Water Resources Data
Texas
Water Year 2004

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

By Susan C. Aragon Long, Brian D. Reece, and Deanna R. Eames

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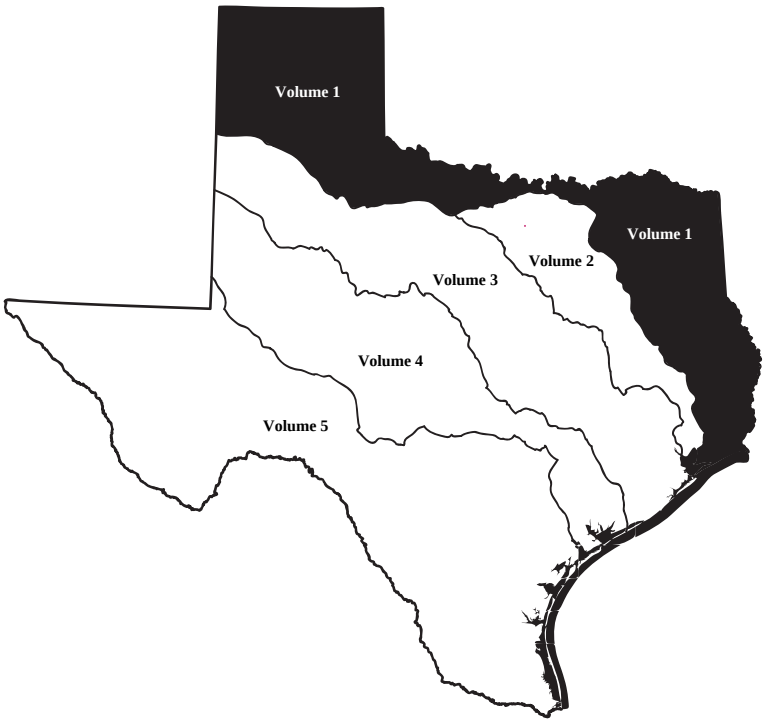

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Gale A. Norton, Secretary

U.S. Geological Survey
Charles G. Groat, Director

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

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PREFACE

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

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

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

Mike E. Dorsey
Addis M. Miller III
Jimmy G. Pond
Timothy H. Raines
Debra A. Sneck-Fahrer
John W. Unruh
Ken VanZandt

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

Houston Subdistrict Office

Dexter W. Brown
J. Pat Bruchmiller
Mike R. Burnich
Al Campodonico
Jeff W. East
Shawn M. French
Lee B. Goldstein
Jimmy E. Hopkins
Mark C. Kasmarek
Patrick O. Keefe
Christina Kala
Wesley D. Meehan
Jeanette H. Oden
Timothy D. Oden
Edna M. Paul
Joseph Sullivan
J. Gilbert Stuart

San Antonio Subdistrict Office

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

Austin Field Office

Michael G. Canova
Matthew M. Charts
Rachael M. Daigle
Michael L. Greenslate
Venezia Chavez
Randy A. Samuelson
Jonathan W. Snatic
Milton W. Sunvison
K. Craig Weiss

Fort Worth Field Office

Kent D. Becher
Jack D. Benton
Richard E. Besse
Dana A. Blanchette
Wendell L. Bradford
Judith H. Donohue
Wilfredo Garcia-Garcia
Glenn R. Harwell
Anthony J. McGlone
Roger K. Trader
David V. Tudor

Wichita Falls Field Office

Stanley Baldys
Gary F. Burke
Monti M. Haynie
Laith P. Hairell
David M. Holmes
Samuel W. Kelly
Jackie D. Kelly
Heather L. Null
Keith R. Snider

San Angelo Field Office

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

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S.C. Aragon Long, B.D. Reece, and D.R. Eames

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USGS Texas Water Science Center
8027 Exchange Dr.
Austin, TX 78754-4733

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13. ABSTRACT (Maximum 200 words)

Water-resources data for the 2004 water year for Texas are presented in six volumes, and consist of records of stage, discharge, and water quality of streams and canals; stage, contents, and water-quality of lakes and reservoirs; and water levels and water quality of ground-water wells. Volume 1 contains records for water discharge at 72 gaging stations; stage only at 3 gaging stations; elevation at 29 lakes and reservoirs; content at 6 lakes and reservoirs; and water quality at 26 gaging stations. Also included are data for 9 partial-record stations comprised of 6 flood-hydrograph and 3 low-flow stations. Also included are lists of discontinued surface-water discharge or stage-only stations and discontinued surface-water-quality stations. Additional water data were collected at various sites, not part of the systematic data-collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating Federal, State, and local agencies in Texas. Records for a few pertinent stations in the bordering States also are included.

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

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TABLES

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

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

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

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

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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Punta De Agua Creek near Channing (d)	07227448	3,568	1968-73
East Cheyenne Creek Tributary near Channing (e)	07227460	1.60	1965-74
Canadian River at Tascosa (d)	07227470	18,536	1969-77
Tecovas Creek Tributary near Bushland (e)	07227480	1.27	1966-74
Dixon Creek near Borger (d)	07227920	134	1974-89
White Woman Creek Tributary near Darrouzett (e)	07234150	4.03	1966-74
Tierra Blanca Creek above Buffalo Lake near Umbarger (d)	07295500	1,968	1939-54, 1967-73
Prairie Dog Town Fork Red River near Canyon (d)	07297500	3,369	1924-26, 1938-49
Palo Duro Creek near Canyon (e)	07297000	982	1942-54
Middle Tule Draw near Tulia (e)	07297920	313	1967-74
North Tule Draw at Reservoir near Tulia (d)	07298000	189	1939-40, 1941-73
Rock Creek Tributary near Silverton (d)	07298150	13.7	1966-74
Tule Creek near Silverton (d)	07298200	1,150	1964-86
Mulberry Creek near Brice (d)	07299000	534	1949-51
Prairie Dog Town Fork Red River near Lakeview (d)	07299200	6,792	1963-80
Little Red River near Turkey (d)	07299300	139	1968-81
Prairie Dog Town Fork Red River near Estelline (d)	07299500	7,293	1924-25, 1938-47
Prairie Dog Town Fork Red River below Mountain Creek near Estelline (e)	07299505	7,341	1974-77
Prairie Dog Town Fork Red River above Jonah Creek near Estelline (e)	07299510	7,533	1974-77
Jonah Creek at Weir near Estelline (d)	07299512	65.5	1974-82
Jonah Creek below Weir near Estelline (d)	07299514	66.6	1974-76
Jonah Creek at mouth near Estelline (d)	07299516	76	1974-76
Salt Creek near Estelline (d)	07299530	142	1974-79
Red River near Quanah (d)	07299570	8,321	1960-82
North Groesbeck Creek Tributary near Kirkland (d)	07299575	0.16	1966-74
Wanderers Creek at Odell (e)	07299750	199	1949-50, 1952-89
Salt Fork Red River near Clarendon (d)	07299850	457	1960-64
Lelia Lake Creek near Hedley (e)	07299900	86.0	1951-70
Salt Fork Red River near Hedley (e)	07299930	744	1951, 1956-62
Oklahoma Draw Tributary near Hedley (e)	07299940	1.15	1965-74
Sweetwater Creek near Wheeler (e)	07301400	164	1951-64
Doodlebug Creek near Wheeler (e)	07301405	0.19	1967-73
Quitaque Creek near Quitaque (d)	07307500	293	1945-59
North Pease River near Childress (d)	07307600	1,434	1973-79
North Pease River near Kirkland (e)	07307660	1,554	1973-79
Roaring Springs near Roaring Springs (e)	07307700	N/A	1937, 1943-95
Cottonwood Creek Tributary near Afton (e)	07307720	0.68	1967-74
Middle Pease River at Highways 62 and 83 near Paducah (d)	07307750	1,086	1973-79
Middle Pease River near Paducah (d)	07307760	1,123	1980-82
Middle Pease River near Kirkland (e)	07307780	1,250	1973-79
Canal Creek near Crowell (e)	07307950	49.0	1968-70, 1978-79
Pease River near Crowell (d)	07308000	3,037	1924-47
Plum Creek near Vernon (e)	07308220	4.99	1967-74
North Fork Wichita River near Crowell (d)	07311622	591	1971-76

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Middle Fork Wichita River near Truscott (d)	07311648	161	1971-76
South Fork Wichita River near Guthrie (d)	07311780	239	1952-54, 1956-57 1971-76
South Fork Wichita River at Ross Ranch near Benjamin (d)	07311790	499	1971-79
Wichita River at State Highway 25 near Kamay (d)	07312130	2,182	1996-2000
Beaver Creek Tributary near Crowell (e)	07312140	3.43	1966-74
Wolf Creek near Iowa Park (e)	07312300	8.13	1966-74
North Fork Little Wichita River Tributary near Archer City (e)	07314200	0.10	1966-74
Little Wichita River near Henrietta (d)	07315000	1,037	1953-79
Little Wichita River near Ringgold (d)	07315400	1,350	1959-65
Farmers Creek near Saint Jo (e)	07315550	0.82	1966-74
Mineral Creek near Sadler (d)	07316200	26.0	1968-77
Sandy Creek near Sadler (e)	07316230	24.0	1968-74
Bois D'Arc Creek near Randolph (d)	07332600	72.0	1963-85
Cooper Creek near Bonham (e)	07332602	6.21	1966-74
Sanders Creek near Chicota (d)	07335400	175	1968-86
Little Pine Creek near Kanawha (d)	07336750	75.4	1969-80
Pecan Bayou near Clarksville (d)	07336800	100	1962-77
Red River near DeKalb (d)	07336820	47,348	1967-98
McKinney Bayou near Leary (e)	07336940	3.33	1966-73
Barkman Creek near Leary (e)	07336950	37.0	1958-64
Nelson Branch near Leonard (e)	07342450	0.22	1966-74
South Sulphur River near Commerce (d)	07342470*	189	1980-91
Cuthand Creek near Bogata (d)	07343300	69	1964-74
Dial Branch near Bagwell (e)	07343350	1.00	1966-74
White Oak Creek near Mt. Vernon (e)	07343480	434	1966, 1969-75
White Oak Creek below Talco (d)	07343800	579	1938-50
Buck Creek near Cookville (e)	07343900	0.78	1966-74
Sulphur River near Darden (d)	07344000	2,774	1924-56
Sulphur River near Texarkana (d)	07344210	3,443	1980-85
Big Cypress Creek near Winnsboro (d)	07344482	27.2	1974-92
Dragoo Creek near Mt. Pleasant (e)	07344490	4.27	1967-74
Williamson Creek near Pittsburg (e)	07344600	7.11	1967-74
Boggy Creek near Daingerfield (d)	07345000	72.0	1943-77
Ellison Creek Reservoir near Lone Star (e)	07345500	37.0	1943-62, 1974-89
Cypress Creek Tributary near Jefferson (e)	07346010	0.21	1966-74
Taylor Branch near Smithland (e)	07346072	0.73	1966-74
Big Cypress Creek near Karnack (e)	07346085	2,157	1980-85
Frazier Creek near Linden (d)	07346140	48.0	1965-91
Sabine River near Emory (d)	08017500	888	1952-73
Burnett Branch near Canton (e)	08017700	0.33	1966-74
Grand Saline Creek near Grand Saline (d)	08018200	91.4	1968-73
Burke Creek near Yantis (d)	08018730	33.1	1979-89
Dry Creek near Quitman (e)	08018950	63.6	1968-75
Lake Winnsboro near Winnsboro (e)	08019300	27.1	1962-86
Big Sandy Creek near Hawkins (e)	08019430	196	1980-82
Prairie Creek near Gladewater (d)	08020200	48.9	1968-77
Sabine River near Longview (d)	08020500	2,947	1904-07, 1924-33
Rabbit Creek at Kilgore (d)	08020700	75.8	1964-77
Grace Creek Tributary at Longview (e)	08020800	5.05	1967-74
Mill Creek near Henderson (d)	08020960	20.3	1979-81
Mill Creek near Longview (d)	08020980	47.9	1979-81
Tiawichi Creek near Longview (d)	08020990	62.7	1978-81
Cherokee Bayou near Elderville (d)	08021000	120	1940-49
Sabine River near Tatum (d)	08022000	3,493	1939-78,
" " " " (e)			1979-82
Redmon Branch near Hallesville (e)	08022010	0.46	1966-74

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Eight Mile Creek near Tatum (e)	08022050	106	1962-71
Martin Creek near Tatum (d)	08022070	148	1974-96
Martin Creek near Beckville (e)	08022080	192	1962-71
Murvaul Bayou near Gary (d)	08022300	134	1958-83
Socagee Creek near Carthage (d)	08022400	82.6	1962-73
Tenaha Creek near Shelbyville (d)	08023200	97.8	1952-81
Dorsey Branch near Milam (e)	08024290	0.70	1967-74
Patroon Bayou near Milam (e)	08024300	130	1952-54, 1959-63
Sabine River near Milam (d)	08024400	6,508	1924-25, 1939-68
Palo Gaucho Bayou near Hemphill (d)	08024500	123	1952-65
Housen Bayou near Yellowpine (e)	08025250	92.1	1952-54, 1957, 1959-63
Sandy Creek near Yellowpine (e)	08025300	135	1952-54, 1957, 1959-63
Mill Creek near Burkeville (d)	08025307	18.0	1974-79
Little Cow Creek below McGraw Creek near Burkeville (e)	08026500	112	1952-58
Moore Branch near Newton (e)	08028505	3.77	1967-74
Nichols Creek near Buna (e)	08029750	54.4	1959-64
Cypress Creek near Buna (d)	08030000	69.2	1952-83
Adams Bayou Tributary near Deweyville (e)	08030700	12.4	1966-74
Bethlehem Branch near Van (e)	08031100	1.09	1966-74
Kickapoo Creek near Brownsboro (d)	08031200	232	1962-89
Neches River near Reese (d)	08031500	851	1924-27
Hurricane Creek Tributary near Palestine (e)	08032100	0.39	1966-74
One Arm Creek near Maydelle (e)	08032250	6.01	1967-74
Squirrel Creek near Elkhart (e)	08032300	1.57	1967-74
Neches River near Alto (d)	08032500	1,945	1944-79
Piney Creek Tributary near Pennington (e)	08033250	1.17	1967-74
Piney Creek near Groveton (d)	08033300	79 .0	1962-89
Shawnee Creek Tributary near Huntington (e)	08033450	0.52	1966-74
Greenwood Creek Tributary near Colmesneil (e)	08033480	0.15	1966-74
Bowles Creek near Selman City (e)	08033600	14.5	1968-85
Striker Creek near Summerfield (d)	08033700	146	1941-49
Striker Creek Reservoir near New Salem (e)	08033800	148	1941-49
East Fork Angelina River near Cushing (d)	08033900	158	1964-89
Mud Creek at Ponta (d)	08035000	475	1924-27
Angelina River near Lufkin (d)	08037000	1,600	1924-34, 1939-79
Bayou Lanana at Nacogdoches (d)	08037050	31.3	1965-86, 1988-93
Gingham Branch near Mt. Enterprise (e)	08037300	0.90	1967-74
Arenoso Creek near San Augustine (d)	08037500	75.3	1938-40
Angelina River near Zavalla (d)	08038500	2,892	1952-65
Ayish Bayou at San Augustine (d)	08039000	15.8	1924-25
Angelina River at Ebenezer (d)	08039500	3,486	1928-51, 1967-73
Little Sandy Creek Tributary near Jasper (e)	08039900	0.46	1967-74
Drakes Branch near Spurger (e)	08041400	5.03	1967-74
West Fork Double Bayou near Anahuac (e)	08042550	6.25	1967-74
North Creek SWS No. 28-A near Jermyn (e)	08042650	6.82	1972-80
North Creek near Jacksboro (d)	08042700	21.6	1956-80
Beans Creek at Wizard Wells (e)	08042900	29.6	1993-95
West Fork Trinity River at US Highway 380 at Bridgeport (d)	08043100	1,113	1984-89
West Fork Trinity River at Bridgeport (d)	08043500	1,147	1908-30
Big Sandy Creek near Bridgeport (d)	08044000	333	1937-95

