEAN					102		1973
LOWEST ANNUAL MEAN					4.63		1971
HIGHEST DAILY MEAN	1980	Dec 21	2600	Mar 4	5730	Jun 7	1981
LOWEST DAILY MEAN	.15	Apr 3	.41	Sep 20	.02	Sep 27	1967
ANNUAL SEVEN-DAY MINIMUM	.38	Mar 31	.52	Aug 25	.02	Sep 27	1967
INSTANTANEOUS PEAK FLOW			4390	Mar 4	24500	Jun 7	1981
INSTANTANEOUS PEAK STAGE			15.33	Mar 4	30.37	Jun 7	1981
INSTANTANEOUS LOW FLOW					.01	*	
ANNUAL RUNOFF (AC-FT)	37430		45440		30960		
ANNUAL RUNOFF (CFSM)	.91		1.10		.75		
ANNUAL RUNOFF (INCHES)	12.32		14.95		10.19		
10 PERCENT EXCEEDS	55		70		59		
50 PERCENT EXCEEDS	3.5		3.6		3.4		
90 PERCENT EXCEEDS	.78		.77		.44		

* Minimum discharge, 0.01 ft^3/s, occurred July 19, 20, 1971.

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX

LOCATION.--Lat 30°38'00", long 95°00'36", Polk-San Jacinto County line, Hydrologic Unit 12030202, at left end of gated spillway at Livingston Dam on Trinity River, 4.4 mi northwest of Goodrich, 7 mi southwest of Livingston, 11.7 mi upstream from Long King Creek, and at mile 129.2.

DRAINAGE AREA.--16,583 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1968 to current year.

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

REMARKS.--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 with a combined detention capacity of 184,600 acre-ft. These structures control runoff from an 617 mi² area in the Richland, Chambers, Tehuacana, and Bedias Creeks drainage basins above this station. Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Elevation (feet)	Capacity (acre-feet)
Top of dam	145.0	-
Design flood	135.0	2,136,000
Top of tainter gates	134.0	2,046,000
Top of conservation pool	131.0	1,788,000
Crest of spillway (sill of tainter gates)	99.0	157,900
Lowest gated outlet (invert)	58.0	335

COOPERATION.--The capacity table, furnished by the Trinity River Authority, is based on Geological Survey topographic maps.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,032,000 acre-ft Jan. 14, 1991 (elevation, 133.85 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, 1,972,000 acre-ft Dec. 23 at 2000 hours (elevation, 133.16 ft); minimum, 1,745,000 acre-ft Nov. 5 (elevation, 130.47 ft).

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

130.0	1,707,000	131.5	1,830,000	133.0	1,958,000
130.5	1,748,000	132.0	1,872,000	133.5	2,002,000
131.0	1,788,000	132.5	1,915,000	134.0	2,046,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1818000	1766000	1873000	1951000	1888000	1914000	1775000	1779000	1867000	1798000	1775000	1759000
2	1814000	1763000	1849000	1946000	1879000	1892000	1775000	1783000	1878000	1807000	1786000	1758000
3	1804000	1756000	1830000	1934000	1879000	1863000	1775000	1786000	1883000	1821000	1785000	1770000
4	1802000	1752000	1811000	1916000	1935000	1916000	1771000	1791000	1884000	1826000	1785000	1778000
5	1800000	1754000	1801000	1898000	1941000	1916000	1767000	1793000	1877000	1832000	1788000	1775000
6	1793000	1756000	1800000	1877000	1940000	1920000	1773000	1791000	1880000	1836000	1794000	1777000
7	1789000	1776000	1798000	1862000	1933000	1918000	1769000	1791000	1871000	1836000	1797000	1777000
8	1784000	1778000	1798000	1851000	1923000	1916000	1766000	1788000	1862000	1839000	1798000	1778000
9	1783000	1790000	1808000	1835000	1905000	1906000	1763000	1789000	1850000	1836000	1799000	1779000
10	1782000	1809000	1795000	1822000	1886000	1879000	1764000	1788000	1838000	1829000	1797000	1785000
11	1779000	1832000	1789000	1823000	1869000	1854000	1765000	1792000	1829000	1817000	1805000	1780000
12	1779000	1857000	1793000	1834000	1860000	1841000	1766000	1789000	1821000	1803000	1801000	1777000
13	1771000	1879000	1802000	1828000	1843000	1822000	1763000	1790000	1816000	1791000	1799000	1775000
14	1776000	1901000	1808000	1813000	1830000	1816000	1757000	1786000	1804000	1785000	1797000	1773000
15	1776000	1921000	1813000	1814000	1815000	1805000	1759000	1784000	1795000	1784000	1793000	1773000
16	1770000	1931000	1819000	1794000	1809000	1794000	1759000	1779000	1791000	1779000	1788000	1775000
17	1766000	1948000	1831000	1802000	1798000	1792000	1762000	1781000	1789000	1781000	1784000	1774000
18	1767000	1950000	1837000	1849000	1792000	1793000	1767000	1784000	1791000	1784000	1784000	1773000
19	1770000	1961000	1838000	1869000	1786000	1796000	1804000	1793000	1789000	1788000	1784000	1773000
20	1768000	1953000	1861000	1887000	1779000	1792000	1848000	1803000	1788000	1791000	1781000	1772000
21	1766000	1943000	1931000	1900000	1780000	1788000	1848000	1817000	1783000	1789000	1778000	1769000
22	1763000	1942000	1959000	1914000	1826000	1799000	1839000	1830000	1784000	1792000	1775000	1773000
23	1764000	1928000	1971000	1905000	1874000	1783000	1829000	1841000	1785000	1788000	1773000	1771000
24	1766000	1916000	1960000	1899000	1905000	1780000	1813000	1850000	1786000	1788000	1775000	1766000
25	1771000	1899000	1942000	1894000	1945000	1783000	1805000	1858000	1781000	1786000	1778000	1762000
26	1774000	1895000	1923000	1893000	1953000	1772000	1793000	1860000	1785000	1784000	1779000	1768000
27	1768000	1893000	1901000	1914000	1965000	1764000	1786000	1863000	1783000	1779000	1777000	1768000
28	1775000	1885000	1887000	1913000	1954000	1775000	1777000	1867000	1782000	1778000	1771000	1769000
29	1755000	1883000	1899000	1911000	1937000	1786000	1786000	1865000	1789000	1775000	1766000	1766000
30	1777000	1880000	1925000	1902000	---	1781000	1783000	1864000	1793000	1772000	1763000	1762000
31	1776000	---	1940000	1897000	---	1775000	---	1870000	---	1774000	1762000	---
MAX	1818000	1961000	1971000	1951000	1965000	1920000	1848000	1870000	1884000	1839000	1805000	1785000
MIN	1755000	1752000	1789000	1794000	1779000	1764000	1757000	1779000	1781000	1772000	1762000	1758000
(†)	130.25	132.09	132.79	132.29	132.76	130.84	130.93	131.98	131.05	130.82	130.67	130.68
(ϕ)	-45000	+104000	+60000	-43000	+40000	-162000	+8000	+87000	-77000	-19000	-12000	0

CAL YR 1991 MAX 2032000 MIN 1746000 (ϕ) +126000
WTR YR 1992 MAX 1971000 MIN 1752000 (ϕ) -59000

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

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

WATER-QUALITY RECORDS

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

303807095011101 - LIVINGSTON RES SITE AC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	RESER-VOIR STORAGE (AC-FT)	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
FEB											
13...	1140	1840000	1.00	275	7.8	12.0	0.30	9.6	89	100	20
13...	1142	--	10.0	275	7.8	11.5	--	9.4	86	--	--
13...	1144	--	20.0	275	7.8	11.5	--	9.4	86	--	--
13...	1146	--	30.0	280	7.7	11.5	--	9.3	86	--	--
13...	1148	--	40.0	280	7.7	10.5	--	8.9	80	--	--
13...	1150	--	50.0	280	7.7	10.5	--	9.0	81	--	--
13...	1152	--	60.0	280	7.7	10.5	--	8.8	79	--	--
13...	1154	--	74.0	280	7.7	10.5	--	8.7	78	100	17
AUG											
20...	1130	1780000	1.00	335	8.2	28.5	0.85	6.2	80	120	17
20...	1132	--	10.0	335	8.0	28.0	--	5.0	64	--	--
20...	1134	--	20.0	335	8.0	28.0	--	5.0	64	--	--
20...	1136	--	30.0	335	7.7	28.0	--	3.8	48	--	--
20...	1138	--	40.0	335	7.5	28.0	--	2.8	36	--	--
20...	1140	--	50.0	345	7.1	25.5	--	0.2	2	--	--
20...	1142	--	60.0	345	7.2	23.0	--	0.2	2	--	--
20...	1144	--	72.0	365	7.2	21.5	--	0.2	2	140	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
FEB											
13...	36	3.4	15	0.6	4.0	84	30	16	0.20	7.1	162
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
13...	35	3.5	15	0.6	4.6	85	30	17	0.20	7.7	164
AUG											
20...	40	4.1	20	0.8	4.2	100	37	25	0.30	4.4	195
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	49	4.2	16	0.6	4.3	140	9.1	22	0.30	13	207

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB										
13...	0.440	0.070	0.510	0.090	0.81	0.90	0.190	0.150	37	5
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	0.530	0.050	0.580	0.070	0.43	0.50	0.130	0.140	50	20
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	0.530	0.050	0.580	0.070	0.43	0.50	0.130	0.130	83	50
AUG										
20...	--	<0.010	<0.050	0.020	0.28	0.30	0.070	0.080	8	15
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	0.010	<0.050	0.030	0.27	0.30	0.080	0.080	10	310
20...	--	--	--	--	--	--	--	--	--	--
20...	--	0.010	<0.050	0.670	0.63	1.3	0.610	0.530	420	1400
20...	--	--	--	--	--	--	--	--	--	--
20...	--	0.010	<0.050	2.10	1.0	3.1	5.20	1.90	2400	1300

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

303821095005001 - LIVINGSTON RES SITE AL

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB								
13...	1225	1.00	270	7.8	12.5	0.30	9.8	92
13...	1227	10.0	270	7.8	11.5	--	9.4	86
13...	1229	20.0	270	7.7	11.0	--	9.4	85
13...	1231	30.0	270	7.7	11.0	--	9.4	85
13...	1233	40.0	275	7.7	10.5	--	9.1	82
13...	1235	50.0	275	7.7	10.5	--	8.9	80
AUG								
20...	1215	1.00	335	8.3	29.0	0.95	6.9	90
20...	1217	10.0	335	7.9	28.0	--	4.7	60
20...	1219	20.0	335	7.9	28.0	--	4.5	57
20...	1221	30.0	335	7.8	28.0	--	4.1	52
20...	1223	40.0	335	7.8	28.0	--	4.1	52
20...	1225	53.0	365	7.2	25.0	--	0.2	2

303935095055401 - LIVINGSTON RES SITE BC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB								
13...	1050	1.00	275	7.9	12.5	0.30	9.4	88
13...	1052	10.0	275	7.8	12.0	--	9.1	85
13...	1054	20.0	275	7.8	12.0	--	8.5	79
13...	1056	30.0	275	7.8	11.5	--	8.5	78
13...	1058	40.0	280	7.8	11.5	--	8.5	78
13...	1100	50.0	280	7.8	11.5	--	8.3	76
13...	1102	63.0	285	7.8	10.5	--	6.6	59
AUG								
20...	1055	1.00	340	8.5	28.5	0.70	6.9	89
20...	1057	10.0	340	8.4	28.0	--	6.0	76
20...	1059	20.0	340	8.4	28.0	--	6.0	76
20...	1101	30.0	340	8.3	28.0	--	5.8	74
20...	1103	40.0	340	8.2	28.0	--	5.2	66
20...	1105	50.0	340	7.6	28.0	--	2.6	33
20...	1107	57.0	360	7.2	25.0	--	0.2	2