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Garrett Creek near Paradise (e)	08044135	52.5	1992-95
Salt Creek near Paradise (e)	08044140	52.7	1992-95
Walker Creek near Boyd (e)	08044200	2.95	1965-74
West Fork Trinity River at Lake Worth, Fort Worth (d)	08045500	2,069	1924-34
Clear Fork Trinity River near Aledo (d)	08046000	251	1947-75
Marine Creek at Fort Worth (d)	08048500	16.8	1950-58
Sycamore Creek at I.H. 35W, Fort Worth (d)	08048520	17.7	1970-76
Sycamore Creek Trib. above Seminary Street Shopping Center, Fort Worth (d)	08048530	0.97	1970-76
Sycamore Creek Trib. at I.H. 35W, Fort Worth (d)	08048540	1.35	1970-76
Dry Branch at Fain Street at Fort Worth (d)	08048600	2.15	1969-76
Big Fossil Creek at Haltom City (d)	08048800*	52.8	1959-73
Little Fossil Creek at I.H. 820, Fort Worth (e)	08048820	5.64	1969-73
Little Fossil Creek at Mesquite Street, Fort Worth (d)	08048850	12.3	1969-76
Deer Creek Tributary near Crowley (e)	08048900	5.86	1967-74
Village Creek at Kennedale (d)	08048980	100	1986-89
Village Creek near Handley (d)	08049000	126	1925-30
Big Bear Creek near Grapevine (d)	08049550	29.6	1967-79
Trigg Branch at DFW Airport near Euless (d)	08049565	1.73	1983-87
Mountain Creek near Cedar Hill (d)	08049600	119	1961-84
Mountain Creek near Duncanville (e)	08049900	225	1971-90
Mountain Creek near Grand Prairie (d)	08050000	273	1925-33
Elm Fork Trinity River SWS 6-O near Muenster (e)	08050200	0.77	1957-73
Elm Fork Trinity River near Muenster (d)	08050300	46 .0	1957-73
Elm Fork Trinity River near Sanger (d)	08050500	381	1949-85
Isle Du Bois Creek near Pilot Point (d)	08051000	266	1949-85
Elm Fork Trinity River near Pilot Point (d)	08051130	692	1985-92
Elm Fork Trinity River above Aubrey (e)	08051190	684	1981-89
Elm Fork Trinity River near Denton (d)	08052000	1,084	1924-27
Lake Dallas near Lake Dallas (e)	08052500	1,165	1929-57
Little Elm Creek SWS #10 near Gunter (e)	08052630	2.10	1966-72
Little Elm Creek near Celina (d)	08052650	46.7	1966-76
Hickory Creek at Denton (d)	08052780	129	1985-87
Indian Creek at Hebron Parkway at Carrollton (d)	08053010	14.7	1987-90
Furneaux Creek at Josey Lane at Carrollton (d)	08053030	4.10	1987-90
Hutton Branch at Broadway at Carrollton (e)	08053090	9.10	1987-90
Jones Valley Creek Tributary near Forestburg (e)	08053100	1.70	1966-74
Denton Creek near Roanoke (d)	08054000	621	1924-28, 1939-55
Gamble Branch near Argyle (e)	08054200	0.50	1965-74
Joe's Creek at Royal Lane, Dallas (e)	08055580	1.94	1973-78
Joes Creek near Dallas (e)	08055600	7.51	1964-79
Bachman Branch at Dallas (d)	08055700	10 .0	1964-79
Turtle Creek at Dallas (d)	08056500	7.98	1952-80, 1984-91
Coombs Creek at Sylvan Avenue, Dallas (e)	08057020	4.75	1965-78
Cedar Creek at Bonnie View Road, Dallas (e)	08057050	9.42	1965-78
White Rock Creek at Keller Springs Road, Dallas (d)	08057100	29.4	1961-79
McKamey Creek at Preston Road, Dallas (e)	08057120	6.77	1962-78
Rush Branch at Arapaho Road, Dallas (e)	08057130	1.22	1973-78
Cottonwood Creek at Forest Lane, Dallas (e)	08057140	8.50	1962-78
Floyd Branch at Forrest Lane, Dallas (e)	08057160	4.17	1962-78
White Rock Creek at White Rock Lake, Dallas (d)	08057300	100	1963-79
Ash Creek at Highland Road, Dallas (e)	08057320	6.92	1963-78
Forney Creek at Lawnview Avenue, Dallas (e)	08057340	1.84	1963-72
White Rock Creek at Scyene Road, Dallas (d)	08057400	122	1963-79
Elm Creek at Seco Boulevard, Dallas (e)	08057415	1.25	1973-78
Fivemile Creek at US Highway 77 West, Dallas (e)	08057420	14.3	1965-78
Woody Branch at US Highway 77 West, Dallas (e)	08057425	10.3	1965-78
Fivemile Creek at Lancaster Road, Dallas (e)	08057430	37.9	1965-78
Newton Creek at Interstate Highway 635, Dallas (e)	08057435	5.91	1974-78
Whites Branch at Interstate Highway 635, Dallas (e)	08057440	2.53	1974-78

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Trinity River near Wilmer (d)	08057448*	6,387	1998-2002
Tenmile Creek at State Highway 342 at Lancaster (d)	08057450	52.8	1970-79
Honey Creek SWS #11 near McKinney (e)	08057500	2.14	1952-73
Honey Creek SWS #12 near McKinney (e)	08058000	1.26	1952-77
Honey Creek near McKinney (d)	08058500	39	1951-73
East Fork Trinity River near McKinney (d)	08059000	190	1949-75
Arls Branch near Westminster (e)	08059200	0.52	1965-74
Sister Grove Creek near Princeton (d)	08059500	113	1949-75
East Fork Trinity River above Pilot Grove near Lavon (d)	08060000	324	1949-53
East Fork Trinity River near Lavon (d)	08061000	773	1954-89
East Fork Trinity River near Rockwall (d)	08061500	840	1924-54
Duck Creek at Buckingham Road, Garland (e)	08061620	8.05	1969-76
Duck Creek near Garland (d)	08061700	31.6	1958-93
South Mesquite Creek at State Highway 352, Mesquite (e)	08061920	13.4	1969-76
South Mesquite Creek at Mercury Road, North Mesquite (d)	08061950	23 .0	1969-79
Cedar Creek Reservoir Spillway Outflow near Trinidad (d)	08062650	1,007	1966-82
Bachelor Creek near Terrell (e)	08062850	13.0	1967-74
Kings Creek near Kaufman (d)	08062900	233	1963-87
Lacey Fork near Mabank (d)	08062980	118	1983-84
Cedar Creek near Mabank (d)	08063000	733	1939-66
South Twin Creek near Eustace (d)	08063003	27.4	1983-84
Red Oak Branch near Eustace (e)	08063005	0.90	1966-74
Cedar Creek at Trinidad (d)	08063020	1,011	1965-71
Briar Creek Tributary near Corsicana (e)	08063180	0.72	1966-74
Pin Oak Creek near Hubbard (d)	08063200	17.6	1956-72
Richland Creek near Richland (d)	08063500	734	1939-88
Alvarado Branch near Alvarado (e)	08063550	0.84	1966-74
Kings Branch near Reagor Springs (e)	08063620	0.62	1966-74
Chambers Creek near Corsicana (d)	08064500	963	1939-84
Richland Creek near Fairfield (d)	08064600	1,957	1972-83
Saline Branch Tributary near Bethel (e)	08064630	0.22	1967-74
Catfish Creek near Tennessee Colony (d)	08064800	207	1962-89
Mayes Branch near Latexo (e)	08065320	4.26	1967-74
Trinity River near Midway (d)	08065500	14,450	1939-71
Caney Creek near Madisonville (d)	08065700	112	1963-77
Nelson Creek near Riverside (e)	08065950	86.4	1949, 1965, 1970-74
Harmon Creek near Huntsville (e)	08065975	89.2	1973-81
West Carolina Creek near Oakhurst (e)	08066050	15.2	1949, 1966-73
White Rock Creek near Trinity (e)	08066100	222	1974-85
White Rock Creek at Trilady Park near Trinity (e)	08066130	228	1966-74
Tantaboque Creek near Trinity (e)	08066140	61.3	1966-73
Caney Creek near Groveton (e)	08066145	41.4	1966-73
Brushy Creek near Onalaska (d)	08066150	29.1	1966-70
Rocky Creek near Onalaska (e)	08066180	40.6	1966-73
Livingston Reservoir outflow weir near Goodrich (d)	08066191	16,583	1969-94
Long King Creek near Goodrich (d)	08066210	220	1972-81
Bluff Creek Tributary near Livingston (e)	08066280	0.62	1965-74
Big Creek near Shepherd(e)	08066400	38.8	1966-89
Gaylor Creek near Moss Hill (e)	08066800	32.3	1966-73
Devers Canal near Liberty (d)	08067080	N/A	1972-82
Goose Creek near McNair (e)	08067520	6.70	1963-65,
Welch Branch near Huntsville (e)	08067550	2.35	1965-74
Lake Conroe near Montgomery (e)	08067580	445	1973-76
Lake Conroe at Outflow Weir near Conroe (d)	08067610	445	1974, 1977-89
Caney Creek near Dobbin (d)	08067700	40.4	1963-65
Landrum Creek Tributary near Montgomery (e)	08067750	0.13	1965-74

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Lake Creek near Conroe (e)	08067900*	291	1969-89
West Fork San Jacinto River near Porter (e)	08068100	970	1970-76
Mill Creek Tributary near Dobbin (e)	08068300	4.07	1967-73
Swale No. 8 at Woodlands (e)	08068438	0.55	1975-76, 1980-88
Spring Creek at Spring (d)	08068520	419	1975-95
Spring Creek near Humble (e)	08068600	435	1971-76
Cypress Creek at Sharp Road near Hockley (d)	08068700*	80.7	1975-85
Cypress Creek near Cypress (e)	08068750	138	1971-76
Cypress Creek at Stuebner-Airline Road near Westfield (d)	08068900*	248	1982-87
Cypress Creek near Humble (e)	08069200	319	1971-76
West Fork San Jacinto River near Humble (d)	08069500	1,741	1929-54
Bear Creek near Cleveland (e)	08069850	1.46	1967-73
Caney Creek near New Caney (e)	08070600	178	1970-76
Peach Creek near New Caney (e)	08071100	155	1970-76
Tarkington Bayou near Dayton (e)	08071200	142	1964-76
Luce Bayou near Huffman (e)	08071300	226	1971-76
San Jacinto River near Huffman (d)	08071500	2,800	1937-53
Buffalo Bayou near Clodine (e)	08072400	84.2	1974-85
Bettina Street Ditch at Houston (e)	08073630	1.37	1979-85
Stony Brook Street Ditch at Houston (e)	08073750	0.50	1967-72
Bering Ditch at Woodway Drive, Houston (e)	08073800	2.77	1965-73
Cole Creek at Guhn Road at Houston (e)	08074100	7.05	1964-72
Bingle Road Storm Sewer at Houston (e)	08074145	0.21	1980-88
Cole Creek at Deihl Road at Houston (d)	08074150*	7.50	1964-86
Brickhouse Gully at Clarblak Street at Houston (e)	08074200	2.56	1965-83
Brickhouse Gully at Costa Rica Street at Houston (d)	08074250*	11.4	1964-81
Lazybrook Street Storm Sewer, Houston (e)	08074400	0.13	1978-88
Buffalo Bayou at Main St., Houston (d)	08074600	339	1962-94
Buffalo Bayou at McKee Street, Houston (d)	08074610	454	1992-2000
Buffalo Bayou at 69th Street, Houston (e)	08074700	463	1961-86
Brays Bayou at Addicks-Clodine Rd., Houston (e)	08074750	0.87	1974-77
Brays Bayou at Alief Road, Alief (e)	08074760*	12.9	1977-85
Keegans Bayou at Keegans Road near Houston (e)	08074780*	8.63	1964-71
Keegans Bayou at Roark Road near Houston (d)	08074800*	12.7	1964-85
Bintliff Ditch at Bissonnet Street, Houston (e)	08074850	4.29	1968-82
Willow Waterhole Bayou at Landsdowne Street, Houston (e)	08074900	3.81	1965-72
Hummingbird Street Ditch at Mullins Street, Houston (e)	08074910	0.32	1979-84
Brays Bayou at Scott Street, Houston (e)	08075100	106	1971-81
Sims Bayou at Carlsbad Street, Houston (e)	08075300	3.81	1964-72
Sims Bayou at MLK Blvd., Houston (e)	08075470	48.4	1978-89
Sims Bayou at Houston (d)	08075500*	63.0	1953-95
Berry Bayou at Gilpin Street, Houston (e)	08075550	2.87	1965-84
Berry Bayou Tributary at Globe Street, Houston (e)	08075600	1.58	1965-72
Berry Bayou at Galveston Road, Houston (e)	08075700	4.86	1965-72
Hunting Bayou Tributary at Cavalcade Street, Houston (e)	08075750	1.20	1965-72
Hunting Bayou at Falls Street, Houston (e)	08075760	2.75	1964-84
Halls Bayou at Deertrail Street at Houston (e)	08076200	8.69	1965-84
Carpenters Bayou near Channelview (e)	08076900	25.8	1964, 1971-93
Clear Creek near Pearland (d)	08077000	38.8	1944-45, 1946-60, 1963-94
Clear Creek Tributary at Hall Road, Houston (e)	08077100	1.31	1965-86
Clear Creek at Friendswood (d)	08077540	99.6	1994-97
Cowart Creek near Friendswood (e)	08077550	18.0	1965-74
Clear Creek near Friendswood (e)	08077600*	122	1966-94
Armand Bayou near Genoa (e)	08077620	18.2	1968, 1971-73
Highland Bayou at Hitchcock (e)	08077700	15.6	1963-82
Flores Bayou near Danbury (e)	08078700	23.3	1967-72

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Oyster Creek near Angleton (d)	08079000	171	1945-80
North Fork Double Mountain Fork Brazos River at Lubbock (d)	08079500	5,300	1940-49,
North Fork Double Mountain Fork Brazos River above Buffalo Springs nr Lubbock (e)	08079530	5,578	1952-54, 1957, 1962, 1967-76
Buffalo Springs Lake near Lubbock (e)	08079550	236	1967-77
Barnum Springs Draw near Post (e)	08079570	4.99	1965-73
North Fork Double Mountain Fork Brazos River near Post (d)	08079575	5,790	1984-93
Rattlesnake Creek near Post (e)	08079580	2.77	1966-74
Double Mountain Fork Brazos River near Rotan (d)	08080000	8,536	1950-51
Guest-Flowers Draw near Aspermont (e)	08080510	3.02	1965-74
McDonald Creek near Post (d)	08080540	103	1966-78
Callahan Draw near Lockney (e)	08080750	37.5	1966-77
White River near Crosbytown (e)	08080800	529	1951-64
White River below falls near Crosbytown (e)	08080900	2,683	1951-64
Salt Fork Brazos River at Farm Road 1081 near Clairemont (e)	08080916	3,617	1968-77
Red Mud Creek near Spur (e)	08080918	2,547	1967-74
Salt Fork Brazos River at State Highway 208 near Clairemont (e)	08080940	3,839	1968-77
Duck Creek near Girard (d)	08080950	431	1965-89
Salt Fork Brazos River at U.S. Highway 380 near Jayton (e)	08080959	4,431	1968-77
Salt Fork Brazos River near Peacock (d)	08081000	4,619	1950-51, 1965-86
Short Croton Creek at mouth near Jayton (e)	08081050	18.1	1959-82
Croton Creek below Short Croton Creek near Jayton (e)	08081100	250	1959-82
Croton Creek near Jayton (d)	08081200	290	1959-86
Salt Croton Creek at Weir D near Aspermont (e)	08081400	55.5	1957-76
Haystack Creek at Weir E near Aspermont (e)	08081450	15.1	1957-77
Salt Croton Creek near Aspermont (d)	08081500	64.3	1957-77
Stinking Creek near Aspermont (d)	08082100	88.8	1966-83
North Croton Creek near Knox City (d)	08082180	251	1965-86
North Elm Creek near Throckmorton (e)	08082900	3.58	1965-77
Elm Creek near Profitt (e)	08082950	275	1969-85
Brazos River near Graham (d)	08083000	16,830	1916-20
Clear Fork Brazos River at Hawley (d)	08083240	1,416	1968-89
Mulberry Creek near Hawley (d)	08083245	205	1968-89
Elm Creek near Abilene (d)	08083300	133	1964-79
Little Elm Creek near Abilene (d)	08083400	39.1	1964-79
Elm Creek at Abilene (d)	08083430	422	1980-83
Cedar Creek at Abilene (d)	08083470	119	1971-84
Paint Creek near Haskell (d)	08085000	914	1950-51
Humphries Draw near Haskell (e)	08085300	3.51	1965-77
Clear Fork Brazos River at Crystall Falls (d)	08086000	4,323	1922-29
Hubbard Creek near Sedwick (d)	08086015	128	1964-66
Hubbard Creek at Highway 380 near Moran (e)	08086020	152	1963-76
Deep Creek near Putnam (e)	08086030	33.8	1963-66
Brushy Creek near Putnam (e)	08086040	27.6	1963-66
Mexia Creek near Putnam (e)	08086045	67.0	1963-66
Hubbard Creek near Albany (d)	08086100	454	1962-75
Salt Prong Hubbard Creek below Lake McCarty near Albany (e)	08086110	45.5	1963-66
Salt Prong Hubbard Creek at U.S. 380 near Albany (d)	08086120	65.2	1964-68
Cook Creek near Albany (e)	08086130	11.3	1963-76
North Fork Hubbard Creek near Albany (d)	08086150	39.3	1963-90
Salt Prong Hubbard Creek near Albany (d)	08086200	115	1962-63
Snailum Creek near Albany (d)	08086210	22.9	1964-66
Big Sandy Creek near Eolian (e)	08086220	91.4	1963-76
Battle Creek near Putnam (e)	08086230	32.0	1963-66
Battle Creek near Moran (d)	08086235	108	1967-68
Battle Creek near Eolian (e)	08086240	137	1963-66
Pecan Creek at FM 1853 near Eolian (e)	08086250	6.95	1963-66

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Pecan Creek near Eolian (d)	08086260	26.4	1967-75
Big Sandy Creek near Breckenridge (e)	08086300	288	1962-75
Hubbard Creek near Breckenridge (d)	08086500	1,089	1955-86
Clear Fork Brazos River near Crystal Falls (e)	08087000	5,658	1916-20, 1928-51
Clear Fork Brazos River near Eliasville (d)	08087300	5,697	1916-20, 1924-25, 1928-51, 1962-82
Salt Creek at Olney (d)	08088100	11.8	1958-77
Salt Creek near Newcastle (d)	08088200	120	1958-60
Briar Creek near Graham (d)	08088300	24.2	1958-89
Brazos River at Farm Road 1287 near Graham (e)	08088420	13,432	1970-77
Big Cedar Creek near Ivan (d)	08088450	97	1965-89
Brazos River at Morris Sheppard Dam near Graford (d)	08088600	23,596	1990-94
Elm Creek Tributary near Graford (e)	08089100	1.10	1965-74
Palo Pinto Creek near Santo (d)	08090500	573	1925, 1951-76
Cidwell Branch near Granbury (e)	08090850	3.37	1966-73
Morris Branch near Bluff Dale (e)	08091200	0.06	1965-73
Panter Branch near Tolar (e)	08091700	7.82	1966-74
Nolan River at Blum (d)	08092000*	282	1924-87
Brazos River near Whitney (d)	08093000	27,214	1939-74
Bond Branch near Hillsboro (e)	08093200	0.36	1965-74
Hackberry Creek at Hillsboro (d)	08093250	57.9	1980-92
Hackberry Creek below Hillsboro (e)	08093260	86.8	1980-92
Cobb Creek near Abbott (d)	08093400	12.40	1967-79
Aquilla Creek near Aquilla (d)	08093500#	308	1939-2001
Aquilla Creek at RR bridge near Aquilla (e)	08093530	345	1976-85
Aquilla Creek at Farm Road 2114 near Aquilla (e)	08093540	351	1976-85
Aquilla Creek at Farm Road 1858 near Ross (e)	08093560	392	1976-85
Aquilla Creek at Farm Road 933 near Ross (e)	08093580	397	1976-85
North Bosque River at Stephenville (d)	08093700	95.9	1958-79
Green Creek SWS #1 near Dublin (d)	08094000	4.19	1955-77
Green Creek near Alexander (d)	08094500	45.4	1958-73
South Bosque River near McGregor (e)	08095220	15.9	1967-73
Willow Branch at McGregor (e)	08095250	2.52	1966-73
Middle Bosque River near McGregor (d)	08095300*	182	1959-86
Hog Creek near Crawford (d)	08095400*	78.0	1959-86
South Bosque River near Speegleville (d)	08095500	386	1924-30
Bosque River near Waco (d)	08095600*	1,656	1960-82
Box Branch at Robinson (e)	08096550	0.34	1965-73
Cow Bayou SWS No. 4 (inflow) near Bruceville (e)	08096800	5.04	1958-75
Cow Bayou at Mooreville (d)	08097000	83.5	1958-75
Brazos River near Marlin (d)	08097500	30,211	1939-51
Deer Creek at Chilton (d)	08098000	84.5	1934-36
Leon River near De Leon (d)	08099100*	479	1960-87
Sabana River Tributary near De Leon (e)	08099350	0.48	1966-74
Leon River near Hasse (d)	08099500	1,261	1939-91
Eidson Creek near Hamilton (e)	08100100	2.91	1965-73
Bermuda Branch near Gatesville (e)	08100400	0.50	1966-73
Hoffman Branch near Hamilton (e)	08100800	5.56	1966-74
Cowhouse Creek near Killeen (d)	08101500	667	1925, 1939-42
Nolan Creek at Belton (d)	08102600	112	1974-82
School Branch near Lampasas (e)	08102900	0.90	1966-73
Fleece Branch near Lampasas (e)	08103450	1.08	1965-74
Lampasas River at Youngsport (d)	08104000	1,240	1924-80
Salado Creek above Salado (e)	08104290	134	1985-88
Salado Creek below Salado Springs at Salado (d)	08104310	136	1985-87
N. Fork San Gabriel River upstream from State Highway 418 at Georgetown (e)	08104795*	271	1985-88

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
North Fork San Gabriel River at Georgetown (d)	08104800	271	1964-68
South Fork San Gabriel River near Bertram (e)	08104850	8.4	1967-74
San Gabriel River at Georgetown (d)	08105000*	405	1924-25, 1934-73, 1984-87
Berry Creek at State Hwy. 971 near Georgetown (d)	08105200*	117	1985-87
San Gabriel River near Weir (d)	08105300*	563	1977-90
San Gabriel River near Circleville (d)	08105400	599	1924-34, 1967-77
Avery Branch near Taylor (e)	08105900	3.52	1966-73
Brushy Creek at Coupland (d)	08106000	205	1924-26
Brushy Creek near Rockdale (d)	08106300	505	1967-80
San Gabriel River near Rockdale (d)	08106310	1,359	1975-92
Big Elm Creek near Temple (d)	08107000	74.7	1934-36
Big Elm Creek near Buckholts (d)	08107500	171	1934-36
North Elm Creek near Ben Arnold (d)	08108000	32.2	1935-36
North Elm Creek near Cameron (d)	08108200	44.8	1963-73
Little Branch near Bryan (e)	08108800	0.14	1966-73
Brazos River near Bryan (d)	08109000	39,515	1899-1903, 1918-92
Brazos River near College Station (d)	08109500	39,599	1899-1902, 1918-25
Yegua Creek near Somerville (d)	08110000	1,009	1924-92
Brazos River at Washington (e)	08110200	41,192	1966-95
Plummers Creek at Mexia (e)	08110350	4.42	1965-73
Navasota River near Groesbeck (d)	08110400	311	1965-79
Navasota River near Bryan (d)	08111000	1,454	1951-94, 1994-97
Navasota River near College Station (d)	08111010	1,809	1977-85
Burton Creek at Villa Maria Road, Bryan (d)	08111025	1.33	1968-70
Hudson Creek near Bryan (d)	08111050	1.94	1968-70
Winkleman Creek near Brenham (e)	08111100	0.75	1965-73
Piney Creek near Bellville (e)	08111600	30.7	1948, 1955, 1958, 1964-89
West Fork Mill Creek near Industry (e)	08111650	15.3	1964-89
Brazos River near San Felipe (d)	08112000	44,666	1939-57
Brazos River near Wallis (e)	08112200	44,684	1974-75
Brazos River Authority Canal A near Fulshear (d)	08112500	N/A	1932-54, 1958-73
Richmond Irrigation Co. Canal near Richmond (d)	08113500	N/A	1932-54, 1956-78
Brazos River near Juliff (d)	08114500	45,189	1949-69
Seabourne Creek near Rosenberg (e)	08114900	5.78	1968-74
Fairchild Creek near Needville (d)	08115500	26.2	1947-55
Big Creek near Guy (d)	08116000	116	1947-50
Dry Creek near Rosenberg (d)	08116400	8.65	1959-79
Dry Creek near Richmond (d)	08116500	12.2	1947-50, 1957-58
San Bernard River near West Columbia (e)	08117700	766	1949, 1971-77
Mound Creek Tributary at Guy (e)	08117800	1.48	1966-73
Big Boggy Creek near Wadsworth (d)	08117900	10.3	1970-77
Bull Creek near Ira (d)	08118500	26.3	1948-54, 1959-62
Colorado River below Bull Creek near Ira (e)	08118600	3,604	1975-78
Bluff Creek near Ira (d)	08119000	42.60	1948-65
Bluff Creek at mouth near Ira (e)	08119100	44.1	1975-78
Colorado River near Ira (d)	08119500	3,483	1948-52, 1959-89

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Colorado River near Cuthburt (d)	08120700*	3,912	1965-2002
Morgan Creek near Westbrook (d)	08121500	273	1954-63
Graze Creek near Westbrook (d)	08122000	21.7	1954-59
Morgan Creek near Colorado City (d)	08122500	313	1947-49
Champlin Creek near Colorado City (d)	08123500	198	1948-59
Sulphur Springs Draw near Wellman (e)	08123620	41.8	1966-74
Beals Creek above Big Spring (d)	08123650	9,319	1959-79
Beals Creek at Big Spring (d)	08123700	9,341	1957-59
Beals Creek near Coahoma (d)	08123720	9,383	1983-88
Coahoma Draw Tributary near Big Spring (e)	08123750	2.38	1966-74
Bull Creek Tributary near Forsan (e)	08123760	0.40	1966-74
Colorado River near Silver (d)	08123900	14,997	1957-70
Bitter Creek near Silver (e)	08123920	4.30	1967-74
Salt Creek Tributary near Hylton (e)	08125450	0.25	1966-74
Fish Creek Tributary near Hylton (e)	08126300	0.25	1966-71
Colorado River at Ballinger (d)	08126500	16,413	1907-79
Dry Creek near Christoval (e)	08127100	0.79	1965-73
South Concho Irrigation Co. Canal at Christoval (d)	08127500	N/A	1940-83
Middle Concho River near Tankersley (d)	08128500	2,653	1930-61
Spring Creek above Tankersley (d)	08129300*	425	1961-95
Dove Creek Springs near Knickerbocker (d)	08129500*	N/A	1944-58
Dove Creek at Knickerbocker (d)	08130500*	226	1961-95
Spring Creek near Tankersley (d)	08131000	699	1930-60
South Concho River above Pecan Creek near San Angelo (e)	08131300	470	1963-84
Tom Green Co. WCID No. 1 Canal near San Angelo (d)	08131600	N/A	1963-81
South Concho River at San Angelo (d)	08132500	3,866	1932-53
Quarry Creek near Sterling City (e)	08133300	3.25	1965-73
North Concho River at Sterling City (d)	08133500*	588	1939-87
Broome Creek near Broome (e)	08133800	0.29	1965-73
Nolke Station Creek near San Angelo (e)	08134300	0.59	1965-73
Gravel Pit Creek near San Angelo (e)	08134400	0.19	1965-74
North Concho River at San Angelo (d)	08135000	1,525	1916-31, 1947-90
Concho River near Veribest (e)	08136150	5,541	1970-74, 1998-2000
Puddle Creek near Veribest (e)	08136200	12.0	1966-73
Frog Pond Creek near Eden (e)	08136300	1.96	1967-73
Mukewater Creek SWS No. 10A near Trickham (e)	08136900	21.8	1965-72
Mukewater Creek SWS No. 9 near Trickham (e)	08137000	4.02	1961-72
Mukewater Creek at Trickham (d)	08137500	70.0	1951-73
Deep Creek SWS No. 3 near Placid (e)	08139000	3.42	1954-60
Deep Creek near Mercury (d)	08139500	43.9	1954-73
Deep Creek SWS No. 8 near Mercury (e)	08140000	5.41	1952-71
Dry Prong Deep Creek near Mercury (d)	08140500	8.31	1951-71
Pecan Bayou near Cross Cut (d)	08140700	532	1968-79
Jim Ned Creek near Coleman (d)	08140800	333	1965-80
McCall Branch near Coleman (e)	08141100	2.17	1966-73
Hords Creek near Valera (d)	08141500	54.2	1947-91
Hords Creek at Coleman (d)	08142000	107	1941-70
Brown County WID No. 1 Canal near Brownwood (d)	08142500	N/A	1950-83
Pecan Bayou at Brownwood (d)	08143500	1,660	1917-18, 1924-83
Brown Creek Tributary near Goldthwaite (e)	08143700	2.48	1966-73
Noyes Canal at Menard (d)	08144000	N/A	1924-83
Brady Creek near Eden (d)	08144800	101	1962-85
Brady Creek Tributary near Brady (e)	08145100	4.05	1967-73
Lake Buchanan near Burnet (e)	08148000	31,910	1937-90
Llano River Tributary near London (e)	08150200	0.58	1966-73
Stone Creek Tributary near Art (e)	08150900	0.40	1966-73
Llano River near Castell (d)	08151000	3,747	1924-39
Johnson Creek near Valley Spring (e)	08151300	5.66	1967-73