304144095073001 - LIVINGSTON RES SITE CC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB								
12...	1525	1.00	270	7.8	12.0	0.27	10.0	92
12...	1527	10.0	270	7.8	11.5	--	10.0	91
12...	1529	20.0	260	7.7	11.5	--	9.8	89
12...	1531	30.0	260	7.6	11.5	--	9.0	82
12...	1533	40.0	260	7.6	11.5	--	8.8	80
12...	1535	50.0	265	7.6	11.0	--	8.8	79
12...	1537	59.0	265	7.6	11.0	--	8.8	79
AUG								
20...	1020	1.00	340	8.4	28.0	0.65	5.9	75
20...	1022	10.0	340	8.3	27.5	--	5.5	69
20...	1024	20.0	345	8.2	27.5	--	5.3	67
20...	1026	30.0	345	8.2	27.5	--	5.4	68
20...	1028	40.0	345	8.1	27.5	--	5.4	68
20...	1030	54.0	355	7.7	27.0	--	2.2	28

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

304521095075501 - LIVINGSTON RES SITE DC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NITRATE TOTAL (MG/L AS N)
FEB									
12...	1440	1.00	245	7.7	12.5	0.24	9.8	92	0.360
12...	1442	10.0	245	7.7	11.5	--	9.8	90	--
12...	1444	20.0	245	7.7	11.5	--	9.8	90	--
12...	1446	30.0	245	7.7	11.5	--	9.8	90	--
12...	1448	40.0	245	7.7	11.5	--	9.8	90	--
12...	1450	50.0	255	7.7	11.5	--	9.7	89	--
12...	1452	56.0	255	7.6	11.5	--	9.6	88	0.360
AUG									
20...	1300	1.00	350	8.4	28.0	0.55	6.4	82	--
20...	1302	10.0	350	8.2	27.5	--	4.8	61	--
20...	1304	20.0	350	8.2	27.5	--	4.8	61	--
20...	1306	30.0	350	8.2	27.5	--	4.8	61	--
20...	1308	40.0	350	8.2	27.5	--	4.8	61	--
20...	1310	50.0	350	8.2	27.5	--	4.8	61	--
20...	1312	58.0	355	8.0	27.5	--	3.5	44	--

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB									
12...	0.060	0.420	0.070	0.53	0.60	0.130	0.130	70	10
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	0.080	0.440	0.100	0.60	0.70	0.190	0.150	80	20
AUG									
20...	<0.010	<0.050	0.020	0.38	0.40	0.100	0.100	<10	60
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	0.030	<0.050	0.210	0.39	0.60	0.140	0.160	<10	140

304453095064901 - LIVINGSTON RES SITE DL

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB								
12...	1420	1.00	250	7.7	12.5	0.24	9.9	93
12...	1422	10.0	250	7.6	11.5	--	9.8	90
12...	1424	21.0	255	7.6	11.5	--	10.0	92
AUG								
20...	0925	1.00	350	8.4	27.0	0.65	5.9	74
20...	0927	10.0	350	8.4	27.0	--	5.9	74
20...	0929	22.0	350	8.5	27.0	--	6.0	75

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

304659095052001 - LIVINGSTON RES SITE LC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, NITRATE TOTAL (MG/L AS N)
FEB									
12...	1050	1.00	270	7.8	11.5	0.21	10.2	93	0.410
12...	1052	10.0	270	7.6	11.5	--	10.0	92	--
12...	1054	20.0	265	7.6	11.5	--	9.4	86	--
12...	1056	29.0	265	7.5	11.5	--	9.3	85	0.410
AUG									
20...	0855	1.00	350	8.5	27.0	0.50	5.4	68	--
20...	0857	10.0	350	8.4	27.0	--	5.0	63	--
20...	0859	20.0	350	8.4	27.0	--	4.9	61	--
20...	0901	28.0	355	8.4	27.0	--	4.9	61	--

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
FEB									
12...	0.060	0.470	0.060	0.54	0.60	0.140	0.130	70	<10
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	0.050	0.460	0.070	0.53	0.60	0.150	0.090	90	<10
AUG									
20...	<0.010	<0.050	0.030	0.37	0.40	0.130	0.110	<10	20
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	0.010	<0.050	0.050	0.35	0.40	0.120	0.120	<10	10

304843095104001 - LIVINGSTON RES SITE FC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
FEB								
12...	1330	1.00	265	7.7	12.0	0.21	10.2	95
12...	1332	10.0	275	7.6	11.5	--	10.0	92
12...	1334	20.0	275	7.6	11.5	--	10.0	92
12...	1336	30.0	275	7.6	11.5	--	10.0	92
12...	1338	40.0	280	7.6	11.5	--	10.0	92
12...	1340	50.0	280	7.6	11.5	--	9.8	90
12...	1342	56.0	280	7.6	11.5	--	10.2	93
AUG								
20...	1335	1.00	370	9.0	28.5	0.50	10.2	131
20...	1337	10.0	375	8.6	27.5	--	5.9	75
20...	1339	20.0	380	8.6	27.5	--	5.0	63
20...	1341	30.0	380	8.5	27.5	--	4.7	59
20...	1343	40.0	380	8.3	27.5	--	3.7	47
20...	1345	50.0	385	8.2	27.5	--	2.8	35
20...	1347	58.0	390	8.0	27.5	--	1.3	16

305411095144901 - LIVINGSTON RES SITE GC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLING DEPTH (FEET)	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TRANSPARENCY (SECCHI DISK) (M)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)
FEB											
13...	1500	1.00	265	7.8	12.5	0.18	8.7	82	99	19	34
13...	1502	10.0	275	7.8	12.5	--	8.8	83	--	--	--
13...	1504	20.0	275	7.8	12.5	--	8.7	82	--	--	--
13...	1506	30.0	275	7.9	12.5	--	8.7	82	--	--	--
13...	1508	40.0	275	7.9	12.5	--	8.7	82	--	--	--
13...	1510	48.0	295	8.0	12.5	--	8.7	82	110	20	39
AUG											
21...	0828	1.00	495	9.2	27.0	0.42	9.0	113	150	33	50
21...	0830	10.0	510	9.0	26.5	--	5.3	66	--	--	--
21...	0832	20.0	520	8.9	26.5	--	4.0	50	--	--	--
21...	0834	30.0	520	8.9	26.5	--	4.0	50	--	--	--
21...	0836	45.0	520	8.9	26.5	--	3.4	42	160	40	55

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

305411095144901 - LIVINGSTON RES SITE GC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
FEB										
13...	3.4	15	0.7	3.7	80	31	16	0.20	6.4	158
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	3.7	15	0.6	4.1	93	32	16	0.20	6.1	172
AUG										
21...	5.2	41	1	5.7	110	62	47	0.60	7.5	287
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	5.5	46	2	5.8	120	64	51	0.60	8.0	308

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB										
13...	0.420	0.070	0.490	0.070	1.3	1.4	0.170	0.120	86	22
13...	--	--	--	--	--	--	--	--	--	--
13...	0.400	0.070	0.470	0.080	0.52	0.60	0.170	0.160	70	20
13...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
13...	0.460	0.060	0.520	0.070	0.53	0.60	0.230	0.140	52	7
AUG										
21...	1.09	0.110	1.20	0.020	0.78	0.80	0.250	0.190	12	3
21...	--	--	--	--	--	--	--	--	--	--
21...	1.45	0.150	1.60	0.180	0.62	0.80	0.300	0.260	20	<10
21...	--	--	--	--	--	--	--	--	--	--
21...	1.39	0.210	1.60	0.210	0.49	0.70	0.280	0.310	38	14

30544/095161401 - LIVINGSTON RES SITE HC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (uS/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
FEB									
13...	1538	1.00	140	6.7	13.0	0.24	8.1	77	0.013
13...	1540	10.0	140	6.7	11.5	--	8.0	74	--
13...	1542	20.0	140	6.8	11.5	--	7.8	72	--
13...	1544	30.0	140	6.9	11.0	--	7.6	69	--
13...	1546	42.0	145	7.1	11.0	--	7.3	66	0.004
AUG									
21...	0915	1.00	430	9.1	27.0	0.46	8.9	111	0.190
21...	0917	10.0	460	8.8	27.0	--	5.4	68	--
21...	0919	20.0	505	8.8	26.5	--	4.3	53	--
21...	0921	30.0	510	8.8	26.5	--	3.7	46	--
21...	0923	37.0	510	8.8	26.5	--	3.6	45	1.28

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

305447095161401 - LIVINGSTON RES SITE HC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB									
13...	0.050	0.063	0.120	0.78	0.90	0.090	0.090	230	110
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	0.060	0.064	0.160	1.3	1.5	0.100	0.120	220	70
AUG									
21...	0.100	0.290	0.040	0.86	0.90	0.140	0.080	20	20
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	0.120	1.40	0.190	0.61	0.80	0.290	0.230	70	40

305135095193601 - LIVINGSTON RES SITE IC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
FEB								
14...	0820	1.00	310	8.0	12.5	0.12	9.4	89
14...	0822	10.0	310	8.0	12.5	--	9.4	89
14...	0824	20.0	310	8.0	12.5	--	9.4	89
14...	0826	30.0	310	8.2	12.5	--	9.4	89
14...	0828	40.0	310	8.1	12.5	--	9.3	88
14...	0830	48.0	310	8.1	12.5	--	9.3	88
AUG								
21...	1040	1.00	415	8.2	29.0	0.38	5.4	70
21...	1042	10.0	425	8.1	28.5	--	3.7	48
21...	1044	20.0	435	8.1	28.5	--	3.7	48
21...	1046	30.0	440	8.0	28.0	--	3.4	43
21...	1048	40.0	440	8.1	28.0	--	3.0	38

305135095235401 - LIVINGSTON RES SITE JC

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING DEPTH (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TRANS-PAR-ENCY (SECCHI DISK) (M)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)
FEB											
14...	0910	1.00	305	7.9	12.5	0.15	9.4	88	120	19	41
14...	0912	10.0	305	7.9	12.5	--	9.4	88	--	--	--
14...	0914	20.0	305	7.9	12.5	--	9.4	88	--	--	--
14...	0916	30.0	305	7.9	12.5	--	9.4	88	--	--	--
14...	0918	42.0	305	7.9	12.5	--	9.4	88	120	23	42
AUG											
21...	1115	1.00	400	8.1	30.0	0.26	6.9	91	130	27	46
21...	1117	10.0	400	7.9	29.0	--	5.2	67	--	--	--
21...	1119	20.0	405	7.9	29.0	--	5.2	67	--	--	--
21...	1121	30.0	410	7.9	29.0	--	4.6	60	--	--	--
21...	1123	38.0	420	7.9	28.5	--	4.0	51	130	23	47

08066190 LIVINGSTON RESERVOIR NEAR GOODRICH, TX--Continued

30513509523501 - LIVINGSTON RES SITE JC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
FEB										
14...	3.9	16	0.6	4.3	99	33	18	0.20	6.2	182
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	3.9	16	0.6	4.4	98	33	18	0.20	6.1	182
AUG										
21...	4.1	27	1	4.6	100	45	30	0.50	8.8	229
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	4.1	30	1	5.1	110	44	36	0.50	9.8	243

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
FEB										
14...	0.510	0.070	0.580	0.060	0.54	0.60	0.140	0.150	37	4
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	0.490	0.080	0.570	0.080	0.62	0.70	0.210	0.180	60	4
AUG										
21...	1.45	0.050	1.50	0.030	0.27	0.30	0.360	0.310	4	<1
21...	--	--	--	--	--	--	--	--	--	--
21...	1.53	0.070	1.60	0.060	0.44	0.50	0.340	0.330	<10	<10
21...	--	--	--	--	--	--	--	--	--	--
21...	1.13	0.070	1.20	0.140	0.36	0.50	0.270	0.290	7	2

08066191 LIVINGSTON RESERVOIR AT OUTFLOW WEIR NEAR GOODRICH, TX

LOCATION.--Lat 30°37'55", long 95°01'11", San Jacinto County, Hydrologic Unit 12030202, at end of conduit into stilling basin, 1,700 ft to right of right spillway abutment, 4.8 mi northwest of Goodrich, 11.7 mi upstream from Long King Creek, and at mile 129.2.

DRAINAGE AREA.--16,583 mi².

PERIOD OF RECORD.--August 1969 to current year.
Water-quality records.--Chemical and biochemical analyses: October 1969 to September 1972.

GAGE.--Water-stage recorder, concrete control, and crest-stage gage. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Trinity River Authority). Oct. 1, 1974, to Jan. 30, 1976, staff gage and control only.

REMARKS.--Records fair. For details concerning outlet works, see Livingston Reservoir (station 08066190). The purpose of this station is to record selective withdrawal releases at outflow weir, crest 61.90 ft. These releases do not constitute the total flow from Livingston Reservoir since flow through tainter gates is not included in these totals.

AVERAGE DISCHARGE.--23 years, 198 ft³/s (143,500 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,990 ft³/s Jan 7, 1982; maximum elevation not determined, but probably occurred between May 16 and May 23, 1990; no flow for many days.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 518 ft³/s Oct. 23; maximum elevation, 91.32 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	400	218	.00	.00	.00	.00	.00	240	.00	252	403	434
2	e400	54	.00	.00	.00	.00	.00	246	.00	265	389	424
3	400	.00	.00	.00	.00	.00	.00	252	.00	278	381	425
4	400	.00	.00	.00	.00	.00	.00	246	.00	295	438	424
5	400	.00	.00	.00	.00	.00	.00	239	.00	113	448	428
6	400	.00	.00	.00	.00	.00	.00	239	.00	.00	450	438
7	400	.00	.00	.00	.00	.00	.00	238	.00	.00	450	440
8	400	.00	.00	.00	.00	.00	.00	241	.00	.00	452	441
9	400	.00	.00	.00	.00	.00	.00	250	.00	.00	447	442
10	e400	.00	.00	.00	.00	.00	.00	258	.00	.00	448	438
11	e400	.00	.00	.00	.00	.00	.00	269	.00	.00	437	434
12	402	.00	.00	.00	.00	.00	.00	276	.00	.00	433	431
13	405	.00	.00	.00	.00	.00	.00	288	.00	137	428	426
14	408	.00	.00	.00	.00	.00	.00	259	.00	239	423	428
15	408	.00	.00	.00	.00	.00	.00	256	.00	232	421	434
16	204	.00	.00	.00	.00	.00	140	248	.00	232	420	434
17	.00	.00	.00	.00	.00	.00	244	244	.00	234	423	426
18	153	.00	.00	.00	.00	.00	249	247	.00	232	422	427
19	400	.00	.00	.00	.00	.00	253	250	.00	236	421	422
20	405	.00	.00	.00	.00	.00	64	252	.00	241	420	421
21	413	.00	.00	.00	.00	.00	.00	259	.00	255	423	442
22	413	.00	.00	.00	.00	.00	.00	104	103	274	422	432
23	518	.00	.00	.00	.00	.00	.00	.00	244	302	424	430
24	413	.00	.00	.00	.00	.00	.00	.00	233	306	422	425
25	413	.00	.00	.00	.00	.00	.00	.00	231	327	423	435
26	413	.00	.00	.00	.00	.00	.00	.00	236	299	421	425
27	425	.00	.00	.00	.00	.00	.00	.00	230	309	417	e425
28	413	.00	.00	.00	.00	.00	138	.00	230	301	490	430
29	413	.00	.00	.00	.00	.00	244	.00	252	300	465	483
30	e413	.00	.00	.00	---	.00	236	.00	243	416	450	495
31	e413	---	.00	.00	---	.00	---	.00	---	409	441	---
TOTAL	11845.00	272.00	0.00	0.00	0.00	0.00	1568.00	5401.00	2002.00	6484.00	13352	13039
MEAN	382	9.07	.000	.000	.000	.000	52.3	174	66.7	209	431	435
MAX	518	218	.00	.00	.00	.00	253	288	252	416	490	495

CAL YR 1991 TOTAL 59179.00 MEAN 162 MAX 558
WTR YR 1992 TOTAL 53963.00 MEAN 147 MAX 518

e Estimated

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 downstream side of bridge on U.S. Highway 190, 2 mi west of Livingston, 2 mi upstream from Choates Creek, and 14.8 mi upstream from mouth.

DRAINAGE AREA.--141 mi².

PERIOD OF RECORD.--January 1963 to current year.
Water-quality records.--Chemical analyses: January 1963 to September 1971.

GAGE.--Water-stage recorder. Datum of gage is 100.12 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No diversions above station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1870, about 41 ft in May 1929.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,600 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 22	0030	6,030	16.03	Feb. 5	0630	4,360	13.68
Jan. 12	0800	3,480	12.29	Feb. 25	1430	6,470	16.61
Jan. 18	1630	3,900	12.98	Mar. 5	0230	9,200	19.57

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	8.8	9.2	47	104	69	e40	26	632	151	3.5	3.3
2	6.4	5.6	24	42	73	55	e25	21	313	36	3.9	3.8
3	3.3	3.8	37	46	144	49	e18	18	105	18	19	30
4	3.0	2.8	20	37	2420	3090	e16	17	43	22	16	108
5	2.4	2.4	12	35	3610	4560	e15	16	26	15	6.9	215
6	2.0	2.4	9.5	35	760	450	52	15	21	9.5	4.6	29
7	1.8	3.2	8.5	34	262	e200	41	20	19	7.4	3.1	12
8	2.2	5.6	11	642	147	e125	26	14	16	6.6	e2.4	7.4
9	1.8	4.1	613	297	99	e80	21	13	15	5.7	e2.2	5.5
10	2.0	3.8	292	104	78	e60	18	12	26	4.9	e2.0	4.9
11	1.6	3.3	57	58	68	e50	16	12	61	4.5	8.0	31
12	1.8	3.0	33	2290	66	e40	15	12	26	4.3	24	25
13	1.4	3.0	27	790	117	e32	14	12	17	4.4	18	9.3
14	1.5	3.1	30	212	99	e28	14	12	24	4.2	12	5.6
15	1.4	2.8	26	103	92	e26	12	11	21	4.5	5.7	4.8
16	1.1	2.8	19	65	67	e24	11	11	15	4.7	3.8	3.9
17	1.1	113	15	58	67	e22	10	16	12	4.2	e2.8	3.7
18	1.1	120	25	2570	66	e23	11	30	11	4.5	e2.5	3.5
19	1.1	26	164	1640	46	e25	31	25	9.7	154	e2.2	3.2
20	1.2	163	139	323	37	e23	1300	20	9.2	144	e2.5	2.8
21	1.1	39	2520	170	33	e22	278	19	8.6	30	e2.4	e2.6
22	1.1	16	3690	529	822	e21	76	17	8.7	16	e2.3	e2.5
23	1.2	9.8	649	341	1080	e20	41	16	13	11	e2.2	e2.2
24	1.2	7.2	204	139	727	e18	31	25	10	13	e2.1	e2.0
25	1.2	6.1	97	87	5300	e17	25	41	8.8	13	e2.0	e1.8
26	1.2	5.4	234	70	1330	e16	22	479	8.0	9.0	e1.9	e2.2
27	1.3	5.7	892	852	284	e15	19	117	7.7	7.0	e1.8	e2.0
28	1.8	6.5	436	805	146	125	18	235	10	5.8	e1.7	e1.8
29	1.9	5.9	169	300	94	650	26	471	12	5.1	e1.6	e1.9
30	2.8	5.9	94	228	---	e300	34	81	14	4.3	e1.5	e1.8
31	9.9	---	62	165	---	e100	---	94	---	3.9	1.8	---
TOTAL	67.4	590.0	10618.2	13114	18238	10335	2276	1928	1522.7	727.5	166.4	532.5
MEAN	2.17	19.7	343	423	629	333	75.9	62.2	50.8	23.5	5.37	17.7
MAX	9.9	163	3690	2570	5300	4560	1300	479	632	154	24	215
MIN	1.1	2.4	8.5	34	33	15	10	11	7.7	3.9	1.5	1.8
AC-FT	134	1170	21060	26010	36180	20500	4510	3820	3020	1440	330	1060
CFSM	.02	.14	2.43	3.00	4.46	2.36	.54	.44	.36	.17	.04	.13
IN.	.02	.16	2.80	3.46	4.81	2.73	.60	.51	.40	.19	.04	.14

e Estimated

08066200 LONG KING CREEK AT LIVINGSTON, TX--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1992, BY WATER YEAR (WY)

MEAN	32.6	76.0	127	155	173	149	139	146	149	40.9	17.2	23.1
MAX	292	689	491	966	629	640	844	662	869	493	191	186
(WY)	1974	1974	1974	1974	1992	1990	1979	1969	1989	1989	1983	1973
MIN	.18	.92	2.83	2.79	5.53	3.75	4.06	4.98	.72	.000	.000	.15
(WY)	1966	1989	1971	1971	1971	1971	1971	1978	1971	1971	1971	1967

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1964 - 1992	
ANNUAL TOTAL	58807.9		60115.7			
ANNUAL MEAN	161		164		102	
HIGHEST ANNUAL MEAN					256	1973
LOWEST ANNUAL MEAN					12.3	1970
HIGHEST DAILY MEAN	3690	Dec 22	5300	Feb 25	15900	May 18 1989
LOWEST DAILY MEAN	1.1	Oct 16	1.1	Oct 16	.00	Aug 5 1965
ANNUAL SEVEN-DAY MINIMUM	1.1	Oct 16	1.1	Oct 16	.00	Jun 28 1971
INSTANTANEOUS PEAK FLOW			9200	Mar 5	27600	May 18 1989
INSTANTANEOUS PEAK STAGE			19.57	Mar 5	27.27	May 18 1989
INSTANTANEOUS LOW FLOW					.00	at times
ANNUAL RUNOFF (AC-FT)	116600		119200		73770	
ANNUAL RUNOFF (CFSM)	1.14		1.16		.72	
ANNUAL RUNOFF (INCHES)	15.52		15.86		9.81	
10 PERCENT EXCEEDS	377		293		148	
50 PERCENT EXCEEDS	23		17		12	
90 PERCENT EXCEEDS	2.7		2.0		.80	

08066250 TRINITY RIVER NEAR GOODRICH, TX

LOCATION.--Lat 30°34'19", long 94°56'55", Polk-San Jacinto County line, Hydrologic Unit 12030202, on left bank at downstream bridge on U.S. Highway 59, 0.2 mi downstream from Long King Creek, 3.0 mi southeast of Goodrich, 11.9 mile downstream from Livingston Dam, and at mile 117.3.

DRAINAGE AREA.--16,844 mi².

PERIOD OF RECORD.--December 1965 to current year.
Water-quality records.--March 1966 to September 1973.