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Little Flatrock Creek near Marble Falls (e)	08152700	3.20	1966-74
Spring Creek near Fredericksburg (e)	08152800	15.2	1967-73
Pedernales River at Stonewall (d)	08153000	647	1924-34
Cane Branch at Stonewall (e)	08153100	1.37	1965-71
Pedernales River near Spicewood (d)	08154000	1,294	1924-39
Colorado River below Mansfield Dam, Austin (d)	08154510	38,755	1975-90
West Bull Creek at Loop 360 near Austin (e)	08154750	6.77	1976-82
Bull Creek at FM 2222, Austin (e)	08154760	30.4	1975-78
Bee Creek at West Lake Drive near Austin (e)	08154950	3.28	1980-82
Barton Creek near Camp Craft Road near Austin (d)	08155260	109	1982-89
Skunk Hollow Creek below Pond 1 at Austin (e)	08155370	0.12	1982-84
West Bouldin Creek at Riverside Drive, Austin (e)	08155550	3.12	1976-82
Shoal Creek at Steck Avenue, Austin (e)	08156650	2.79	1975-82
Shoal Creek at Northwest Park at Austin (d)	08156700	6.52	1975-84
Shoal Creek at White Rick Drive, Austin (e)	08156750	6.97	1975-82
Waller Creek at 38th Street, Austin (d)	08157000	2.31	1955-80
Waller Creek at 23rd Street, Austin (d)	08157500	4.13	1955-80
East Bouldin Creek at South 1st Street, Austin (d)	08157600	2.40	1997-2001
Blunn Creek near Little Stacey Park, Austin	08157700	1.20	1997-2001
Boggy Creek at US Highway 183, Austin	08158050	13.1	1977-86, 1994-2001
Walnut Creek at Farm-Market 1325 near Austin (e)	08158100	12.6	1975-88
Walnut Creek at Dessau Road, Austin (e)	08158200	26.2	1975-88
Ferguson Branch at Springdale Road, Austin (e)	08158300	1.63	1978-82
Little Walnut Creek at Georgian Drive, Austin (e)	08158380	5.22	1975-88
Little Walnut Creek at IH 35, Austin (e)	08158400	5.57	1975-82
Little Walnut Creek at Manor Road, Austin (e)	08158500	12.1	1975-82
Walnut Creek at Southern Pacific Railroad bridge, Austin (e)	08158640	53.5	1975-86
Onion Creek at Buda (e)	08158800	166	1961-78,
" " " (d)			1979-83, 1992-95
Bear Creek at Farm-Market Road 1626 near Manchaca (e)	08158820	24.0	1979-83
Little Bear Creek at Farm-Market Road 1626 near Manchaca (d)	08158825	21.0	1979
Slaughter Creek at FM 2304 near Austin (e)	08158860	23.1	1978-83
Boggy Creek (South) at Circle S Road, Austin (e)	08158880	3.58	1976-88
Fox Branch near Oak Hill (e)	08158900	0.12	1965-73
Williamson Creek at Oak Hill (d)	08158920	6.30	1978-93
Williamson Creek at Jimmy Clay Road, Austin (d)	08158970	27.6	1975-85
Onion Creek below Del Valle (e)	08159100	339	1962-75
Wilbarger Creek near Pflugerville (d)	08159150	4.61	1963-80
Big Sandy Creek near McDade (d)	08159165	38.7	1979-85
Big Sandy Creek near Elgin (d)	08159170	63.8	1979-85
Dogwood Creek near McDade (e)	08159180	0.53	1980-85
Dogwood Creek at Highway 95 near McDade (e)	08159185	5.03	1980-85
Reeds Creek near Bastrop (e)	08159450	5.22	1967-73
Dry Creek at Buescher Lake near Smithville (d)	08160000	1.48	1940-66
Colorado River at La Grange (d)	08160500	40,430	1939-55
Colorado River above Columbus (d)	08160700	41,403	1983-85
Dry Branch Tributary near Altair (e)	08161580	0.68	1966-73
Little Robin Slough near Matagorda (e)	08162530	5.30	1969
Cashs Creek near Blessing (e)	08162650	14.8	1969-77
East Carancahua Creek near Blessing (e)	08162700	81.2	1968, 1970-83
West Carancahua Creek near Laward (e)	08162800	57.1	1970-76
Navidad River near Speaks (d)	08164350	437	1982-89, 1995-2000
Navidad River at Morales (d)	08164370	549	1995-2000
Navidad River near Ganado (d)	08164500	1,062	1939-80
Guadalupe River above Kerrville (e)	08166150	498	1976-79
Turtle Creek Tributary near Kerrville (e)	08166300	0.46	1966-74

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Guadalupe River near Comfort (d)	08166500	762	1918-32
Rebecca Creek near Spring Branch (d)	08167600	10.9	1960-79
Blieders Creek at New Braunfels (e)	08168600	16.0	1962-89
Panther Canyon at New Braunfels (e)	08168700	0.73	1962-89
Trough Creek near New Braunfels (e)	08168720	0.48	1966-74
W.P. Dry Comal Creek Tributary near New Braunfels (e)	08168750	0.32	1966-74
Walnut Branch near Seguin (e)	08169750	5.46	1967-74
East Pecan Branch near Gonzales (e)	08169850	0.24	1965-74
San Marcos River at San Marcos (d)	08169950	83.7	1915-21
West Elm Creek near Niederwald (e)	08172100	0.44	1965-74
San Marcos River at Ottine (d)	08173500	1,249	1915-43
Guadalupe River below Cuero (d)	08176000	4,923	1903-07, 1916-19, 1921-36
Irish Creek near Cuero (e)	08176200	15.5	1967-74
Three Mile Creek near Cuero (e)	08176600	0.48	1966-74
Coleto Creek Reservoir inflow (Guadalupe diversion) near Schroeder (d)	08176990	357	1980-94
Coleto Creek near Schroeder (d)	08177000	369	1930-34, 1953-79
Olmos Creek Tributary at FM 1535 at Savano Park (e)	08177600	0.33	1969-81
Olmos Reservoir at San Antonio (e)	08177800	32.4	1968-71, 1976-89. 1992-95
San Antonio River at Woodlawn Avenue, San Antonio (e)	08177860	36.4	1989-95
San Antonio River at Dolorosa, San Antonio (d)	08177920	38.9	1980-86
Alazan Creek at St. Cloud Street, San Antonio (e)	08178300	3.26	1969-79
San Pedro Creek at Furnish St., San Antonio (d)	08178500*	2.64	1916-29
Harlandale Creek at W. Harding Street, San Antonio (e)	08178555	2.45	1977-81
Panther Springs Creek at FM 2696 near San Antonio (e)	08178600	9.54	1969-77
Lorence Creek at Thousand Oaks Blvd., San Antonio (e)	08178620	4.05	1980-84
West Elm Creek at San Antonio (e)	08178640	2.45	1976-88
East Elm Creek at San Antonio (e)	08178645	2.33	1976-81
Salado Creek Tributary at Bitters Road, San Antonio (e)	08178690	0.26	1969-81
Salado Creek at Rittman Road, San Antonio (e)	08178720	137	1968-81
Salado Creek Tributary at Bee Street, San Antonio (e)	08178736	0.45	1970-77
Salado Creek at E. Houston Street, San Antonio (e)	08178740	181	1968-81
Salado Creek at U.S. Highway 87, San Antonio (e)	08178760	186	1968-81
Salado Creek at Southcross Blvd., San Antonio (e)	08178780	188	1968-81
Bandera Creek Tributary near Bandera (e)	08178900	0.27	1966-74
Medina River near Pipe Creek (d)	08179000	474	1923-35, 1953-82
Red Bluff Creek near Pipe Creek (d)	08179100	56.30	1956-81
Medina River Tributary near Pipe Creek (e)	08179200	0.30	1966-74
Medina River at La Coste (d)	08180640	805	1987-2000
Medio Creek at Pearsall Road, San Antonio (e)	08180750	47.9	1987-95
Leon Creek Tributary at FM 1604, San Antonio (e)	08181000	5.57	1968-80
French Creek Tributary near Helotes (e)	08181200	1.08	1966-74
Ranch Creek near Helotes (d)	08181410	0.39	1978
Leon Creek Tributary at Kelly Air Force Base (d)	08181450	1.19	1969-79
Calaveras Creek SWS No. 6 (inflow) near Elmendorf (e)	08182400	7.01	1957-77
Calaveras Creek near Elmendorf (d)	08182500	77.2	1954-71
San Antonio River at Calaveras (d)	08183000	1,786	1918-25
Cibolo Creek near Boerne (d)	08183900	68.4	1963-95
Cibolo Creek near Bulverde (d)	08184000	198	1946-66
Cibolo Creek above Bracken (d)	08184500	250	1946-51
Cibolo Creek at Sutherland Springs (d)	08185500	665	1924-29
Escondido Creek SWS No. 1 (inflow) near Kenedy (e)	08187000	3.29	1955-73
Escondido Creek at Kenedy (d)	08187500	72.4	1954-73
Escondido Creek SWS No. 11 (inflow) near Kenedy (e)	08187900	8.43	1959-77
Dry Escondido Creek near Kenedy (d)	08188000	9.43	1954-59
Baugh Creek at Goliad (e)	08188400	3.02	1966-74

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Guadalupe-Blanco River Authority Calhoun Canal-Flume No. 2 near Long Mott (d)	08188750	N/A	1972-86
Guadalupe River at State Highway 35 near Tivoli (e)	08188810	10,280	1975-82
Olmos Creek Tributary near Skidmore (e)	08189600	0.58	1966-73
Chiltipin Creek at Sinton (d)	08189800	128	1970-91
Nueces River near Uvalde (d)	08191500	1,833	1928-39
Nueces River near Cinonia (d)	08192500	2,102	1915-25
Plant Creek near Tilden (e)	08194550	0.36	1965-74
Nueces River at Simmons (d)	08194600	8,561	1965-77
Frio River at Knippa (d)	08195700	N/A	1953
Dry Frio River at Knippa (d)	08196500	179	1953
East Elm Creek near Sabinal (e)	08198900	10.6	1967-74
Frio River near Frio Town (d)	08199700	1,460	1924-27
Hondo Creek near Hondo (d)	08200500	132	1953-64
Bone Creek near Hondo (e)	08200900	0.19	1965-74
Seco Creek near Utopia (d)	08202000	53.2	1952-61
Seco Creek Reservoir inflow near Utopia (d)	08202450	59.5	1991-98
Seco Creek near D'Hanis (d)	08202500	87.4	1952-64
Parkers Creek Reservoir (e)	08202800	10.0	1991-99
Leona River Tributary near Uvalde (e)	08203500	1.21	1966-74
Leona River Spring Flow near Uvalde (d)	08204000*	N/A	1939-65 1966-2002
Leona River near Divot (d)	08204500	565	1924-29
Frio River at Calliham (d)	08207000	5,491	1925-26, 1932-81
Rutledge Hollow Creek at Poteet (e)	08207200	9.33	1966-74
Rutledge Hollow at 7th Street, Poteet (d)	08207220	9.74	1979-2000
Atascoas River at U.S. Highway 281, Pleasanton (d)	08207300	394	1973-2000
Lucas Creek near Pleasanton (e)	08207700	32.8	1966-73
Ramirena Creek near George West (d)	08210300	84.4	1968-72
Nueces River below Mathis (d)	08211100	16,726	1966-67
Rincon Bayou Channel near Calallen (d)	08211503*	N/A	1996-2000
Pintas Creek Tributary near Banquete (e)	08211550	3.28	1966-74
Hamon Creek near Freer (e)	08211600	0.73	1965-73
San Diego Creek at Alice (d)	08211800	319	1964-89
Lake Alice at Alice (e)	08211850	150	1965-86
San Fernando Creek near Alice (d)	08212000	518	1962-63
North Los Animas Creek Tributary near Freer (e)	08212320	0.07	1969-74
Rio Grande at Vinton Bridge near Anthony (d)	08363840	28,680	1969-74
Northgate Reservoir at El Paso (e)	08365540	6.89	1973-75
Range Reservoir at El Paso (e)	08365545	11.9	1973-75
Franklin Canal at El Paso (d)	08365550	N/A	1969-72
McKelligon Canyon at El Paso (d)	08365600	2.30	1958-77
Government Ditch at El Paso (d)	08365800	6.40	1958-77
Riverside Canal near Socorro (d)	08366400	N/A	1969-72
Rio Grande at Island Station near El Paso (d)	08366500	32,683	1938-60
Rio Grande at Tornillo Branch near Fabens (d)	08367000	32,914	1924-38
Tornillo Drain at mouth near Tornillo (d)	08368000	N/A	1969-72
Tornillo Canal near Tornillo (d)	08368300	N/A	1969-72
Hudspeth Feeder Canal near Tornillo (d)	08368900	N/A	1969-72
Rio Grande at County Line Station near El Paso (d)	08369500	33,550	1938-60
Camo Rice Arroyo Tributary near Fort Hancock (e)	08370200	2.35	1966-74
Wild Horse Creek Tributary near Van Horn (e)	08370800	0.74	1966-73
Cibolo Creek near Presidio (d)	08373200	276	1971-77
Rio Grande above Presidio (lower Station) (d)	08373500	64,285	1901-13, 1924-54
Rio Grande at Langtry (d)	08377500	81,429	1900-14, 1920, 1924-60
Rio Grande Tributary near Langtry (e)	08377600	0.32	1966-74