GAGE.--Water-stage recorder. Datum of gage is 40.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Regulation by Livingston Reservoir (station 08066190) 11.9 mi upstream, with capacity of 2,046,000 acre-ft, began Sept. 29, 1968. No diversions between Livingston Reservoir and station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1929, 52.0 ft in May 1942, from information by State Department of Highways and Public Transportation and by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3410	11700	22100	81200	33300	49000	19200	5200	19100	3310	1700	1560
2	4080	12800	e22000	83000	33000	48600	17600	5180	19400	3790	1800	1560
3	4170	15500	e20800	83600	33000	48300	16300	5160	19900	5670	1840	1620
4	3900	15700	e19100	e81800	35900	51700	16200	5160	21200	6780	1760	1710
5	3360	15700	e17500	e79000	45700	65000	15900	5180	21400	8060	1740	1870
6	2710	16400	e16400	e75000	50100	61600	15500	5140	21400	9190	1730	1800
7	2410	18700	e15400	e68900	49300	60900	15100	5120	21400	9990	1850	1700
8	2100	20500	e15100	63300	48800	59800	14100	5110	21200	10800	2120	1690
9	2070	21600	15000	57700	48300	59200	12600	5120	21100	10900	2140	1680
10	2070	21700	13800	51200	48000	59100	12000	5110	21000	10900	2150	1680
11	2020	21800	12700	45600	47200	57200	10500	5090	19700	10900	2220	1690
12	1690	21800	11100	44300	45200	51900	10400	5090	19100	10000	2350	1720
13	1650	22000	11000	43300	43400	47400	10400	5080	17600	7950	2220	1720
14	1590	22100	11400	39900	40500	44100	9970	4850	17400	5950	2170	1720
15	1340	22800	12700	34600	35700	41700	7950	4450	16000	4010	2150	1710
16	1280	23800	13300	32500	33800	38600	7020	4220	15100	2510	2130	1710
17	1130	24500	14700	27900	30600	35100	6690	3860	14700	2370	1940	1630
18	1140	24400	15300	26900	28000	33100	6690	3850	14000	2360	1590	1290
19	1290	24200	16800	27700	25400	32300	6700	3840	13800	2390	1620	1250
20	1320	24300	17200	25700	24000	32100	10200	3970	12300	2450	1610	1220
21	1280	24200	21900	26300	22000	32000	16100	5030	10200	2380	1560	1200
22	1140	24000	39900	29400	22100	31900	16500	6320	7990	2330	1550	e1220
23	1140	23900	46800	30100	23800	30300	16400	8030	5940	2320	1560	e1220
24	1140	23800	e49400	29600	28500	28400	16400	10600	5600	2290	1560	e1210
25	1140	23700	e52000	29400	42400	26100	14300	12500	5290	2260	1560	e1210
26	1140	23300	56900	29400	52200	25400	11900	14800	4710	2250	1550	e1210
27	1140	22200	63400	30600	51000	23200	9150	15600	4180	2220	1560	e1200
28	1140	22100	e68600	33200	50300	21100	6880	16000	3430	2210	1560	e1200
29	1520	22000	73100	33900	49600	20500	5370	18100	3250	2090	1560	1210
30	4340	22000	75300	33600	---	19900	5240	18200	3240	1760	1560	1210
31	8400	---	77800	33500	---	19700	---	18100	---	1730	1560	---
TOTAL	68250	633200	938500	1412100	1121100	1255200	359260	239060	420630	154120	55970	44620
MEAN	2202	21110	30270	45550	38660	40490	11980	7712	14020	4972	1805	1487
MAX	8400	24500	77800	83600	52200	65000	19200	18200	21400	10900	2350	1870
MIN	1130	11700	11000	25700	22000	19700	5240	3840	3240	1730	1550	1200
AC-FT	135400	1256000	1862000	2801000	2224000	2490000	712600	474200	834300	305700	111000	88500

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1992, BY WATER YEAR (WY)

MEAN	3150	6053	7937	8533	9462	10740	10740	13910	12680	4832	2215	2276
MAX	25630	30260	30270	45550	38660	40490	30750	57850	32120	24310	6819	15230
(WY)	1974	1975	1992	1992	1992	1992	1977	1990	1973	1989	1982	1974
MIN	283	449	317	321	472	724	1262	1294	907	1043	355	455
(WY)	1973	1971	1971	1971	1971	1981	1971	1971	1972	1971	1972	1971

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1967 - 1992	
ANNUAL TOTAL	4190690		6702010			
ANNUAL MEAN	11480		18310		7696	
HIGHEST ANNUAL MEAN					18310	1992
LOWEST ANNUAL MEAN					746	1971
HIGHEST DAILY MEAN	77800	Dec 31	83600	Jan 3	106000	May 20 1990
LOWEST DAILY MEAN	1130	Oct 17	1130	Oct 17	191	Aug 6 1971
ANNUAL SEVEN-DAY MINIMUM	1140	Oct 22	1140	Oct 22	240	Aug 16 1972
INSTANTANEOUS PEAK FLOW			83900	Jan 3	107000	May 21 1990
INSTANTANEOUS PEAK STAGE			43.40	Jan 3	46.80	May 21 1990
ANNUAL RUNOFF (AC-FT)	8312000		13290000		5575000	
10 PERCENT EXCEEDS	23800		48400		22400	
50 PERCENT EXCEEDS	6530		13000		2540	
90 PERCENT EXCEEDS	1650		1560		672	

08066300 MENARD CREEK NEAR RYE, TX

LOCATION.--Lat 30°28'52", long 94°46'46", Liberty County, Hydrologic Unit 12030202, on left bank 20 ft downstream from bridge on State Highway 146, 2.3 mi northwest of Rye, and about 6 mi upstream from mouth.

DRAINAGE AREA.--152 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of of gage is 62.32 ft above National Geodetic Vertical Datum of 1929. September 1974 to August 1976, wire-weight gage read twice daily.

REMARKS.--No estimated daily discharges. Records good. No known diversions above station. Regulation by Bear Foot lake on Mill Creek, located 0.5 mi upstream from station. A section of the dam on this lake washed out on June 26-27, 1986, and was repaired in 1987.

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 September 1961 reached a stage of about 34.0 ft, from information by local resident. Flood of May 1929 may have been equaled or exceeded by other floods during the period 1929-65.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 23	1800	3,050	22.33	Feb. 26	2100	2,740	21.90
Jan. 20	1700	1,830	20.08	Mar. 6	1030	4,650	24.05
Feb. 6	1800	2,100	20.75				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	44	79	280	409	432	303	90	190	43	29	23
2	42	63	126	249	307	295	170	94	238	42	40	25
3	41	54	182	237	253	247	143	80	297	44	107	30
4	50	43	260	228	560	562	128	73	283	46	69	43
5	56	36	243	210	1310	2190	129	73	188	42	54	99
6	46	32	147	185	1820	3580	287	69	126	38	47	111
7	42	32	110	167	1710	1840	284	64	107	36	41	64
8	40	34	88	162	1080	1180	260	60	112	34	39	47
9	38	36	199	180	610	689	184	57	111	33	41	40
10	37	39	338	185	352	435	145	55	88	32	38	36
11	37	38	415	192	277	322	129	54	75	32	51	32
12	38	36	670	432	248	268	118	53	81	31	78	30
13	36	36	439	643	252	222	107	52	72	30	85	29
14	35	33	215	763	232	197	99	51	66	30	154	28
15	35	32	159	949	247	182	94	49	60	32	99	27
16	34	32	130	517	217	171	94	48	56	34	52	25
17	34	150	113	263	209	162	98	49	53	31	41	24
18	33	344	102	649	194	159	92	61	49	32	35	29
19	33	345	133	1240	188	178	87	77	47	31	33	57
20	32	620	181	1500	166	179	96	89	45	48	31	33
21	32	554	422	1390	145	167	112	117	43	64	29	26
22	32	263	1330	816	280	150	163	94	44	55	28	26
23	32	173	2190	550	596	142	208	78	47	49	27	24
24	33	108	1860	431	646	135	122	66	44	46	27	23
25	38	85	1100	420	2110	129	115	81	43	46	29	22
26	36	74	618	299	2430	122	135	87	42	47	29	22
27	35	68	461	422	2140	117	111	65	41	43	27	22
28	35	65	447	695	1340	146	84	77	40	37	25	22
29	36	64	469	653	757	419	79	189	40	34	24	21
30	40	63	507	848	---	371	82	278	38	32	24	21
31	44	---	369	649	---	429	---	291	---	30	23	---
TOTAL	1176	3596	14102	16404	21085	15817	4258	2721	2766	1204	1456	1061
MEAN	37.9	120	455	529	727	510	142	87.8	92.2	38.8	47.0	35.4
MAX	56	620	2190	1500	2430	3580	303	291	297	64	154	111
MIN	32	32	79	162	145	117	79	48	38	30	23	21
AC-FT	2330	7130	27970	32540	41820	31370	8450	5400	5490	2390	2890	2100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1992, BY WATER YEAR (WY)

MEAN	44.3	82.3	152	195	220	170	172	218	158	72.6	47.3	47.3
MAX	186	514	457	777	727	510	977	757	788	464	354	192
(WY)	1974	1975	1975	1974	1992	1992	1979	1983	1986	1989	1983	1983
MIN	3.42	3.55	8.05	14.6	14.0	13.5	9.77	23.2	8.72	4.52	5.47	4.43
(WY)	1968	1968	1968	1971	1971	1971	1971	1978	1971	1971	1967	1967

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1967 - 1992	
ANNUAL TOTAL	89465		85646			
ANNUAL MEAN	245		234		131	
HIGHEST ANNUAL MEAN					279	1975
LOWEST ANNUAL MEAN					14.7	1971
HIGHEST DAILY MEAN	2190	Dec 23	3580	Mar 6	8110	May 8 1969
LOWEST DAILY MEAN	26	Aug 11	21	Sep 29	2.6	Nov 1 1967
ANNUAL SEVEN-DAY MINIMUM	28	Aug 5	22	Sep 24	2.9	Nov 1 1967
INSTANTANEOUS PEAK FLOW			4650	Mar 6	13200	Jun 27 1986
INSTANTANEOUS PEAK STAGE			24.05	Mar 6	30.78	Jun 27 1986
ANNUAL RUNOFF (AC-FT)	177500		169900		94940	
10 PERCENT EXCEEDS	679		572		282	
50 PERCENT EXCEEDS	105		83		48	
90 PERCENT EXCEEDS	33		31		13	

08066300 MENARD CREEK NEAR RYE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: August 1950 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FID. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
JAN									
17...	1233	251	62	8.0	14	7	3.9	0.95	6.9
FEB									
12...	1124	248	71	15.0	14	7	4.0	1.0	7.8
MAR									
26...	1248	123	81	17.0	16	6	4.5	1.2	9.3
MAY									
05...	1255	75	86	21.5	18	7	5.1	1.3	10
JUN									
15...	1245	60	87	25.5	18	8	5.2	1.2	10
AUG									
13...	1015	76	69	26.0	16	6	4.7	1.1	7.4

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
JAN								
17...	0.8	0.80	7.0	3.9	14	0.10	9.9	45
FEB								
12...	0.9	0.70	7.0	3.[illegible]	16	<0.10	10	48
MAR								
26...	1	0.70	10	2.3	16	0.10	13	53
MAY								
05...	1	0.70	11	1.9	18	<0.10	13	57
JUN								
15...	1	0.70	10	1.8	19	<0.10	12	56
AUG								
13...	0.8	1.0	10	2.6	14	<0.10	10	47

08066500 TRINITY RIVER AT ROMAYOR, TX
(National stream-quality accounting network)

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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1924 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1392: 1932, 1935. WSP 1922: Drainage area. WRD TX-81-1: 1980(M, m).

GAGE.--Water-stage recorder. Datum of gage is 25.92 ft above National Geodetic Vertical Datum 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.

REMARKS.--Records fair, including those of estimated daily discharges. Since Sept. 28, 1968, flow has been regulated by Livingston Reservoir (station 08066190), capacity 1,788,000 acre-ft, 35 mi upstream. There are no known large diversions between Livingston Reservoir and this station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--44 years (water years 1925-68) 7,155 ft³/s (5,184,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1925-68).--Maximum discharge, 111,000 ft³/s May 9, 1942 (gage height, 45.8 ft, from floodmark), present site and datum; minimum, 102 ft³/s Aug. 24, 25, 1956.
Maximum stage since at least 1908, that of May 9, 1942.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3440	11600	24400	81600	39100	55900	e23300	6310	21700	4050	2090	1690
2	4030	12900	24300	83000	38800	55300	e21300	6270	22600	4210	2150	1680
3	4420	15700	22700	84000	38700	53700	e19400	6210	23000	5860	2330	1750
4	e4200	16500	20400	83400	40100	55700	e19000	6170	24500	7310	2170	1920
5	e3700	16600	18500	82600	46300	64900	e18800	6240	24900	8750	2110	2060
6	e3200	16800	16600	79400	54900	67400	e18400	6160	24900	10200	2060	2190
7	e2800	19100	15300	75800	56700	65900	18100	6080	25000	11200	2050	1980
8	e2500	21300	14400	71600	56000	63900	17100	6050	24800	12100	2370	1880
9	e2300	23100	15100	66800	55300	63300	15200	6020	24600	12400	2440	1830
10	e2250	23400	15800	61600	54800	62400	14500	6030	24500	12400	2440	1810
11	e2200	23500	14700	56000	54300	61500	e13000	6030	23500	12400	2490	1820
12	e2000	23600	13200	53000	52600	59600	e12500	6020	22500	11800	2820	1830
13	e1900	23800	12700	51900	50400	55600	e12500	6010	20800	9860	2630	1830
14	e1800	23900	12500	47300	46900	52000	e12300	5890	20200	7460	2600	1810
15	e1700	24300	13700	42200	42400	48400	e10500	5200	19000	5450	2560	1800
16	e1500	25900	14100	40200	40800	44000	8980	4970	17600	3490	2450	1750
17	e1400	27100	15500	36000	38100	41500	8370	4420	17100	2960	2360	1710
18	e1300	27700	16100	33700	35200	40000	8270	4390	16300	2930	1940	1340
19	e1400	27200	17800	35700	31600	39300	8230	4410	16100	2900	1850	1220
20	e1600	27500	18500	33200	29800	38600	10400	4460	14600	2950	1870	1170
21	e1500	27400	21800	32900	27100	38600	17000	5710	12700	2970	1800	1150
22	e1400	27100	38600	35300	26500	38200	18900	7140	10100	2890	1750	1220
23	e1300	26700	48000	e36600	28600	36900	18900	9240	7680	2860	1740	1220
24	e1250	26600	52800	e35900	33300	35000	18800	11700	6660	2830	1740	1210
25	e1200	26500	55400	e35400	43400	32200	17200	13900	6460	2760	1730	1210
26	e1200	26200	59100	e35100	56000	e31000	14500	16000	5790	2740	1720	1210
27	e1300	24800	64200	36100	58700	e28800	11900	17500	5250	2710	1710	1210
28	e1300	24400	69600	38800	57800	e26700	9220	17800	4560	2680	1690	1200
29	e1400	24400	73600	39700	56700	e25000	6980	20200	4090	2630	1690	1190
30	2620	24400	77000	39600	---	e24100	6400	20900	4020	2250	1680	1190
31	7380	---	79100	39500	---	e23700	---	20700	---	2110	1690	---
TOTAL	71490	690000	975500	1603900	1290900	1429100	429950	274130	495510	180110	64720	47080
MEAN	2306	23000	31470	51740	44510	46100	14330	8843	16520	5810	2088	1569
MAX	7380	27700	79100	84000	58700	67400	23300	20900	25000	12400	2820	2190
MIN	1200	11600	12500	32900	26500	23700	6400	4390	4020	2110	1680	1150
AC-FT	141800	1369000	1935000	3181000	2560000	2835000	852800	543700	982800	357200	128400	93380

e Estimated

08066500 TRINITY RIVER AT ROMAYOR, TX--Continued
(National stream-quality accounting network)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1992#, BY WATER YEAR (WY)

MEAN	3339	6502	8744	9453	10600	11300	11070	14480	13500	5245	2481	2494
MAX	25380	30780	31470	51740	44510	46100	31340	60070	33140	26280	7021	14850
(WY)	1974	1975	1992	1992	1992	1992	1977	1990	1989	1989	1982	1974
MIN	326	449	351	347	450	909	1176	1303	952	936	404	469
(WY)	1973	1971	1971	1971	1971	1981	1971	1971	1972	1971	1972	1971

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1969 - 1992#	
ANNUAL TOTAL	4603440		7552390			
ANNUAL MEAN	12610		20630		8291	
HIGHEST ANNUAL MEAN					20630	1992
LOWEST ANNUAL MEAN					730	1971
HIGHEST DAILY MEAN	79100	Dec 31	84000	Jan 3	104000	May 21 1990
LOWEST DAILY MEAN	1200	Oct 25	1150	Sep 21	292	Oct 18 1972
ANNUAL SEVEN-DAY MINIMUM	1280	Oct 22	1200	Sep 20	297	Oct 13 1972
INSTANTANEOUS PEAK FLOW			85300	Jan 3	105000	May 21 1990
INSTANTANEOUS PEAK STAGE			40.25	Jan 3	41.58	May 21 1990
ANNUAL RUNOFF (AC-FT)	9131000		14980000		6007000	
10 PERCENT EXCEEDS	27100		55300		23800	
50 PERCENT EXCEEDS	7420		14600		2820	
90 PERCENT EXCEEDS	1700		1720		820	

Period of regulated streamflow.

08066500 TRINITY RIVER AT ROMAYOR, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1941 to November 1949, February 1950 to September 1951, October 1953 to current year. Chemical and biochemical analyses: February 1968 to current year. Pesticide analyses: February 1968 to July 1981, August 1983 to current year. Sediment records: March 1959 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1941 to September 1942, January 1944 to September 1951, October 1953 to current year.
WATER TEMPERATURE: October 1941 to September 1950, October 1953 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1954 to September 1955, October 1968 to September 1971.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (1945-50, 1953-to current year): Maximum daily, 3,800 microsiemens Oct. 30, 1956; minimum daily, 103 microsiemens Nov. 9, 1946.
WATER TEMPERATURES (1953-58, 1961-to current year): Maximum daily, 37.0°C July 18, 27, 1953; minimum daily, 3.0°C Jan. 18, 1956, Jan. 15, 16, 1968, Jan. 2, 3, 1979.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily 367 microsiemens Nov. 16; minimum daily, 219 microsiemens Mar. 12.
WATER TEMPERATURE: Maximum daily, 30.0°C July 28,31,Aug. 2,7,9,10; minimum daily, 8.0°C Feb. 7.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
DEC												
11...	1225	14400	323	7.9	14.5	15	10.0	98	1.6	180	210	110
FEB												
19...	1118	31700	278	7.9	14.0	26	11.2	108	1.0	28	84	110
APR												
07...	1140	18200	275	8.0	17.0	27	9.5	98	2.1	120	110	110
MAY												
20...	1135	4440	320	7.4	23.0	17	8.0	93	1.0	140	290	120
JUL												
14...	1102	7500	322	8.2	28.5	5.0	7.3	94	2.5	K12	150	120
AUG												
25...	0924	1740	342	8.0	28.0	3.0	8.6	110	2.1	K16	80	130

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
DEC												
11...	33	38	3.5	20	0.8	5.4	0	94	77	37	23	0.30
FEB												
19...	18	37	3.6	15	0.6	3.6	0	109	90	30	17	0.10
APR												
07...	19	38	3.5	14	0.6	3.7	0	111	91	28	17	0.20
MAY												
20...	22	41	3.7	17	0.7	3.6	0	117	96	30	22	0.20
JUL												
14...	25	40	3.8	19	0.8	4.1	0	111	91	35	22	0.20
AUG												
25...	24	44	4.3	23	0.9	4.3	0	127	104	35	26	0.30

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
DEC											
11...	6.5	203	183	--	--	<0.010	<0.010	0.510	0.540	0.030	<0.010
FEB											
19...	7.3	168	170	0.450	--	0.010	<0.010	0.460	0.490	0.040	0.030
APR											
07...	6.6	170	168	0.470	--	0.030	<0.010	0.500	0.480	0.040	0.030
MAY											
20...	4.3	204	182	0.460	0.480	0.020	0.010	0.480	0.490	0.030	0.040
JUL											
14...	4.3	185	184	0.030	--	0.020	<0.010	0.050	0.063	0.030	0.020
AUG											
25...	5.2	196	205	--	--	<0.010	<0.010	<0.050	<0.050	0.020	0.020

08066500 TRINITY RIVER AT ROMAYOR, TX--Continued
(National stream-quality accounting network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
DEC											
11...	0.37	0.40	0.150	0.090	0.100	0.120	0.31	58	2260	42	30
FEB											
19...	0.46	0.50	0.120	0.070	0.060	0.060	0.18	66	5650	60	--
APR											
07...	0.36	0.40	0.120	0.080	0.070	0.120	0.21	31	1520	97	40
MAY											
20...	0.37	0.40	0.090	0.090	0.080	0.080	0.25	38	456	100	--
JUL											
14...	0.77	0.80	0.100	0.060	0.060	0.070	0.18	31	628	91	<10
AUG											
25...	0.28	0.30	0.080	0.070	0.060	0.060	0.18	27	127	86	<10

DATE	BARIUM, DIS-SOLVED (UG/L AS BA)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)
DEC											
11...	51	<3	48	6	5	<10	3	<1	<1.0	270	<6
FEB											
19...	--	--	--	--	--	--	--	--	--	--	--
APR											
07...	47	<3	68	7	3	<10	2	<1	<1.0	260	<6
MAY											
20...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	46	<3	<3	7	1	<10	1	<1	<1.0	320	<6
AUG											
25...	56	<3	6	6	3	<10	2	<1	<1.0	340	<6

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (MICRO-SIEMENS)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1991	71490	349	198	38300	26	4940	35	6720	120
NOV.	1991	690000	350	199	371000	26	48200	35	65300	120
DEC.	1991	975500	330	188	496000	23	60900	33	85700	110
JAN.	1992	1603900	263	151	655000	15	65600	25	106200	98
FEB.	1992	1290900	273	157	548000	16	56700	26	89600	100
MAR.	1992	1429100	245	142	546000	13	51600	23	87000	93
APR.	1992	429950	292	167	194000	18	21400	28	32400	100
MAY	1992	274130	320	183	135000	22	16200	31	23200	110
JUNE	1992	495510	324	185	248000	22	29900	32	42500	110
JULY	1992	180110	322	184	89400	22	10700	32	15300	110
AUG.	1992	64720	333	190	33200	24	4110	33	5750	110
SEPT	1992	47080	345	196	25000	25	3190	34	4370	120
TOTAL		7552390	**	**	3379000	**	373000	**	564000	**
WTD.AVG.		20630	289	166	**	18	**	28	**	100

08066500 TRINITY RIVER AT ROMAYOR, TX--Continued
(National stream-quality accounting network)

SPECIFIC CONDUCTANCE, US/CM AT 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY EQUIVALENT MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	344	354	338	282	287	272	274	316	325	322	338	347
2	343	355	343	266	289	273	277	315	317	321	339	344
3	344	357	341	273	e288	276	289	314	315	321	318	347
4	343	357	341	265	286	277	e286	316	323	323	317	337
5	343	359	338	256	262	250	282	316	323	321	332	319
6	354	358	341	251	271	251	280	315	323	320	334	315
7	347	359	341	250	274	245	277	317	323	320	335	319
8	347	359	341	246	278	233	274	318	325	e322	e332	e355
9	348	359	337	248	276	239	272	319	327	319	335	340
10	348	358	337	248	278	231	274	319	326	321	337	342
11	346	359	328	255	280	222	277	318	321	321	311	344
12	347	359	326	254	280	219	280	319	326	318	305	343
13	348	360	326	244	276	226	282	319	332	318	325	347
14	350	362	334	256	276	224	285	320	323	322	320	347
15	350	366	338	263	275	230	287	321	325	324	330	350
16	351	367	339	276	275	231	293	322	330	326	335	353
17	352	350	339	276	274	233	307	321	332	332	337	353
18	353	347	e337	233	274	235	311	318	335	332	340	355
19	355	348	338	e245	274	235	315	317	332	323	340	344
20	354	338	336	e255	274	235	315	316	324	327	339	354
21	351	336	333	260	273	247	301	319	312	320	342	355
22	351	339	289	275	270	245	309	321	322	322	341	354
23	351	339	322	276	256	253	307	319	322	e320	342	354
24	353	336	322	278	266	256	309	324	321	318	342	354
25	354	343	333	278	247	260	309	327	323	326	342	355
26	354	343	340	279	253	263	308	323	323	328	341	355
27	356	342	341	279	270	259	314	318	323	329	342	355
28	355	343	335	274	272	252	316	322	322	330	341	355
29	353	344	332	280	270	252	315	319	323	328	344	354
30	353	344	321	281	---	254	310	322	325	332	346	354
31	351	---	314	284	---	263	---	326	---	334	346	---
MEAN	350	351	333	264	273	246	294	319	324	324	334	347
MAX	356	367	343	284	289	277	316	327	335	334	346	355
MIN	343	336	289	233	247	219	272	314	312	318	305	315