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Delaware River Tributary near Orla (e)	08407800	1.6	1966-74
Pecos River near Angeles (d)	08409500	20,540	1914-37
Salt Screwbean Draw near Orla (d)	08411500	464	1939-41, 1944-57
Pecos River near Mentone (d)	08414000	21,650	1922-26, 1969-73
Reeves County WID No. 2 Canal near Mentone (d)	08414500	N/A	1922-25, 1939-57, 1964-90
Ward County WID No. 3 Canal near Barstow (d)	08415000	N/A	1939-57, 1964-90
Pecos River above Barstow (d)	08416500	21,800	1916-21
Ward County Irrigation District No. 1 Canal near Barstow (d)	08418000	N/A	1922-25, 1939-57, 1964-90
Pecos River at Pecos (d)	08420500	22,100	1898-1907, 1914-15, 1922-26, 1939-55
Madera Canyon near Toyahvale (d)	08424500	53.8	1932-49
Phantom Lake Spring near Toyahvale (d)	08425500*	N/A	1932-34, 1942-66
San Solomon Springs at Toyahvale (d)	08427500*	N/A	1932-34, 1941-65
West Sandia Spring at Balmorhea (d)	08429000	N/A	1932-33
East Sandia Spring at Balmorhea (d)	08430000	N/A	1932-33
Toyah Creek near Pecos (d)	08431000	1,024	1940-41, 1944-45
Salt Draw near Pecos (d)	08431500	1,882	1939-41, 1944-45
Limpia Creek below Fort Davis (d)	08431800	227	1962-77
Limpia Creek near Fort Davis (d)	08432000	303	1925-32
Toyah Creek below Toyah Lake near Pecos (d)	08434000	3,709	1939-51
Grandfalls-Big Valley Canal near Barstow (d)	08435000	N/A	1922-26, 1939-57, 1964-76
Pecos River below Barstow (d)	08435500	25,980	1939-41
Toronto Creek near Alpine (d)	08435600	27.9	1971-76
Alpine Creek at Alpine (d)	08435620	18.1	1971-76
Moss Creek near Alpine (d)	08435660	11.3	1971-76
Sunny Glen Canyon near Alpine (d)	08435700	29.7	1968-77
Coyanosa Draw near Fort Stockton (d)	08435800	1,182	1964-77
Pecos County WID No. 2 (Upper Div.) Canal near Grandfalls (d)	08436500	N/A	1922-25, 1939-57, 1964-90
Courtney Creek Tributary near Fort Stockton (e)	08436800	0.44	1966-74
Pecos County WID No. 2 Canal near Imperial (d)	08437500	N/A	1940-57, 1964-90
Lake Leon Tributary near Fort Stockton (e)	08437550	1.59	1966-74
Pecos County WID No. 3 Canal near Imperial (d)	08437600	N/A	1940-57, 1964-90
Monument Draw Tributary at Pyote (e)	08437650	178	1966-74
Ward County WID No. 2 Canal near Grand Falls (d)	08437700	N/A	1939-57, 1964-90
Pecos River near Grand Falls (d)	08438100	27,810	1916-26
Pecos River below Grand Falls (d)	08441500	27,820	1921-26, 1939-56
Three Mile Mesa Creek near Fort Stockton (e)	08444400	1.04	1966-74
Comanche Springs at Fort Stockton (d)	08444500	N/A	1936-64
Pecos River near Sheffield (d)	08447000	31,600	1922-25, 1940-49

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Howards Creek Tributary near Ozona (e)	08447200	7.53	1967-73
Pecos River near Shumla (d)	08447400	35,162	1955-60
Goodenough Springs near Comstock (e)	08448500	N/A	1929-60
Sonora Field Creek at Sonora (e)	08448800	2.60	1965-71
Devils River near Juno (d)	08449000	2,730	1925-49, 1964-73
Rough Canyon Tributary near Del Rio (e)	08449470	7.90	1967-73
Devils River near Del Rio (d)	08449500	4,185	1900-14, 1924-57
Evans Creek Tributary near Del Rio (e)	08449600	0.39	1966-73
Devils River near mouth, Del Rio (d)	08450500	4,305	1954-60
Rio Grande near Del Rio (d)	08452500	123,303	1900-15, 1920, 1924-54
San Felipe Creek near Del Rio (e)	08453000	46.0	1931-60
Zorro Creek near Del Rio (e)	08453100	10.0	1966-74
East Perdido Creek near Brackettville (e)	08454900	3.39	1965-74
Pinto Creek near Del Rio (d)	08455000	249	1929-69, 1971-72
Rio Grande at San Antonio Crossing (d)	08458700	129,226	1952-60
Arroyo San Bartolo at Zapata (e)	08459600	0.61	1966-74
Rio Grande near Zapata (d)	08460500	163,344	1932-53
Rio Grande at Roma (d)	08462500	166,464	1900-13, 1923-54
Rio Grande Tributary near Rio Grande City (e)	08466100	1.20	1966-74
Rio Grande Tributary near Sullivan City (e)	08466200	0.40	1966-74
Rio Grande at Hildalgo (d)	08471500	176,100	1928-32, 1935, 1939, 1941-51
Rio Grande near Progreso Bridge (d)	08473300	176,228	1953-60
Rio Grande near San Beniot (d)	08473700	176,304	1953-60
Rio Grande near Brownsville (d)	08475000	176,333	1935-50

The following stations were discontinued as continuous-record surface-water-quality stations prior to the 2000 water year. Daily records of specific conductance, temperature, sediment, color, pH, dissolved oxygen, or chloride were collected and published for the record shown for each station.

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

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Canadian River at Tascosa	07227470	19,200	SC, T, Cl	1948-53,
		18,536	SC, T, pH, Cl	1969-77
Canadian River near Canadian	07228000	22,866	SC, T	1974-81
Prairie Dog Town Fork Red River near Wayside	07297910	4,211	SC, T	1969-81
Tule Creek near Silverton	07298200	1,150	SC, T, pH, Cl	1968-69
Prairie Dog Town Fork Red River near Brice	07298500	6,082	SC, pH, Cl, S	1949-51,
			T	1950-51
Mulberry Creek near Brice	07299000	534	SC, pH, Cl, S	1949-51
Prairie Dog Town Fork Red River near Lakeview	07299200	6,792	SC, T	1968-80,
			S	1979-80
Little Red River near Turkey	07299300	139	SC, T	1968-81,
			S	1979-81
Jonah Creek at Weir near Estelline	07299512	65.5	SC	1974-82
Jonah Creek below Weir near Estelline	07299514	66.6	SC	1974-76
Salt Creek near Estelline	07299530	142	SC	1974-79
Prairie Dog Town Fork Red River near Childress	07299540	7,725	SC, T	1968-82,
				1994-97
Salt Fork Red River near Hedley	07299930	744	SC, T, pH, Cl	1956-61
North Pease River near Childress	07307600	1,434	SC, T	1973-79
Middle Pease River at Highway 62 and 83 near Paducah	07307750	1,086	SC	1973-79,
			T	1973-79,
			S	1994-97
Middle Pease River near Paducah	07307760	1,128	SC	1980-82,
			T	1980
Pease River near Childress	07307800	2,754	SC, T	1968-82,
				1994-97
Pease River near Crowell	07308000	3,037	SC	1942-43
Pease River near Vernon	07308200	3,488	SC, T	1999
North Fork Wichita River near Crowell	07311622	591	SC	1971-76
Middle Fork Wichita River near Truscott	07311648	161	SC	1970-76
Truscott Brine Lake near Truscott	07311669	26.2	SC, T	1985-90
South Fork Wichita River near Guthrie	07311780	219	SC	1970-76
South Fork Wichita River at Ross Ranch near Guthrie	07311790	499	SC	1971-79,
			Cl	1988-97,
			S	1978-79
Beaver Creek near Electra	07312200	652	SC,T	1969-70
				1996-2002
Wichita River at State Highway 25 near Kamay	07312130	2,246	SC, T	1996-2002
Wichita River at Wichita Falls	07312500	3,140	SC, T	1981-89,
				1996-2002
Little Wichita River near Archer City	07314500	481	SC	1953-55,
			T	1953-54
Little Wichita River above Henrietta	07314900	1,037	SC, DO	1999
Little Wichita River near Henrietta	07315000	1,037	SC, T, pH, Cl	1953-56,
			S, T	1959-66,
East Fork Little Wichita River near Henrietta	07315200	178	T	1954
Little Wichita River near Ringgold	07315400	1,350	SC, pH, Cl	1959-62
Red River near Gainesville	07316000	30,782	SC, Cl	1944-46,
			SC, T, pH, Cl	1953-63,
			SC, T	1967-89,
Little Pine Creek near Kanawha	07336750	75.4	T	1980
Red River near De Kalb	07336820	47,348	SC, T	1968-91
Middle Sulphur River at Commerce	07342480	44.1	Cl, pH	1987-2001

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, pH, Cl	1959-66, 1968-72,
			SC, T	1973-89
Sulphur River near Talco	07343200	1,365	SC, T, pH, Cl	1966-72,
			SC, T	1973-91
White Oak Creek near Talco	07343500	494	SC, T, pH, Cl	1966-72,
			SC, T	1973-91
Sulphur River near Darden	07344000	2,774	SC, T, pH, Cl	1947-50
Big Cypress Creek near Pittsburg	07344500	370	SC, T, pH, Cl	1968-72,
			SC, T	1973-89
Little Cypress Creek near Jefferson	07346070	675	SC, T, pH, Cl	1968-72,
			SC, T	1973-91
Sabine River near Emory	08017500	888	SC, T, pH, Cl	1952-54
Grand Saline Creek near Grand Saline	08018200	91.4	SC, T, pH, Cl	1968-73
Sabine River near Mineola	08018500	1,357	SC, T, pH, Cl	1968-72,
			SC, T	1973-92
Lake Fork Creek near Quitman	08019000	585	SC, T, pH, Cl	1968-72,
			SC, T	1973-89
Big Sandy Creek near Big Sandy	08019500	231	SC, T, S	1985-86
Sabine River near Beckville	08022040	3,589	SC, T	1952-98
Sabine River below Toledo Bend near Burkeville	08026000	7,482	SC, T	1969-86,
			C	1969-75
Sabine River near Bon Wier	08028500	8,229	SC, T, C	1969-84
Sabine River near Ruliff	08030500	9,329	SC	1945, 1947-98
			T	1947-98
			pH, DO	1968-75,
			C	1970-76,
			Cl	1968
Cow Bayou near Mauriceville	08031000	83.3	SC, T, pH, Cl	1952-54,
			SC, T	1954-56
Neches River near Neches	08032000	1,145	SC, T	1974-91
Neches River near Alto	08032500	1,945	SC, T	1950-69
Neches River near Diboll	08033000	2,724	SC, T	1970-81
Neches River near Rockland	08033500	3,636	SC	1941-42, 1946-47
Angelina River near Lufkin	08037000	1,600	SC, T, pH, Cl	1955-78,
			SC, T	1955-
Attoyac Bayou near Chireno	08038000	503	SC, T	1984-99
Sam Rayburn Reservoir near Jasper	08039300	3,449	SC, T	1964-84, 1993-99
Angelina River below Sam Rayburn Dam near Jasper	08039400	3,449	SC, T	1964-79
Angelina River near Ebenezer	08039500	3,486	SC, T	1994-99
Village Creek near Kountze	08041500	860	SC, T	1968-70
Pine Island Bayou near Sour Lake	08041700	336	SC, T, pH, Cl	1968-72,
			SC, T	1973-89
Big Sandy Creek near Bridgeport	08044000	333	SC, T, S	1968-77,
Lake Worth above Fort Worth	08045400	2,064	pH, Cl	
Clear Fork Trinity River at Fort Worth	08047500	518	SC, pH, Cl	1949-52,
			T	1948-62
Village Creek at Everman	08048970	84.5	SC, pH, T, DO	1990
Lake Arlington at Arlington	08049200	143	SC, pH, T, DO	1989-2002
Elm Fork Trinity River SWS # 6-0 near Muenster	08050200	0.77	S	1957-66
Elm Fork Trinity River near Muenster	08050300	46 .0	SC	1967-68,
			T	1957-58, 1966-68,
			S	1957-68
Clear Creek near Sanger	08051500	295	SC, T, S	1968-77

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Little Elm Creek near Celina	08052650	46.7	SC	1967-75,
			T, S	1966-75
Little Elm Creek near Aubrey	08052700	75.5	SC	1967-75,
			T, S	1967-75
Elm Fork Trinity River near Lewisville	08053000	1,673	SC	1982-86,
			T	1976-86
White Rock Creek at Greenville Avenue, Dallas	08057200	66.4	SC, pH, T, DO	1997-2000
Trinity River below Dallas	08057410	6,278	SC, T	1968-2000,
			S	1972-75,
				1998-2000
			Cl	1970-81,
				1998-99
Lavon Lake near Lavon	08060500	770	SC,T,CL	1969-74,
				1975,82,
				1995-99
Duck Creek near Garland	08061700	31.6	SC, pH, T, DO	1988-89
East Fork Trinity River above Seagoville	08061970	1,183	SC, T, pH, DO	1987-93
East Fork Trinity River at Seagoville	08061980	1,224	SC, pH, T, DO	1987-96
East Fork Trinity River near Crandall	08062000	1,256	SC, T	1968-1981,
				1987-2000
			pH, DO	1977,
				1986-2000
			Cl	1964-81,
				1986-2000
Trinity River at Trinidad	08062700	8,538	SC, T	1967-81
				1986-2000
			pH, DO	1967-81,
				1986-2000
			Cl	1966-94
			S	1978-94
Cedar Creek near Mabank	08063000	733	SC, T, pH, Cl	1956-57
Pin Oak Creek near Hubbard	08063200	17.6	SC	1967-72,
			T	1957-60,
				1965-72,
			S	1957-60,
				1962-72
Richland Creek near Richland	08063500	734	SC, T, pH, Cl	1968-69,
			SC, T	1983-89
Chambers Creek near Corsicana	08064500	963	SC, T, pH, Cl	1961-70
Richland Creek near Fairfield	08064600	1,957	SC, T, pH, Cl	1956-66,
				1972,
			SC, T	1973-83
Trinity River near Oakwood	08065000	12,833	SC, T, pH, Cl	1948-54,
			SC, T, S	1977-81
Bedias Creek near Madisonville	08065800	321	SC, T	1985-87,
			S	1986
Long King Creek at Livingston	08066200	141	SC, T, pH, Cl	1963-72
Trinity River near Goodrich	08066250	16,844	SC, T	1970-73
Old River near Cove	08067200	19.0	SC, pH, Cl	1950-65,
			T	1965
Trinity River at Anahuac	08067300	17,912	SC, pH, Cl	1950-65
Cedar Bayou near Crosby	08067500	64.9	SC, pH, Cl	1971-79
West Fork San Jacinto River near Conroe	08068000	828	SC, T	1962-90,
			DO	1979-81
Panther Branch near Spring	08068450	34.5	S	1975-76
West Fork San Jacinto River near Humble	08069500	1,741	SC, Cl	1945-46
East Fork San Jacinto River near New Caney	08070200	388	SC,T	1984-99
San Jacinto River near Huffman	08071500	2,800	SC	1945-54,
			T	1949-54