WTR YR 1992 MEAN 313 MAX 367 MIN 219

e Estimated

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	19.0	15.0	13.0	14.0	15.0	18.0	22.0	23.0	27.0	29.0	27.0
2	25.0	20.0	14.0	14.0	14.0	15.0	17.0	22.0	23.0	29.0	30.0	28.0
3	26.0	17.0	14.0	13.0	---	16.0	16.0	21.0	24.0	29.0	28.0	28.0
4	25.0	17.0	14.0	14.0	12.0	16.0	16.5	23.0	25.0	28.0	28.0	27.0
5	24.5	16.0	13.0	13.0	10.5	16.0	---	23.0	25.0	28.0	29.0	26.0
6	23.0	18.0	14.0	13.0	9.0	16.0	17.0	21.0	25.0	28.0	29.0	28.0
7	23.0	17.0	15.0	13.0	8.0	17.0	17.0	21.0	24.0	29.0	30.0	29.0
8	23.0	16.0	15.0	13.0	10.0	17.0	20.0	22.0	25.0	---	---	---
9	21.0	15.0	16.0	12.0	9.0	17.0	20.0	22.0	25.0	29.0	30.0	29.0
10	22.0	16.0	16.0	12.0	11.0	15.0	21.0	22.0	26.0	29.0	30.0	28.0
11	24.0	15.0	16.0	12.0	12.0	15.0	22.0	22.0	26.0	29.0	29.0	28.0
12	24.0	16.0	17.0	13.0	13.0	15.0	22.0	24.0	26.0	29.0	29.0	28.0
13	24.0	16.0	16.0	13.0	13.0	15.0	22.0	23.0	26.0	29.0	28.0	28.0
14	24.0	16.0	14.0	11.0	14.0	16.0	22.0	24.0	26.0	29.0	29.0	28.0
15	24.0	16.0	14.5	11.0	13.0	17.0	22.0	24.0	27.0	29.0	28.0	27.0
16	22.0	16.0	14.0	11.0	13.0	17.0	22.0	23.0	26.0	28.0	28.0	26.0
17	23.0	---	14.0	11.0	14.0	17.0	20.0	22.0	26.0	29.0	26.0	28.0
18	21.0	17.0	---	9.0	14.0	18.0	20.0	23.0	26.0	28.0	27.0	28.0
19	24.0	17.0	14.0	---	14.0	17.0	20.0	23.0	28.0	28.0	27.0	---
20	21.0	16.0	15.0	---	14.0	17.0	20.0	23.0	27.0	28.0	27.0	28.0
21	23.0	15.0	15.0	9.0	13.0	17.0	20.0	23.0	28.0	28.0	27.0	28.0
22	24.0	14.0	16.0	11.0	14.0	17.0	21.0	24.0	27.0	---	27.0	28.0
23	23.0	15.0	15.0	9.0	15.0	17.0	22.0	23.0	27.0	28.0	29.0	27.0
24	24.0	14.0	13.0	11.0	14.0	17.0	22.0	21.0	27.0	28.0	28.0	25.0
25	25.0	13.0	14.0	10.0	14.0	18.0	21.0	25.0	28.0	29.0	28.0	26.0
26	25.0	14.0	14.0	11.0	14.0	18.0	21.0	24.0	28.0	29.0	28.0	26.0
27	25.0	15.0	13.0	11.0	14.0	18.0	22.0	24.0	28.0	29.0	28.0	21.0
28	26.0	16.5	13.0	11.0	15.0	18.0	22.0	25.0	27.0	30.0	26.0	25.0
29	26.0	16.0	14.0	11.0	14.0	18.0	22.0	22.0	27.0	29.0	27.0	24.0
30	24.0	17.0	13.0	11.0	---	17.0	22.0	23.0	28.0	29.0	27.0	23.0
31	23.0	---	13.0	12.0	---	17.0	---	23.0	---	30.0	27.0	---
MEAN	24.0	16.0	14.5	11.5	13.0	16.5	20.5	23.0	26.0	28.5	28.0	27.0
MAX	26.0	20.0	17.0	14.0	15.0	18.0	22.0	25.0	28.0	30.0	30.0	29.0
MIN	21.0	13.0	13.0	9.0	8.0	15.0	16.0	21.0	23.0	27.0	26.0	21.0

WTR YR 1992 MEAN 20.5 MAX 30.0 MIN 8.0

08067000 TRINITY RIVER AT LIBERTY, TX

LOCATION.--Lat 30°03'27", long 94°49'05", Liberty County, Hydrologic Unit 12030203, at upstream side of upstream bridge on U.S. Highway 90 in Liberty, 345 ft downstream from Texas and New Orleans Railroad Co. bridge, and at mile 40.3.

DRAINAGE AREA.--17,468 mi².

PERIOD OF RECORD.--October 1938 to September 1940 (gage heights, discharge measurements, and some records of daily discharge), October 1940 to current year (high-water records only). Gage-height records collected in this vicinity since 1903 are contained in reports of the National Weather Service. Water-quality records.--Chemical and biochemical analyses: October 1970 to September 1972. Pesticide analyses: May 1971 to September 1972.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2.22 ft below National Geodetic Vertical Datum of 1929; unadjusted land-surface subsidence. Prior to Mar. 13, 1973, nonrecording gage at site 105 ft downstream at same datum.

REMARKS.--Records fair. Discharges for current year were computed using stage discharge relationship. During years with predominantly low releases from Livingston Reservoir, discharges are estimated using records for Trinity River near Romayor (station 08066500), intervening area computation, and discharge measurements. Estimated discharges below 10,000 ft³/s are not published. Considerable regulation of flow by Livingston Reservoir (station 08066190) 88.9 mi upstream. Many diversions above station for municipal supplies, industrial uses, and irrigation. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 114,000 ft³/s May 12, 1942 (gage height, 29.38 ft); minimum not determined (affected by tides); minimum gage height observed, 2.32 ft Nov. 24, 1970. Maximum gage height since at least 1903, 30.03 ft, May 23, 1990 (at 1700 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, 92,000 ft³/s Jan. 6 at 2300 hours (gage height, 29.62 ft); minimum discharge not determined (affected by tides); minimum gage height, not recorded.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	25400	78700	37500	50700	27300	---	22500	---	---	---
2	---	---	25400	83000	37300	51500	26200	---	24100	---	---	---
3	---	---	25100	86200	37300	51200	24600	---	25000	---	---	---
4	---	12600	24100	87000	38400	56100	22700	---	25200	---	---	---
5	---	13700	22300	87700	39300	64800	21800	---	25800	---	---	---
6	---	14400	20200	88300	40900	63600	22200	---	26200	---	---	---
7	---	15500	18000	86200	44000	64300	21700	---	26500	---	---	---
8	---	18100	16400	84000	47900	65000	20600	---	26700	10600	---	---
9	---	20500	15800	78400	51000	64500	18900	---	26500	11500	---	---
10	---	21900	16500	70900	52700	62000	17000	---	26400	11800	---	---
11	---	22700	16300	65800	52800	60600	15800	---	26300	11800	---	---
12	---	23200	15200	64300	53100	60000	14200	---	25700	11800	---	---
13	---	23500	13900	56700	53500	59200	13500	---	24900	11300	---	---
14	---	23900	13300	52000	51600	57000	13200	---	23600	---	---	---
15	---	24100	13100	48900	49900	53900	12600	---	22600	---	---	---
16	---	24700	13600	45900	46500	50200	11100	---	21000	---	---	---
17	---	25700	14200	43100	43200	47400	---	---	19500	---	---	---
18	---	26800	15200	41600	41500	44900	---	---	18400	---	---	---
19	---	27300	16000	40000	39600	42000	---	---	17400	---	---	---
20	---	27500	17300	38300	37100	40200	---	---	16800	---	---	---
21	---	27700	18600	36700	33600	39000	11300	---	15200	---	---	---
22	---	27600	25800	35700	31700	38100	16300	---	13100	---	---	---
23	---	27400	33200	35200	31400	37300	18100	---	10700	---	---	---
24	---	27300	36900	35500	31900	36700	18400	---	---	---	---	---
25	---	27200	39500	35500	33500	35800	18300	11400	---	---	---	---
26	---	27100	43500	35200	36000	34600	17100	13200	---	---	---	---
27	---	26700	49600	35400	39300	33400	14900	15500	---	---	---	---
28	---	26000	55400	35400	42800	32100	12600	17500	---	---	---	---
29	---	25700	60300	35900	48000	31100	10400	19200	---	---	---	---
30	---	25500	65500	36600	---	29700	---	21400	---	---	---	---
31	---	---	70400	37200	---	28400	---	22100	---	---	---	---

CAL YR 1991	TOTAL	---	MEAN	---	MAX	---	MIN	---	AC-FT	---		
WTR YR 1992	TOTAL	---	MEAN	---	MAX	---	MIN	---	AC-FT	---		

08067070 CWA CANAL NEAR DAYTON, TX

LOCATION.--Lat 29°57'40", long 94°48'36", Liberty County, Hydrologic Unit 12030203, at flume on left bank of Coastal Water Authority canal, 1,000 ft west of the Trinity River, 2 mi east of Farm Road 1409, and 7.4 mi south-east of Dayton.

PERIOD OF RECORD.--April 1981 to current year. Prior to October 1990, published as CIWA Canal near Dayton, TX.

GAGE.--Water-stage recorder. National Geodetic Vertical Datum of gage not determined.

REMARKS.--No estimated daily discharges. Records good. There are no known diversions between pumping plant and the gage. Water is pumped from the Trinity River for industrial and municipal use in the area.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	527	539	517	516	508	516	539	629	519	507	650	636
2	527	554	547	517	508	548	510	610	522	718	589	616
3	588	552	541	507	507	564	538	594	531	731	543	599
4	611	552	510	494	501	524	537	612	584	734	541	623
5	609	524	471	470	477	525	545	612	629	680	545	650
6	602	494	484	469	477	505	552	611	569	687	563	624
7	609	524	491	471	477	495	552	614	566	622	637	631
8	607	525	488	515	491	495	551	645	524	623	638	647
9	569	527	501	521	507	497	541	672	522	564	658	644
10	546	526	531	515	520	534	560	641	578	731	661	592
11	552	543	524	512	555	563	575	668	529	739	658	626
12	573	564	527	513	462	553	534	658	581	717	637	653
13	570	564	504	512	461	535	570	650	565	618	622	615
14	571	560	501	512	510	515	575	626	612	613	564	600
15	567	562	499	496	504	507	575	618	612	687	539	561
16	565	561	501	519	474	501	575	672	611	659	544	555
17	595	484	504	517	493	509	555	643	632	650	546	561
18	591	485	507	517	541	517	525	594	674	657	549	561
19	587	492	500	517	509	546	525	652	676	664	592	535
20	586	487	492	515	552	550	525	576	700	639	700	593
21	574	532	491	513	523	524	530	538	742	574	768	649
22	572	531	482	514	469	502	510	516	734	660	723	653
23	523	527	480	559	474	496	506	536	692	596	706	623
24	565	525	485	552	498	499	532	555	710	614	708	629
25	539	514	484	528	499	492	558	592	691	583	682	639
26	516	508	482	516	479	516	596	616	684	571	627	647
27	516	508	492	469	455	551	597	629	676	614	612	606
28	556	506	508	487	468	565	595	631	666	616	664	604
29	583	503	508	501	506	552	678	598	670	611	657	601
30	534	503	505	503	---	513	641	581	472	630	626	600
31	563	---	489	507	---	541	---	565	---	627	660	---
TOTAL	17593	15776	15546	15774	14405	16250	16702	18954	18473	19936	19409	18373
MEAN	568	526	501	509	497	524	557	611	616	643	626	612
MAX	611	564	547	559	555	565	678	672	742	739	768	653
MIN	516	484	471	469	455	492	506	516	472	507	539	535
AC-FT	34900	31290	30840	31290	28570	32230	33130	37600	36640	39540	38500	36440

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1992, BY WATER YEAR (WY)

MEAN	341	334	320	317	319	337	368	391	418	432	404	386
MAX	568	526	501	509	497	524	557	611	616	643	626	612
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992
MIN	226	236	219	233	226	235	275	273	303	293	237	251
(WY)	1985	1985	1983	1983	1983	1985	1982	1986	1983	1983	1983	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1982 - 1992	
ANNUAL TOTAL	182844		207191			
ANNUAL MEAN	501		566		364	
HIGHEST ANNUAL MEAN					566	1992
LOWEST ANNUAL MEAN					259	1983
HIGHEST DAILY MEAN	639	Sep 26	768	Aug 21	768	Aug 21 1992
LOWEST DAILY MEAN	233	Feb 21	455	Feb 27	52	Aug 18 1983
ANNUAL SEVEN-DAY MINIMUM	326	Feb 19	477	Feb 22	167	Aug 18 1983
ANNUAL RUNOFF (AC-FT)	362700		411000		263800	
10 PERCENT EXCEEDS	594		659		521	
50 PERCENT EXCEEDS	508		552		354	
90 PERCENT EXCEEDS	405		493		237	

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 miles west of State Highway 563, 1.9 miles north of Interstate Highway 10, and 2.7 miles northeast of Wallisville.

DRAINAGE AREA.--Not determined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1991 to September 1992.

GAGE.--Water-stage recorder. Datum of gage is 5.81 feet below National Geodetic Vertical Datum. Water temperature, air temperature, and rain gage located at station.

REMARKS.--Records good. Lake Charlotte is a shallow natural lake within the Trinity River delta.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 14.04 ft January 8, 1992 at 1815 hours.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	12.89	11.83	12.23	11.03	8.71	9.77	7.93	<7.30	<7.30
2	---	---	---	13.23	11.87	12.29	10.94	8.56	10.24	7.79	<7.30	<7.30
3	---	---	---	13.56	12.08	12.33	10.83	8.39	10.45	7.72	<7.30	<7.30
4	---	---	---	13.75	12.16	12.46	10.74	8.23	10.54	7.60	<7.30	---
5	---	---	---	13.87	12.11	13.18	10.75	8.10	10.60	7.50	<7.30	---
6	---	---	---	13.93	12.08	13.25	10.75	7.93	10.76	7.45	<7.30	---
7	---	---	---	13.95	12.10	13.11	10.67	7.83	10.81	7.46	<7.30	---
8	---	---	---	14.03	12.17	13.06	10.60	7.72	10.84	7.50	<7.30	---
9	---	---	---	13.89	12.24	13.07	10.48	7.63	10.84	7.59	<7.30	---
10	---	---	---	13.67	12.31	12.92	10.38	7.56	10.86	7.71	<7.30	---
11	---	---	---	13.42	12.37	12.87	10.23	7.54	10.85	7.81	<7.30	---
12	---	---	---	13.36	12.40	12.83	10.06	7.53	10.84	7.92	<7.30	---
13	---	---	---	13.05	12.39	12.76	9.83	7.43	10.77	8.02	<7.30	---
14	---	---	---	12.73	12.36	12.72	9.65	7.33	10.72	8.08	<7.30	---
15	---	---	9.91	12.48	12.33	12.56	9.51	7.28	10.66	8.04	<7.30	---
16	---	---	9.79	12.35	12.28	12.40	9.39	7.28	10.60	7.92	<7.30	---
17	---	---	9.72	12.30	12.24	12.29	9.21	7.40	10.49	7.78	<7.30	---
18	---	---	9.68	12.33	12.16	12.27	9.15	7.40	10.37	7.64	<7.30	---
19	---	---	9.70	12.26	12.08	12.17	9.12	7.39	10.24	7.52	<7.30	<7.30
20	---	---	10.03	12.20	12.00	12.06	8.96	7.40	10.07	7.53	<7.30	<7.30
21	---	---	10.29	12.03	11.84	12.01	8.79	7.44	9.94	7.44	<7.30	<7.30
22	---	---	10.45	11.95	11.81	11.95	8.87	7.46	9.73	7.32	<7.30	<7.30
23	---	---	10.72	11.83	11.75	11.86	9.11	7.48	9.45	7.33	<7.30	<7.30
24	---	---	10.91	11.75	11.64	11.82	9.25	7.49	9.14	7.30	<7.30	<7.30
25	---	---	11.25	11.73	11.59	11.77	9.27	7.53	8.86	<7.30	<7.30	<7.30
26	---	---	11.96	11.73	11.51	11.66	9.29	7.78	8.62	<7.30	<7.30	<7.30
27	---	---	12.28	11.88	11.60	11.59	9.30	8.02	8.44	<7.30	<7.30	<7.30
28	---	---	12.36	11.84	11.87	11.63	9.22	8.37	8.26	<7.30	<7.30	<7.30
29	---	---	12.46	11.81	12.11	11.51	9.17	8.65	8.12	<7.30	<7.30	<7.30
30	---	---	12.60	11.80	---	11.31	8.94	8.94	7.97	<7.30	<7.30	<7.30
31	---	---	12.67	11.81	---	11.18	---	9.33	---	<7.30	<7.30	---
MAX	---	---	---	14.03	12.40	13.25	11.03	9.33	10.86	8.08	7.30	---
MIN	---	---	---	11.73	11.51	11.18	8.79	7.28	7.97	7.30	7.30	---

CAL YR 1991 MAX --- MIN ---
WTR YR 1992 MAX --- MIN ---

< Actual value is known to be less than the value shown

08067118 LAKE CHARLOTTE NEAR ANAHUAC, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: December 1991 to current year.

INSTRUMENTATION.-- Water-quality monitor for specific conductance, air temperature and water temperature.

REMARKS.--No specific conductance record available due to instrumentation failure.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 36.5°C July 31, Aug. 1, 1992; minimum, 7.5°C Jan. 19,20, 1992.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 36.5°C July 31, Aug. 1; minimum, 7.5°C Jan. 19,20.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	---	---	---	11.5	11.0	11.5
2	---	---	---	---	---	---	---	---	---	12.0	11.0	11.5
3	---	---	---	---	---	---	---	---	---	12.5	11.5	12.0
4	---	---	---	---	---	---	---	---	---	11.5	11.5	11.5
5	---	---	---	---	---	---	---	---	---	12.0	12.0	12.0
6	---	---	---	---	---	---	---	---	---	12.0	12.0	12.0
7	---	---	---	---	---	---	---	---	---	12.5	12.0	12.5
8	---	---	---	---	---	---	---	---	---	13.0	12.5	13.0
9	---	---	---	---	---	---	---	---	---	13.0	12.5	12.5
10	---	---	---	---	---	---	---	---	---	12.5	12.5	12.5
11	---	---	---	---	---	---	---	---	---	12.5	11.5	12.0
12	---	---	---	---	---	---	---	---	---	11.5	11.0	11.5
13	---	---	---	---	---	---	---	---	---	12.0	11.0	11.5
14	---	---	---	---	---	---	---	---	---	11.0	10.5	10.5
15	---	---	---	---	---	---	16.0	14.0	15.0	10.5	9.5	10.0
16	---	---	---	---	---	---	14.0	13.0	13.5	9.5	8.5	9.0
17	---	---	---	---	---	---	13.5	13.0	13.0	8.5	8.5	8.5
18	---	---	---	---	---	---	14.0	13.5	13.5	8.5	8.0	8.5
19	---	---	---	---	---	---	13.5	13.0	13.5	8.0	7.5	8.0
20	---	---	---	---	---	---	14.5	13.0	13.5	8.0	7.5	7.5
21	---	---	---	---	---	---	15.5	14.5	15.0	8.0	8.0	8.0
22	---	---	---	---	---	---	17.5	15.5	16.5	10.5	8.5	9.5
23	---	---	---	---	---	---	17.5	16.5	17.0	10.5	10.0	10.0
24	---	---	---	---	---	---	16.0	14.0	15.0	11.0	9.5	10.0
25	---	---	---	---	---	---	14.0	13.0	13.5	11.0	10.0	10.5
26	---	---	---	---	---	---	13.5	12.0	13.0	10.5	10.0	10.5
27	---	---	---	---	---	---	12.0	11.5	12.0	11.5	10.5	11.0
28	---	---	---	---	---	---	11.5	11.5	11.5	11.5	11.5	11.5
29	---	---	---	---	---	---	11.5	11.0	11.5	11.5	11.0	11.5
30	---	---	---	---	---	---	11.5	11.0	11.5	11.5	11.5	11.5
31	---	---	---	---	---	---	11.5	11.0	11.5	11.5	11.0	11.0
MONTH	---	---	---	---	---	---	17.5	11.0	13.5	13.0	7.5	10.5