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Buffalo Bayou at West Belt Drive at Houston	08073600	307	SC, T	1979-81
Buffalo Bayou at Houston	08074000	336	SC, pH, T, DO	1986-2000
			Cl	1969-81
Whiteoak Bayou at Main Street, Houston	08074598	127	SC, T, DO	1992-97
Buffalo Bayou at Main Street, Houston	08074600	339	SC, T, DO	1986-92
Buffalo Bayou at McKee Street, Houston	08074610	454	SC, T, DO	1992-2000
			pH	1998-2000
Sims Bayou at Houston	08075500	63.0	SC, T, DO	1994-97
Chocolate Bayou near Alvin	08078000	87.70	SC, T	1978-81
North Fork Double Mountain Fork Brazos River near Post	08079575	438	SC, T	1984-93
Double Mountain Fork Brazos River near Rotan	08080000	8,536	SC, T	1950-51
Double Mountain Fork Brazos River near Aspermont	08080500	8,796	SC, T, S	1949-51
			SC, T	1957-95
				1996-2002
McDonald Creek near Post	08080540	103	SC, T	1964-78
Salt Fork Brazos River near Peacock	08081000	4,619	SC, T	1950-51,
				1965-86
Croton Creek near Jayton	08081200	290	SC, T	1961-80
Salt Croton Creek near Aspermont	08081500	64.3	SC	1969-77,
			T	1972-73
Salt Fork Brazos River near Aspermont	08082000	5,130	SC, T, pH, Cl	1949-51,
			SC, T	1957-82
Stinking Creek near Aspermont	08082100	88.8	T	1950,
			SC, T	1966-69
North Croton Creek near Knox City	08082180	251	SC, T	1966-86
Brazos River at Seymour	08082500	15,538	SC, T	1960-95
				1996-2002
Clear Fork Brazos River at Hawley	08083240	1,416	SC, T	1968-79,
				1982-84
Clear Fork Brazos River at Nugent	08084000	2,199	SC, T, pH, Cl	1948-53
California Creek near Stamford	08084800	478	SC, T	1963-79
Paint Creek near Haskell	08085000	914	SC, T	1950-5
Clear Fork Brazos River at Fort Griffin	08085500	3,988	SC, T, S	1950-51,
			SC, T	1968-79,
				1982-84
Hubbard Creek near Sedwick	08086015	128	SC, T	1964-66
Deep Creek at Moran	08086050	235	SC, T	1963-75
Hubbard Creek near Albany	08086100	454	SC, T	1962-75
Salt Prong Hubbard Creek at U.S. Highway 380 near Albany	08086120	65.2	SC, T	1964-68
North Fork Hubbard Creek near Albany	08086150	39.3	SC, T	1964-90
Salt Prong Hubbard Creek near Albany	08086200	115	SC, T	1962-63
Snailum Creek near Albany	08086210	22.9	SC, T	1964-66
Battle Creek near Moran	08086235	108	SC, T	1967-68
Pecan Creek near Eolian	08086260	26.4	SC, T	1967-75
Big Sandy Creek near Breckenridge	08086300	288	SC, T	1962-77
Hubbard Creek near Breckenridge	08086500	1,089	SC, T	1955-75
Clear Fork Brazos River at Eliasville	08087300	5,697	SC, T	1962-82
Brazos River near South Bend	08088000	22,673	SC, Cl	1942-48,
			SC, T	1978-81
Salt Creek at Olney	08088100	11.8	SC, T	1958-60
Salt Creek near Newcastle	08088200	120	SC, T	1958-60
Brazos River at Morris Sheppard Dam near Graford	08088600	23,596	SC	1942-91,
			T	1950-55,
				1966-91
Brazos River near Dennis	08090800	25,237	SC, T	1971-95
Brazos River at Whitney Dam near Whitney	08092600	27,189	SC, T	1947-97
Aquilla Creek above Aquilla	08093360	255	SC, T	1980-83
Aquilla Creek near Aquilla	08093500	308	SC, T	196066,
				1968-82

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Bosque River near Waco	08095600	1,656	SC, T	1998-2002
Brazos River near Highbank	08098290	30,436	T	1968-84
Leon River near Eastland	08098500	235	SC, T	1950-53
Leon River near Hasse	08099500	1,261	SC, T	1980-82, 1990-97
Leon River near Belton	08102500	3,542	T	1957-72
South Fork Rocky Creek near Briggs	08103900	33.30	S	1963-65
Lampasas River at Youngsport	08104000	1,240	SC, T	1961-64
Little River near Little River	08104500	5,228	SC, T	1965-73, 1980-82
Little River at Cameron	08106500	7,065	SC, T	1959-97
San Gabriel River near Weir	08105300	563	T	1977-82
San Gabriel River at Laneport	08105700	738	T	1977-82
Brazos River at State Highway 21 near Bryan	08108700	39,049	SC, T	1961-65
Brazos River near Bryan	08109000	39,515	SC, T	1966
Brazos River near College Station	08109500	39,599	SC, T	1961-84
Yegua Creek near Somerville	08110000	1,009	SC, T	1961-67
Navasota River above Groesbeck	08110325	239	SC, T	1968-89
Navasota River near Groesbeck	08110400	311	SC, T	1968-78
Navasota River near Easterly	08110500	968	SC	1942-43, 1947
Navasota River near Bryan	08111000	1,454	SC, T	1959-81,
			S	1976-81
Brazos River near Richmond	08114000	45,107	S	1966-86,
			SC	1942-95,
			T	1951-95
Brazos River near Rosharon	08116650	45,399	SC, T	1969-80
Brazos River at Harris Reservoir near Angleton	08116700	44,000	SC	1962-77,
			T	1967-77
Brazos River at Brazoria Reservoir near Brazoria	08117200	44,000	SC	1962-77,
			T	1967-77
San Bernard River near Boling	08117500	727	SC, T	1978-81
Bull Creek near Ira	08118500	26.3	SC, T, pH, Cl	1950-51
Bluff Creek near Ira	08119000	42.6	SC, T, pH, Cl	1950
Colorado River near Ira	08119500	3,483	SC, T	1950-52, 1959-70, 1975-82,
			Cl	1951-52
Deep Creek near Dunn	08120500	198	SC, T	1953-54
Colorado River near Cuthbert	08120700	3,912	SC, T	1965-99 2001-02
Morgan Creek near Westbrook	08121500	273	T	1954-55
Graze Creek near Westbrook	08122000	21.7	T	1954-55
Morgan Creek near Colorado City	08122500	313	T	1947-49
Lake Colorado City near Colorado City	08123000	345	T	1954-55
Beals Creek above Big Spring	08123650	9,319	SC, T	1973-78
Beals Creek atr Big Spring	08123700	9,341	SC, T	1956-57
Beals Creek near Coahoma	08123720	9,383	SC, T	1983-88
Colorado River near Silver	08123900	14,997	SC, T	1957-68
Colorado River at Robert Lee	08124000	15,307	SC, T, pH, Cl	1948-51,
			S	1949-51
Colorado River at Ballinger	08126500	16,413	SC, T	1961-79,
			S	1978-79
Pecan Bayou at Brownwood	08143500	1,660	SC, T	1948-49
Pecan Bayou near Mullin	08143600	2,073	SC, T	1968-91
San Saba River at San Saba	08146000	3,046	SC	1962-69,
			T	1963-70

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Colorado River near San Saba	08147000	31,217	SC, T	1947-92,
			S	1951-62
Llano River at Llano	08151500	4,197	SC, T	1979-81
Lake Austin at Austin	08154900	38,846	SC, T	1965-80
Barton Creek below Barton Springs at Austin	08155505	125	SC, T,	1965,
				1975-83,
				1989-91,
				1994-97
Waller Creek at 23rd Street at Austin	08157500	4.13	T	1955-60
East Bouldin Creek at South 1st Street, Austin	08157600	2.40	Cl	1997-2000
Blunn Creek near Little Stacey Park, Austin	08157700	1.20		1997-2001
Boggy Creek at US Highway 183, Austin	08158050	13.1	C	1977-86
			C, T	1994-2001
Colorado River at Austin	08158000	39,009	SC, T	1948-91
Colorado River above Columbus	08160700	41,403	SC, T	1983-86
Colorado River at Columbus	08161000	41,640	SC	1967-73,
			T	1957-59,
				1961-68
			S	1957-73
Colorado River at Wharton	08162000	42,003	SC	1945-92,
			T	1946-48,
Lavaca River near Edna	08164000	817	SC, T	1978-81
Navidad River near Speaks	08164350	437	SC, T, pH, Cl	1996-97
Navidad River near Ganado	08164500	1,062	SC, T	1960-80
Guadalupe River near Spring Branch	08167500	1,315	SC	1942-45
Guadalupe River at Sattler	08167800	1,436	T	1984-87
Blanco River at Wimberley	08171000	355	T	1977-78
Plum Creek near Luling	08173000	309	SC, T	1968-86
Sandies Creek near Westhoff	08175000	549	S	1966
			Cl	1962-99
Guadalupe River at Victoria	08176500	5,198	SC	1946-81,
			T	1951-81
Coleto Creek Reservoir (Condenser No. 1) near Fannin	08177360	414	T	1980-94
Coleto Creek Reservoir (outflow) near Victoria	08177410	494	T	1980-94
Olmos Creek at Dresden Drive, San Antonio	08177700	21.2	SC, pH, T, DO	1969-99
			S	1973
San Antonio River at San Antonio	08178000	41.8	SC, T	1991-92,
				1996-97
San Antonio River at Mitchell Street, San Antonio	08178050	42.4	SC, pH, T, DO	1992-99
San Antonio River at Loop 410 at San Antonio	08178565	125	SC, pH, T, DO	1987-2000
Medina River near Macdona	08180700	885	SC, pH, T, DO	1998-2000
Medina River at La Coste	08180640	805	SC, pH, T, DO	1987-95
Medio Creek at Pearsall Rd. at San Antonio	08180750	47.9	SC, pH, T, DO	1987-95
Medina river near Somerset	08180800	967	SC, T, Cl	1998-2000
Medina River at San Antonio	08181500	1,317	SC, pH, T, DO	1987-2000
			Cl	1965-2000
San Antonio River near Falls City	08183500	2,113	SC, pH, T, DO	1987-96
Cibolo Creek near Falls City	08186000	827	SC, T	1969-91
Escondido Creek SWS #1 near Kenedy	08187000	3.29	S	1955-65
Guadalupe River at Tivoli	08188800	10,128	SC, T	1966-82
Mission River at Refugio	08189500	690	SC, T	1961-81
Nueces River at Cotulla	08194000	5,171	SC	1942
Frio River at Calliham	08207000	5,491	SC, T	1968-81
Nueces River at Bluntzer	08211200	16,772	SC, T	1948-91
Los Olmos Creek near Falfurrias	08212400	480	SC, T	1975-81
Rio Grande at El Paso	08364000	32,207	SC, pH, T, DO	1930-2000
Rio Grande at Fort Quitman	08370500	34,884	SC, T	1975-78.

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Rio Grande at Foster Ranch near Langtry	08377200	80,742	SC, T	1975-81
Pecos River below Red Bluff Dam near Orla	08410100	20,720	SC	1937-69,
			T	1953-69
Salt Draw near Orla	08411500	464	SC, T	1943-48
Pecos River near Mentone	08414000	21,650	SC	1939
Pecos River at Pecos	08420500	22,100	SC	1939-41
Toyah Creek near Pecos	08431000	1,024	SC	1940,
				1944
Salt Screwbean Draw near Pecos	08431500	1,882	SC	1940,
				1944
Toyah Creek below Toyah Lake near Pecos	08434000	3,709	SC	1940-50,
			Cl	1940
Pecos River below Grand Falls	08441500	27,820	SC	1939-42,
				1947-56
Pecos River near Girvin	08446500	29,560	SC	1940-41,
				1947,
				1954-82
			T	1954-59,
				1964-82
Pecos River near Sheffield	08447000	31,600	SC	1940-41,
				1947
Pecos River near Langtry	08447410	35,179	SC, T	1971-76,
				1981-85
Devils River at Pafford Crossing near Comstock	08449400	3,961	SC, T	1978-85
Rio Grande at Laredo	08459000	132,578	SC	1975-86,
			T	1974-76
Rio Grande at Roma	08462500	166,464	SC	1942-43
Rio Grande at Fort Ringgold, Rio Grande City	08464700	174,362	SC, pH, T	1959-2000
Rio Grande near Los Ebanos	08466300		SC, pH, T	1977-2000
Rio Grande below Anzalduas Dam near Mission	08469200	176,112	SC, pH, T	1967-72,
				1959-2000
Rio Grande near Brownsville	08475000	176,333	SC	1943-44,
			SC, T	1967-83
			S	1966-83

WATER RESOURCES DATA—TEXAS, 2004

VOLUME 1

ARKANSAS RIVER BASIN, RED RIVER BASIN, SABINE RIVER BASIN, NECHES 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 U.S. Geological Survey, the data are published annually in six volumes of this report series entitled "Water Resources Data - Texas."

This report series includes records of stage, discharge, and water quality of streams and canals; stage, contents, and water quality of lakes and reservoirs, and water levels and water quality of ground water wells. Volume 1 contains records for water discharge at 72 gaging stations; stage only at 3 gaging stations; elevation at 29 lakes and reservoirs; content at 6 lakes and reservoirs; and water quality at 26 gaging stations. Also included are data for 9 partial-record stations comprised of 6 flood-hydrograph and 3 low-flow stations. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating Federal, State, and City agencies in Texas.

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

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

Publications similar to this report are published annually by the U.S. Geological Survey for all States. These official U.S. Geological Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water Data Report TX-04-1." For archiving and general distribution, the reports for the 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or may be purchased on microfiche from the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161, (703) 605-6000.

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

COOPERATION

Federal agencies that assisted the U.S. Geological Survey in the collection of data in this report in the form of funds or services in water year 2004 are:

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

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

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

SUMMARY OF HYDROLOGIC CONDITIONS

Precipitation

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

Streamflow across the State averaged normal during water year 2004.

Conservation storage in 77 selected reservoirs throughout the State, with a combined conservation capacity of 34,485,000 acre-feet, increased from 77 percent at the end of September 2003 to 84 percent at the end of September 2004. Records from these reservoirs indicate that storage increased in 54, decreased in 21, and remained the same in 2.

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

Streamflow

Monthly mean streamflow was normal in most streams in Texas during the 2004 water year. Comparisons of monthly mean and annual mean discharges in the 2004 water year, with median values for the period 1971-2000, were made for the following four representative index stations in Texas: the Neches River near Rockland (08033500) in southeastern Texas, the North Bosque River near Clifton (08095000) in east central Texas; the North Concho River near Carlsbad (08134000) in west central Texas, and the Guadalupe River near Spring Branch (08167500) in south central Texas (fig. 2).

Annual mean streamflow for the Neches River near Rockland was 2,932 cubic feet per second (ft^3/s) for the 2004 water year, or 162 percent of 1,811 ft^3/s for the reference period 1971-2000. The 2004 water year monthly mean discharges were above the normal range (greater than 75 percent of the median monthly discharge for the reference period) during the months of February, July and September. Monthly mean discharges for the other months were within the normal range.

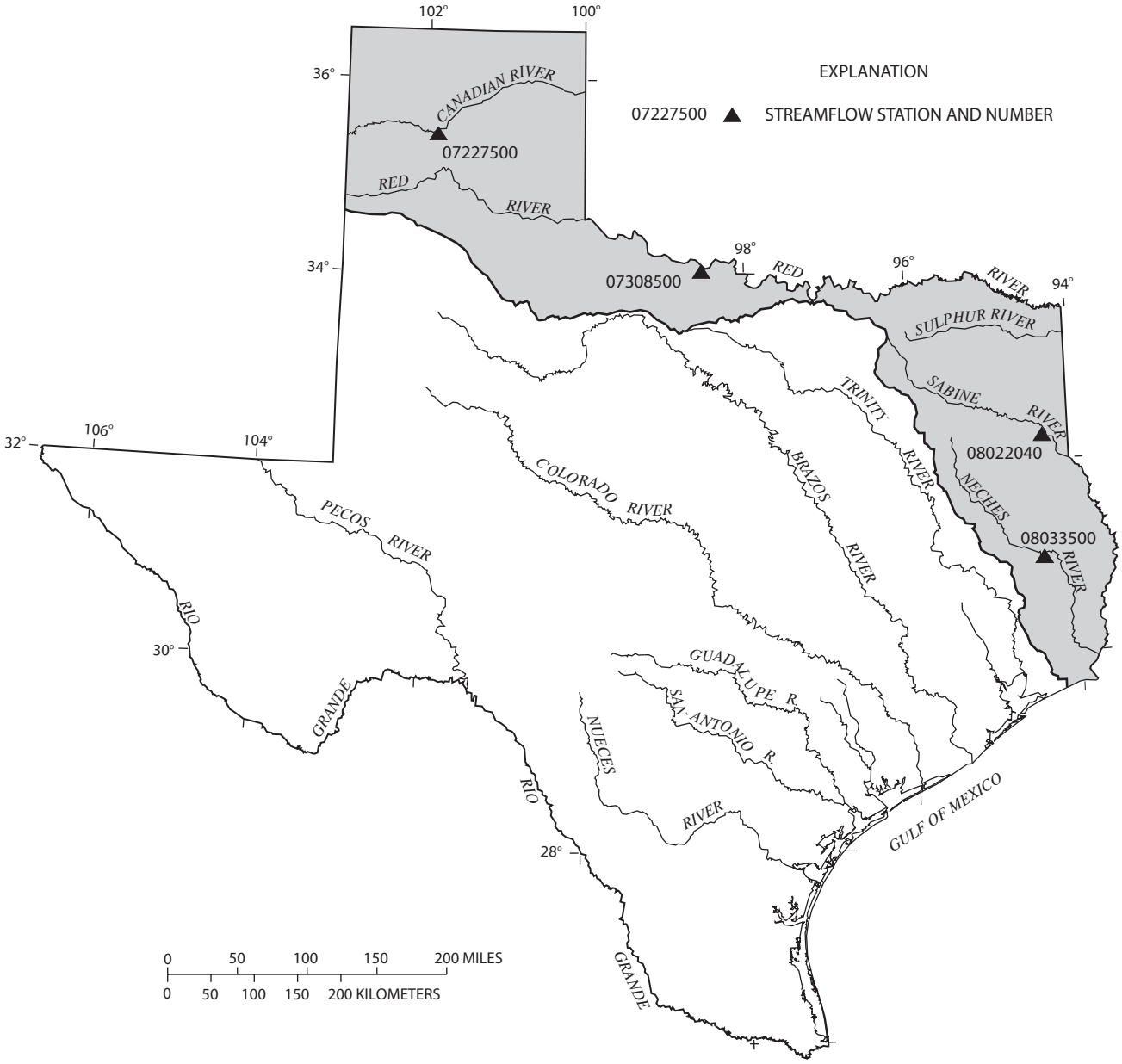


Figure 1. Area of Texas covered by volume 1 (shaded) and location of selected streamflow stations in volume 1.

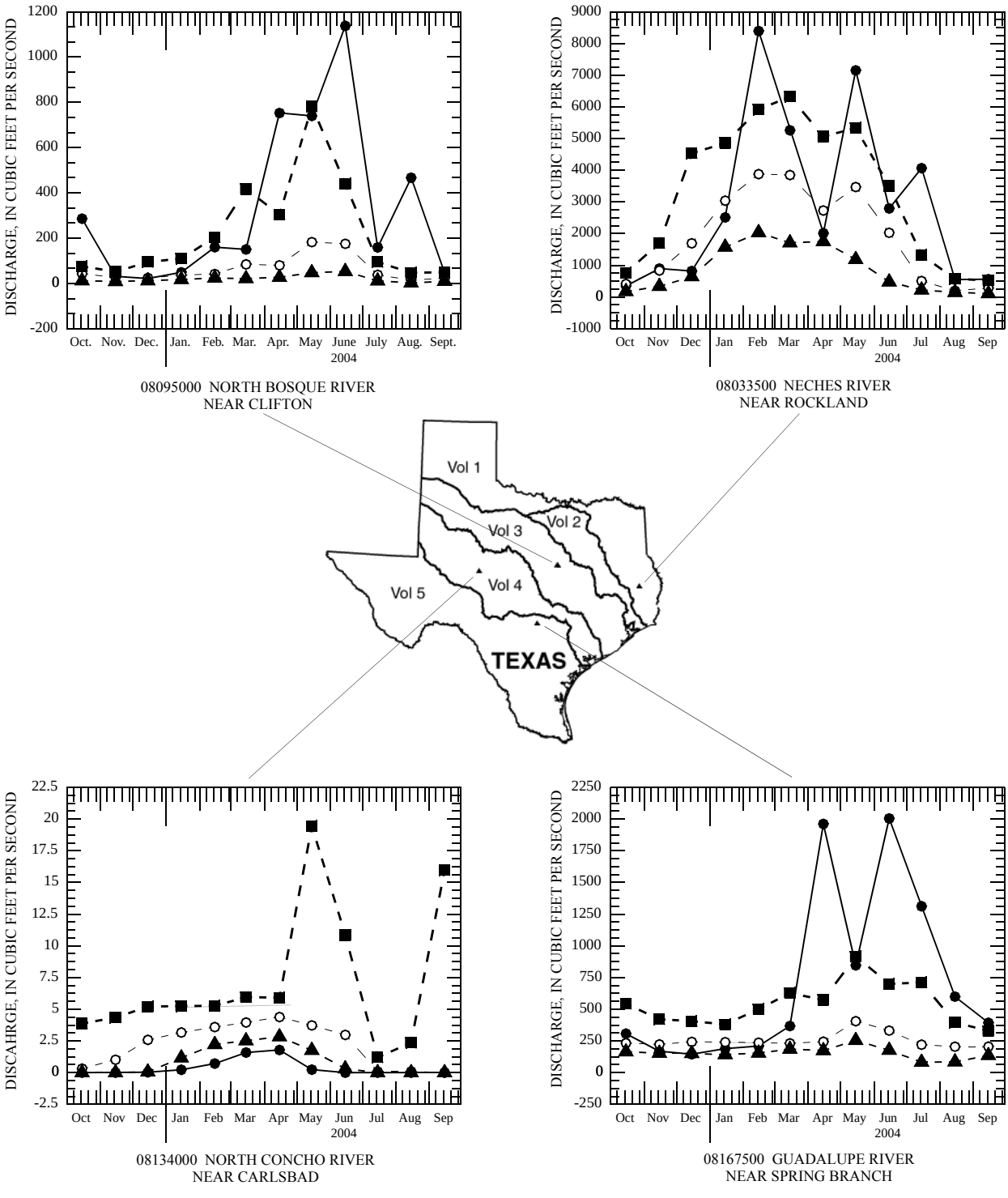


Figure 2. Monthly mean discharges at four long-term hydrologic index stations during 2004 water year and median of the monthly mean discharges for 1971–2000 water years.

Annual mean streamflow for the North Bosque River near Clifton was 333 ft^3/s for the 2004 water year, or 550 percent of 60.6 ft^3/s for the reference period 1971-2000. the 2004 water year monthly mean discharges for the North Bosque River near Clifton were above the normal range (greater than 75 percent of the median monthly discharge for the reference period) during the months of October, April, June, July and August. Monthly mean discharges for the other months were within the normal range.

Annual mean streamflow for the North Concho River near Carlsbad was 0.38 ft^3/s for the 2004 water year, or 18 percent of 2.05 ft^3/s for the reference period 1971-2000. The 2004 water year monthly mean discharges for the North Concho River near Carlsbad were below the normal range (less than 25 percent of the median monthly discharge for the reference period) during the months of December, January, February, March, April, May, and June. Monthly mean discharges for the other months were within the normal range.

Annual mean streamflow for the Guadalupe River near Spring Branch was 707 ft^3/s for the 2004 water year or 265 percent of 267 ft^3/s for the reference period 1971-2000. The 2004 water year monthly mean discharges for the Guadalupe River near Spring Branch were above the normal range (greater than 75 percent of the median monthly discharge for the reference period during the months of April, June, July, August and September, and below the normal range (less than 25 percent of the median monthly discharge for the reference period) during December. Monthly mean discharges for the other months were within the normal range.

Conservation storage in 22 selected reservoirs in this area of the State, with a total combined conservation capacity of 14,654,000 acre-feet, increased from 81 percent of capacity at the end of September 2003 to 84 percent of capacity at the end of September 2004. Records from these reservoirs indicate that storage increased in 15, decreased in 6, and remained the same in 1 during the water year.

Water Quality

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

Table 1. Streamflow at four selected stations

Station no. and name		Discharge during 2004 water year (cubic feet per second)			Discharge during period of record (cubic feet per second)		
		Maximum instantaneous	Minimum daily mean	Mean	Maximum instantaneous	Minimum daily mean	Mean
Arkansas River Basin							
07227500	Canadian River near Amarillo, TX	11,700	0	102	135,000	0	265 (1938-2004)
Red River Basin							
07308500	Red River near Burkburnett, TX	30,300	3	513	174,000	0	1,202 (1960-2004)
Sabine River Basin							
08022040	Sabine River near Beckville, TX	10,600	100	986	49,400	2.4	2,595 (1961-2004)
Neches River Basin							
08033500	Neches River near Rockland, TX1/	14,800	156	2,932	42,300	18	2,437 (1962-2004)

1/ Hydrologic index station.

DOWNSTREAM ORDER AND STATION NUMBER

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

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These station numbers are in the same downstream order used in this report. In assigning a station number, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list composed of both types of stations. Gaps are consecutive. The complete 8-digit (or 10-digit) number for each station such as 09004100, which appears just to the left of the station name, includes a 2-digit part number "09" plus the 6-digit (or 8-digit) downstream order number "004100." In areas of high station density, an additional two digits may be added to the station identification number to yield a 10-digit number. The stations are numbered in downstream order as described above between stations of consecutive 8-digit numbers.

SPECIAL NETWORKS AND PROGRAMS

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

National Stream-Quality Accounting Network (NASQAN) is a network of sites used to monitor the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande River basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia Rivers so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment (NAWQA) Program; (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program may be accessed from *http://water.usgs.gov/nasqan/*.

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

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

Assessment activities are being conducted in 42 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents is measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for water-resources managers to use in making decisions and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key Federal, State, and local water-resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program may be accessed from *http://water.usgs.gov/nawqa/*.

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

EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS

Data Collection and Computation

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

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

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

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

At some stations, stage-discharge relation is affected by changing stage. At these stations, the rate of change in stage is used as a factor in computing discharge.

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

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

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

For some stream-gaging stations, periods of time occur when no gage-height record is obtained or the recorded gage height is faulty and cannot be used to compute daily discharge or contents. Such a situation can happen when the recorder stops or otherwise fails to operate properly, the intakes are

plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records from other stations in the same or nearby basins. Likewise, lake or reservoir volumes may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

Data Presentation

The records published for each continuous-record surface-water discharge station (stream-gaging station) consist of five parts: (1) the station manuscript or description; (2) the data table of daily mean values of discharge for the current water year with summary data; (3) a tabular statistical summary of monthly mean flow data for a designated period, by water year; (4) a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration; and (5) a hydrograph of discharge.

Station Manuscript

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

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

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

PERIOD OF RECORD.—This term indicates the time period for which records have been published for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that its flow reasonably can be considered equivalent to flow at the present station.

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

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

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

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

EXTREMES OUTSIDE PERIOD OF RECORD.—Information here documents major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the USGS.

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

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

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the

REMARKS and in the inclusion of a stage-capacity table when daily volumes are given.

Peak Discharge Greater than Base Discharge

Tables of peak discharge above base discharge are included for some stations where secondary instantaneous peak discharge data are used in flood-frequency studies of highway and bridge design, flood-control structures, and other flood-related projects. The base discharge value is selected so an average of three peaks a year will be reported. This base discharge value has a recurrence interval of approximately 1.1 years or a 91-percent chance of exceedence in any 1 year.

Data Table of Daily Mean Values

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

Statistics of Monthly Mean Data

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

Summary Statistics

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

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

The following summary statistics data are provided with each continuous record of discharge. Comments that follow clarify information presented under the various line headings of the SUMMARY STATISTICS table.

ANNUAL TOTAL.—The sum of the daily mean values of discharge for the year.

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

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

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

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

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

ANNUAL 7-DAY MINIMUM.—The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note

that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. This value should not be confused with the 7-day 10-year low-flow statistic.

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

MAXIMUM PEAK STAGE.—The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

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

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

> Acre-foot (AC-FT) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.
>
> Cubic feet per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area.
>
> Inches (INCHES) indicate the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

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

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

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

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

Identifying Estimated Daily Discharge

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

Accuracy of Field Data and Computed Results

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

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

Values of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft^3/s; to the nearest tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 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 discharge values listed for partial-record stations.

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

adjustments or losses are large in comparison with the observed discharge.

Other Data Records Available

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

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

EXPLANATION OF PRECIPITATION RECORDS

Data Collection and Computation

Rainfall data generally are collected using electronic data loggers that measure the rainfall in 0.01-inch increments every 15 minutes using either a tipping-bucket rain gage or a collection well gage. Twenty-four hour rainfall totals are tabulated and presented. A 24-hour period extends from just past midnight of the previous day to midnight of the current day. Snowfall-affected data can result during cold weather when snow fills the rain-gage funnel and then melts as temperatures rise. Snowfall-affected data are subject to errors. Missing values are indicated by this symbol "---" in the table.

Data Presentation

Precipitation records collected at surface-water gaging stations are identified with the same station number and name as the stream-gaging station. Where a surface-water daily-record station is not available, the precipitation record is published with its own name and latitude-longitude identification number.

Information pertinent to the history of a precipitation station is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, period of record, and general remarks.

The following information is provided with each precipitation station. Comments that follow clarify information presented under the various headings of the station description.

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

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

INSTRUMENTATION.—Information on the type of rainfall collection system is given.

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

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

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

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

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

Water Analysis

Most of the methods used for collecting and analyzing water samples are described in the TWRIs, which may be accessed from *http://water.usgs.gov/pubs/twri/*.

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

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

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum and minimum values (and sometimes mean or median values) for each

constituent measured, and are based on 15-minute or 1-hour intervals of recorded data beginning at 0000 hours and ending at 2400 hours for the day of record.