0806/118 LAKE CHARLOTTE NEAR ANAHUAC, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.0	11.0	11.0	17.0	15.0	16.0	20.0	18.5	19.0	25.5	22.5	23.5
2	11.5	11.0	11.0	17.0	15.5	16.0	19.0	17.0	18.0	26.5	23.0	24.5
3	12.0	11.5	12.0	18.0	16.0	16.5	17.5	16.0	16.5	28.0	24.0	26.0
4	12.0	11.5	12.0	17.5	17.0	17.5	18.5	16.5	17.5	26.5	25.0	25.5
5	11.5	10.5	11.0	18.0	17.0	17.5	---	---	---	30.0	23.5	26.0
6	11.5	10.0	10.5	18.5	16.5	17.5	19.5	16.0	17.5	26.5	21.5	24.5
7	11.5	10.0	11.0	19.5	17.5	18.0	20.0	17.0	18.0	23.0	19.0	21.0
8	11.0	10.0	10.5	18.5	18.0	18.0	20.0	16.5	18.0	26.5	19.5	23.0
9	10.5	10.0	10.5	18.5	18.0	18.5	21.0	17.5	19.0	24.5	21.5	23.0
10	11.0	10.5	10.5	18.0	16.0	17.0	22.0	18.5	20.0	24.5	22.0	23.5
11	11.5	11.0	11.0	16.0	14.5	15.0	22.0	20.0	21.0	26.5	22.5	24.0
12	12.5	11.0	12.0	15.5	14.5	14.5	23.5	20.5	21.5	28.5	24.0	26.0
13	13.0	12.5	12.5	15.5	14.5	15.0	24.5	22.0	23.0	31.0	25.0	28.0
14	14.5	13.0	14.0	16.5	15.0	15.5	25.5	22.5	24.0	31.5	26.0	28.5
15	15.5	14.5	14.5	17.5	16.0	16.5	25.5	23.0	24.5	29.0	27.0	28.0
16	14.5	14.0	14.0	18.0	17.0	17.5	25.0	23.5	24.0	27.0	25.0	26.0
17	16.5	14.0	15.0	18.0	17.5	18.0	24.5	23.0	24.0	24.5	23.0	24.0
18	17.5	15.0	16.0	19.0	17.5	18.0	23.5	22.5	23.0	26.5	22.5	24.0
19	16.0	15.0	15.5	19.5	18.0	18.5	24.5	22.0	23.0	28.0	23.5	26.0
20	15.5	14.5	15.0	18.5	17.5	18.0	24.0	22.0	23.0	29.0	24.5	27.0
21	14.5	14.0	14.0	17.5	17.0	17.5	24.5	21.0	22.5	29.5	25.5	27.5
22	15.5	14.0	15.0	19.0	17.0	17.5	25.5	22.0	23.5	28.0	25.5	26.5
23	15.5	15.0	15.5	17.0	16.0	16.5	26.0	23.5	24.5	27.5	25.0	26.5
24	15.5	15.0	15.0	17.0	16.0	16.5	26.5	24.5	25.5	34.0	25.5	29.0
25	15.5	14.0	15.5	19.0	17.0	18.0	25.5	23.5	24.5	32.0	28.0	30.0
26	14.5	13.5	14.0	19.0	17.5	18.5	24.0	21.5	22.5	30.0	27.0	28.5
27	15.0	13.5	14.0	19.0	18.0	18.5	25.0	21.5	22.5	28.0	26.0	27.0
28	16.0	14.0	15.0	18.5	18.0	18.0	23.5	22.0	22.5	28.0	24.5	26.0
29	16.0	15.0	15.5	19.0	17.5	18.0	23.0	21.5	22.0	25.5	22.0	23.5
30	---	---	---	19.5	18.0	19.0	24.0	21.0	22.0	22.5	21.0	22.0
31	---	---	---	19.5	18.0	18.5	---	---	---	22.0	21.5	22.0
MONTH	17.5	10.0	13.0	19.5	14.5	17.5	26.5	16.0	21.5	34.0	19.0	25.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.0	22.0	23.5	31.0	27.5	29.0	36.5	28.5	32.0	30.5	25.5	28.0
2	24.0	22.5	23.5	32.0	28.0	30.0	33.5	27.5	30.0	32.0	26.5	29.0
3	26.5	23.5	25.0	30.0	27.5	29.0	30.5	26.5	28.0	29.0	26.5	27.5
4	29.5	25.0	26.0	31.5	26.5	28.5	34.5	26.0	30.0	---	---	---
5	28.0	25.0	26.0	33.0	28.0	30.5	35.0	28.0	31.5	---	---	---
6	28.0	26.0	27.0	33.0	28.5	30.5	35.5	28.0	31.5	---	---	---
7	27.5	25.0	26.0	33.0	28.5	30.5	35.5	28.5	32.0	---	---	---
8	29.0	26.0	27.0	33.5	29.5	31.5	35.0	28.0	32.0	---	---	---
9	29.0	26.0	27.0	33.5	30.0	31.5	34.5	28.0	32.0	---	---	---
10	29.0	26.0	27.5	33.0	29.0	31.0	34.5	28.0	31.5	---	---	---
11	30.5	28.0	29.0	33.0	29.5	31.0	34.0	27.0	30.0	---	---	---
12	30.5	28.5	29.5	32.5	29.0	30.5	32.5	26.5	29.0	---	---	---
13	29.5	28.0	28.5	32.5	29.5	31.0	32.5	26.0	29.5	---	---	---
14	30.5	28.5	29.5	31.0	28.5	30.0	34.0	27.0	30.5	---	---	---
15	30.0	28.5	29.5	30.0	28.0	29.0	32.5	25.0	29.0	---	---	---
16	30.5	28.5	29.5	31.0	27.0	29.0	31.0	23.0	27.0	---	---	---
17	30.5	29.0	30.0	31.5	28.0	29.5	31.5	21.5	26.5	---	---	---
18	32.0	29.5	30.5	31.0	28.0	29.5	31.5	22.5	27.0	---	---	---
19	33.0	30.0	31.5	29.0	26.5	28.0	32.0	24.5	28.0	32.0	27.5	29.5
20	33.0	30.0	31.5	27.5	25.5	26.5	33.5	24.5	28.5	31.5	28.0	29.5
21	31.5	30.5	31.0	29.0	25.5	27.5	32.5	25.5	29.0	30.0	26.5	28.5
22	30.5	29.0	29.5	32.5	26.5	29.0	33.0	25.0	29.0	30.0	27.0	28.0
23	30.0	28.0	29.0	28.5	27.0	28.0	31.5	25.5	28.5	27.0	23.5	25.5
24	31.5	28.5	30.0	30.5	26.0	28.0	32.0	26.0	28.5	26.0	20.5	23.0
25	33.0	29.5	31.0	30.5	27.5	29.5	33.5	26.0	29.5	26.0	22.5	24.0
26	34.5	30.0	32.0	34.0	28.0	31.0	33.0	27.0	30.0	26.5	23.0	24.5
27	32.5	30.0	31.0	31.5	29.0	30.5	30.5	26.5	29.0	28.5	23.0	25.5
28	30.0	28.5	29.0	32.5	27.5	30.0	31.5	23.5	27.5	27.0	23.0	24.5
29	31.5	28.5	30.0	33.5	28.0	30.5	30.5	23.5	27.0	25.0	20.0	22.0
30	31.5	28.0	29.5	34.5	28.0	31.0	31.0	23.0	27.0	23.0	17.5	20.0
31	---	---	---	36.5	28.5	32.0	28.5	24.5	27.0	---	---	---
MONTH	34.5	22.0	28.5	36.5	25.5	29.5	36.5	21.5	29.5	32.0	17.5	26.0
YEAR	36.5	7.5	21.5									

08067500 CEDAR BAYOU NEAR CROSBY, TX
(Flood-hydrograph Partial-record Station)

LOCATION.--Lat 29°58'21", long 94°59'08", Liberty County, Hydrologic Unit 12040203, on right bank at downstream side of bridge on U.S. Highway 90 and 6.6 mi northeast of Crosby.

DRAINAGE AREA.--64.9 mi².

PERIOD OF RECORD.--March to August 1946, March 1963 to February 1964, May to August 1971 (discharge measurements only), October 1971 to current year.
Water-quality records.--Chemical, biochemical, and pesticide analyses: May 1971 to September 1979.

GAGE.--Water-stage recorder. Datum of gage is 31.31 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Stage discharge relationship is affected by seasonal vegetal growth during most years. Low flow is sustained by drainage from irrigated lands. There are diversions upstream from station for irrigation. Gage-height telemetry at station.

AVERAGE DISCHARGE.--21 years (water years 1972-92), 78.7 ft³/s (57,020 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,760 ft³/s June 5, 1981 (gage height, 23.92 ft); maximum gage height, 25.50 ft Mar. 5, 1992; no flow occasionally during pumping season of some years.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft³/s:

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 10	1900	2,590	21.54	Feb. 21	2100	2,000	19.83
Jan. 15	1000	2,220	20.49	Apr. 5	2400	2,410	21.05
Jan. 18	2100	2,220	20.50	Apr. 14	2200	1,930	19.58
Feb. 5	0300	2,170	20.34				

Because the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than continuous stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage of those events. The data collected for special reasons are called measurements at miscellaneous sites.

Streamflow data collected at partial-record stations where water-quality data other than observations of water temperature are not obtained are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations; the second is a table of annual maximum stage and (or) discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low and high flows are given in a third table. Discharge measurements and water-quality data collected at partial-record stations are presented in downstream order in the section of this report entitled "Gaging-station records."

Low-flow partial-record stations

Measurements of streamflow at low-flow partial-record stations that are not published in the gaging-station section are given in the following table. Most of the measurements of low flow were made during periods when streamflow was sustained primarily by ground-water discharge. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will indicate the low-flow potential of the stream. The years listed in the column headed "Period of record" identifies the water years in which measurements were made at the same or at practically the same site.

Discharge measurements made at low-flow partial-record station during water year 1992

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Red River Basin				
07299890	Lelia Lake Creek below Bell Creek near Hedley, Tex.	Lat 34'56'08", long 100'41'46", Donley County, 150 ft downstream from county road crossing, 1.0 mile downstream from mouth of Bell Creek, and about 5 mi north of Hedley.	74	1964-92	01-31-92	4.47
07307700	Roaring Springs near Roaring Springs, Tex.	Lat 33'51'12", long 100'51'53", Motley County, 3.5 mi south of Roaring Springs.	(a)	1937, 1943-92	1-16-92	1.32

a Not applicable.

Crest-stage partial-record stations

The following table contains annual maximum stage and (or) discharge at partial-record stations operated primarily for the purpose of defining the flooding characteristics of the streams. At stations where discharge is given, or is footnoted "to be determined", a stage-discharge relation has been, or will be, defined by discharge measurements obtained by current meter or by indirect procedures. Water-stage recorders are located at these flood-hydrograph stations to facilitate complete hydrograph definition. At stations where only the maximum stage is given (discharge column is dashed), data are generally collected for use in stage-frequency studies of flood-profile definition. Gages at these stations usually consist of a device that will register the peak stage occuring between inspections of the gage. The years used in the column "Period of record" identify the years in which the annual maximum has been determined.

Annual maximum stage and (or) discharge during water year 1992

Station name and number	Location	Drainage area (mi^2)	Period of record	Water Year 1992 maximum			Period of record maximum		
				Date	Gage height (ft)	Discharge (ft^3)	Date	Gage height (ft)	Discharge (ft^3)
Red River Basin									
McClellan Creek near McLean, Tex. 07301200	Lat 35°19'45", long 100°36'32", Gray County, on left bank at downstream side of bridge on State Highway 273, 5 mi upstream from mouth.	759	1967-80†	06-05-92	6.17	2,150	05-20-77	14.55	26,600
North Fork Red River nr Shamrock, Tex. 07301300	Lat 35°15'51", long 100°14'29", Wheeler County, on left bank at downstream side of bridge on U.S. Highway83, 2.5 mi north of Shamrock.	1,082	1951-63	05-21-92	4.75	5,440	05-29-75	7.47	20,400
Sabine River Basin									
Long Branch at Greenville, Tex. 08017210	Lat 33°07'20", long 96°05'54", Hunt County, on left edge of low-water channel 80 ft upstream from culvert under Moulton St. (Business Rte. U.S. Highway 69), 0.5 mi upstream from IH-30, and 1.3 mi southeast of Hunt County Courthouse in Greenville.	5.37	1986-92	10-29-91	12.16	--	10-29-91	12.16	--
Trinity River Basin									
Big Fossil Creek at Haltom City, Tex. 08048800	Lat 33°48'32", long 97°15'02", 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 downtown section of Fort Worth.	52.8	1960-73† 1974-84ϕ 1985-92	12-20-91	13.28	--	09-07-62	26.90	27,000
Cedar River Basin									
Cedar Bayou near Baytown, Tex. 08067510	Lat 29°46'12", long 94°54'59", Chambers-Harris County Line, at bridge on State Highway 146, 0.2 mi downstream from Cary Bayou, 0.2 mi upstream from Saw Pit Gully, and 4.3 mi northeast of Baytown.	169	1984-92	02-04-92	*3.42	--	06-26-89	*7.19	--

u Unknown
* Elevation, in feet.
† Operated as a continuous-record station.
ϕ Operated as an unpublished stage-only station.

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table:

Discharge measurements made at miscellaneous sites during water year 1992

Station no.	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Trinity River Basin				
West Fork Trinity River	Trinity River	Lat 32°46'49", long 97°25'05", Tarrant County, Hydrologic Unit 12030102, at bridge on meandering road in Fort Worth, 2.1 mi downstream from Lake Worth Dam and 5.7 mi northwest of Post Office Building on Lancaster Street in downtown area of Fort Worth.	d2,064	1949*, 1952-53*, 1990	05-03-90 05-07-90 05-14-90 05-16-90 05-18-90 05-21-90	20,400 20,100 9,730 7,110 2,600 1,030
Trinity River	Gulf of Mexico	Lat 32°37'03", long 96°37'19", Dallas County, at bridge on South Belt Line Road, 4.2 mi northeast of Wilmer, Tex. and 6.5 mi upstream from Tenmile Creek.	--	1974, 1989-90	10-05-89	666

d Drainage area of Lake Worth dam.
* Although measurement was at a slightly different site location, the drainage area is comparable to prior miscellaneous measurement.

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October 1, 1978

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

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

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

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