SURFACE-WATER-QUALITY RECORDS

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because discharge data is useful in the interpretation of surface-water quality. Records of surface-water quality in this report involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A *continuous-record station* is a site where data are collected on a regularly scheduled basis. Frequency may be one or more times daily, weekly, monthly, or quarterly. A *partial-record station* is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A *miscellaneous sampling site* is a location other than a continuous- or partial-record station, where samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between *continuous records* as used in this report and *continuous recordings* that refer to a continuous graph or a series of discrete values recorded at short intervals. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently.

Accuracy of the Records

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

Arrangement of Records

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

On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the naturally occurring quality of the water. To ensure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made on site when the samples are taken. To assure that measurements made in the laboratory also represent the naturally occurring water, carefully prescribed procedures must be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1-A9. Most of the methods used for collecting and analyzing water samples are described in the TWRIs, which may be accessed from *http://water.usgs.gov/pubs/twri/*. Also, detailed information on collecting, treating, and shipping samples can be obtained from the USGS District office (see address that is shown on the back of title page in this report).

Water Temperature

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

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

Sediment

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

During periods of rapidly changing flow or rapidly changing concentration, samples may be collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day

method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

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

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

Laboratory Measurements

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

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

Remark Codes

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

Printed Output	Remark
E	Value is estimated.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
M	Presence of material verified, but not quantified.
N	Presumptive evidence of presence of material.
U	Material specifically analyzed for, but not detected.
A	Value is an average.
V	Analyte was detected in both the environmental sample and the associated blanks.
S	Most probable value.

Water-Quality Control Data

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

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

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

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

Blank Samples

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

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

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

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

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

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

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

Preservation blank—A blank solution that is treated with the sampler preservatives used for an environmental sample.

Reference Samples

Reference material is a solution or material prepared by a laboratory. The reference material composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are

submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

Replicate Samples

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

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

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

Split sample—A type of replicate sample in which a sample is split into subsamples, each subsample contemporaneous in time and space.

Spike Samples

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

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the World Wide Web (WWW). These data may be accessed from *http://water.usgs.gov*.

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

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units. Other glossaries that also define water-related terms are accessible from *http://water.usgs.gov/glossaries.html*.

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

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

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

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

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

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

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

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

summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day, 10-year low-flow statistic.)

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

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

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

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

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

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

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

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

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

Bedload is material in transport that primarily is supported by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to the top of the bedload sampler nozzle (an elevation ranging from 0.25 to 0.5 foot). These particles are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

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

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

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

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

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

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

Bottom material (See "Bed material")

Bulk electrical conductivity is the combined electrical conductivity of all material within a doughnut-shaped volume

surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved-solids content of the pore water, and the lithology and porosity of the rock.

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

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

sphere $4/3\ \pi r^3$ cone $1/3\ \pi r^2 h$ cylinder $\pi r^2 h$.

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

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

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

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

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

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

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

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

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

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

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

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

Control designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

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

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

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

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

Daily mean suspended-sediment concentration is the time-weighted mean concentration of suspended sediment pass-

ing a stream cross section during a 24-hour day. (See also "Sediment" and "Suspended-sediment concentration")

Daily record station is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to data collection on a daily or near-daily basis.

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

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

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

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

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

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

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

Dissolved oxygen (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved-solids concentration in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4917 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L $CaCO_3$) can be converted to carbonate concentration by multiplying by 0.60.

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

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

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

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

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

Dry mass refers to the mass of residue present after drying in an oven at 105 °C, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass. (See also "Ash mass," "Biomass," and "Wet mass")

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

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

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

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

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

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

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

Extractable organic halides (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

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

Fecal streptococcal bacteria are present in the intestines of warmblooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Filtered pertains to constituents in a water sample passed through a filter of specified pore diameter, most commonly 0.45 micrometer or less for inorganic analytes and 0.7 micrometer for organic analytes.

Filtered, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that has passed through a filter has been extracted. Complete recovery is not achieved by the extraction procedure and thus the analytical determination represents something less than 95 percent of the total constituent concentration in the sample. To achieve comparability of analytical data, equivalent extraction procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

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

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

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the

maximum depth of water. Because the gage datum is not an actual physical object, the datum is usually defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

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

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

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

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

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

Green algae *(Chlorophyta)* are unicellular or colonial algae with chlorophyll pigments similar to those in terrestrial green plants. Some forms of green algae produce mats or floating "moss" in lakes. The abundance of green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter (μm^3/mL). The abundance of green algae in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu m^3/cm^2$). (See also "Phytoplankton" and "Periphyton")

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

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

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

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

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

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

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

Horizontal datum (See "Datum")

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mean sea level is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")

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

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

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

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

Method code is a one-character code that identifies the analytical or field method used to determine a value stored in the National Water Information System (NWIS).

Method detection limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99-

percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Nonfilterable refers to the portion of the total residue retained by a filter.

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

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

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

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

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

Organic mass or **volatile mass** of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")

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

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

Organochlorine compounds are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

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

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

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

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

Classification	Size (mm)	Method of analysis
Clay	>0.00024 - 0.004	Sedimentation
Silt	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation/sieve
Gravel	>2.0 - 64.0	Sieve
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

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

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

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

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

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

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. Although primarily consisting of algae, they also include bacteria, fungi,

protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

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

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

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

Picocurie (PC, pCi) is one-trillionth (1×10^{-12}) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields 3.7×10^{10} radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 2.22 dpm (disintegrations per minute).

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

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

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

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

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

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [mg C/(m^2/time)] for periphyton and macrophytes or per volume [mg C/(m^3/time)] for phytoplankton. The carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light- and dark-bottle method and is preferred for use with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

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

Radioisotopes are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

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

Recoverable is the amount of a given constituent that is in solution after a representative water sample has been extracted or digested. Complete recovery is not achieved by the extraction or digestion and thus the determination represents something less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results. (See also "Bed material")

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occur-

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

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

Return period (See "Recurrence interval")

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

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

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

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

Salinity is the total quantity of dissolved salts, measured by weight in parts per thousand. Values in this report are calculated from specific conductance and temperature. Seawater has an average salinity of about 35 parts per thousand (for additional information, refer to: Miller, R.L., Bradford, W.L., and Peters, N.E., 1988, Specific conductance: theoretical considerations and application to analytical quality control: U.S. Geological Survey Water-Supply Paper 2311, 16 p.)

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

Sediment is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as "fluvial sediment." Sediment includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

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

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

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

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

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

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

Specific electrical conductance (conductivity) is a measure of the capacity of water (or other media) to conduct an elec-

trical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

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

Stage (See "Gage height")

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

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

Substrate is the physical surface upon which an organism lives.

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

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

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

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

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

Suspended is the amount (concentration) of undissolved material in a water-sediment mixture. Most commonly refers to that 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-micrometer filter has been extracted or digested. Complete recovery is not achieved by the extraction or digestion procedures and thus the determination represents less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results. (See also "Suspended")

Suspended sediment is sediment carried in suspension by the turbulent components of the fluid or by the Brownian movement (a law of physics). (See also "Sediment")

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also "Sediment" and "Suspended sediment")

Suspended-sediment discharge (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027. (See also "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

Suspended-sediment load is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also "Sediment")

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

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of

the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total." Determinations of "suspended, total" constituents are made either by directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also "Suspended")

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

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

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

Kingdom:	Animal
Phylum:	Arthropeda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	*Hexagenia*
Species:	*Hexagenia limbata*

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

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

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water resulting from the mixing of flow proportionally to the duration of the concentration.

Tons per acre-foot (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

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

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

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

Total discharge is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

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

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

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

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

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

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

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

Transect, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

Turbidity is an expression of the optical properties of a liquid that causes light rays to be scattered and absorbed rather than transmitted in straight lines through water. Turbidity, which can make water appear cloudy or muddy, is caused by the presence of suspended and dissolved matter, such as clay, silt, finely divided organic matter, plankton and other microscopic organisms, organic acids, and dyes (ASTM International, 2003, D1889–00 Standard test method for turbidity of water, *in* ASTM International, Annual Book of ASTM Standards, Water and Environmental Technology, v. 11.01: West Conshohocken, Pennsylvania, 6 p.). The color of water, whether resulting from dissolved compounds or suspended particles, can affect a turbidity measurement. To ensure that USGS turbidity data can be understood and interpreted properly within the context of the instrument used and site conditions encountered, data from each instrument type are stored and reported in the National Water Information System (NWIS) using parameter codes and measurement reporting units that are specific to the instrument type, with specific instruments designated by the method code. The respective measurement units, many of which also are in use internationally, fall into two categories: (1) the designations NTU, NTRU, BU, AU, and NTMU signify the use of a broad spectrum incident light in the wavelength range of 400-680 nanometers (nm), but having different light detection configurations; (2) The designations FNU, FNRU, FBU, FAU, and FNMU generally signify an incident light in the range between 780-900 nm, also with varying light detection configurations. These reporting units are equivalent when measuring a calibration solution (for example, formazin or polymer beads), but their respective instruments may not produce equivalent results for environmental samples. Specific reporting units are as follows:

NTU (Nephelometric Turbidity Units): white or broadband [400-680 nm] light source, 90 degree detection angle, one detector.

NTRU (Nephelometric Turbidity Ratio Units): white or broadband [400-680 nm] light source, 90 degree detection angle, multiple detectors with ratio compensation.

BU (Backscatter Units): white or broadband [400-680 nm] light source, 30 ± 15 degree detection angle (backscatter).

AU (Attenuation Units): white or broadband [400-680 nm] light source, 180 degree detection angle (attenuation).

NTMU (Nephelometric Turbidity Multibeam Units): white or broadband [400-680 nm] light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

FNU (Formazin Nephelometric Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, one detector.

FNRU (Formazin Nephelometric Ratio Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, multiple detectors, ratio compensation.

FBU (Formazin Backscatter Units): near infrared [780-900 nm] or monochrome light source, 30±15 degree detection angle.

FAU (Formazin Attenuation Units): near infrared [780-900 nm] light source, 180 degree detection angle.

FNMU (Formazin Nephelometric Multibeam Units): near infrared [780-900 nm] or monochrome light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

For more information please see http://water.usgs.gov/owq/FieldManual/Chapter6/6.7_contents.html.

Ultraviolet (UV) absorbance (absorption) at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic sub-

stances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of path length of UV light through a sample.

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

Unfiltered pertains to the constituents in an unfiltered, representative water-suspended sediment sample.

Unfiltered, recoverable is the amount of a given constituent in a representative water-suspended sediment sample that has been extracted or digested. Complete recovery is not achieved by the extraction or digestion treatment and thus the determination represents less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

Vertical datum (See "Datum")

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

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

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

Water year in USGS reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 2002, is called the "2002 water year."

Watershed (See "Drainage basin")

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

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

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

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

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

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

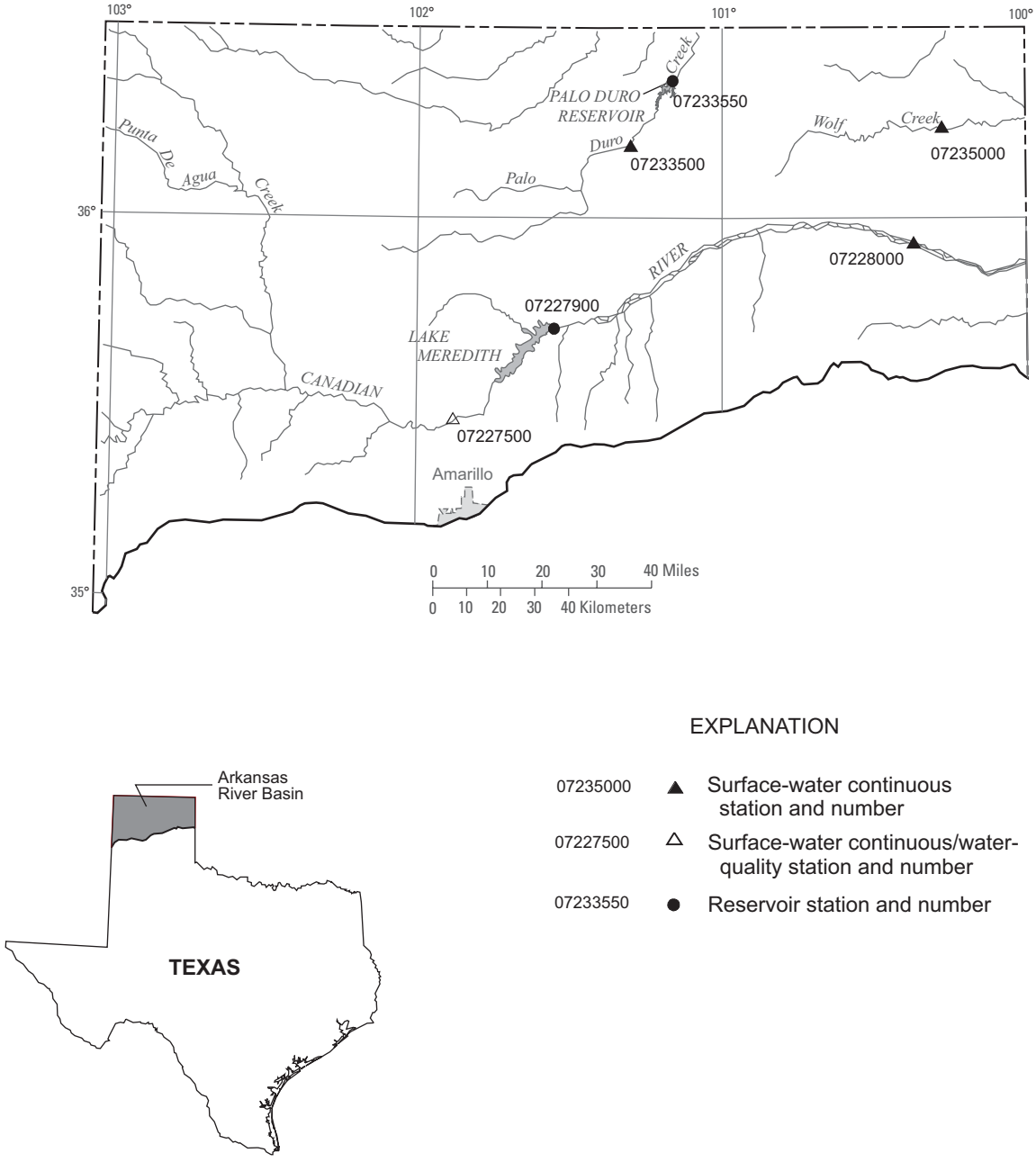


Figure 3.--Map showing location of gaging stations in the Arkansas River Basin

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 northbound lane of bridge on U.S. Highways 87 and 287, 1,800 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 mi^2 of which 4,069 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Jan. 1924 to Dec. 1925 (period no longer used in computation of average annual discharge), Jan. 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 NGVD 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. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since installation of gage in Jan. 1924, at least 10% of contributing drainage area has been regulated. Conchas and Bell Ranch Canals divert water from Conchas Reservoir upstream for irrigation. No flow at times.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

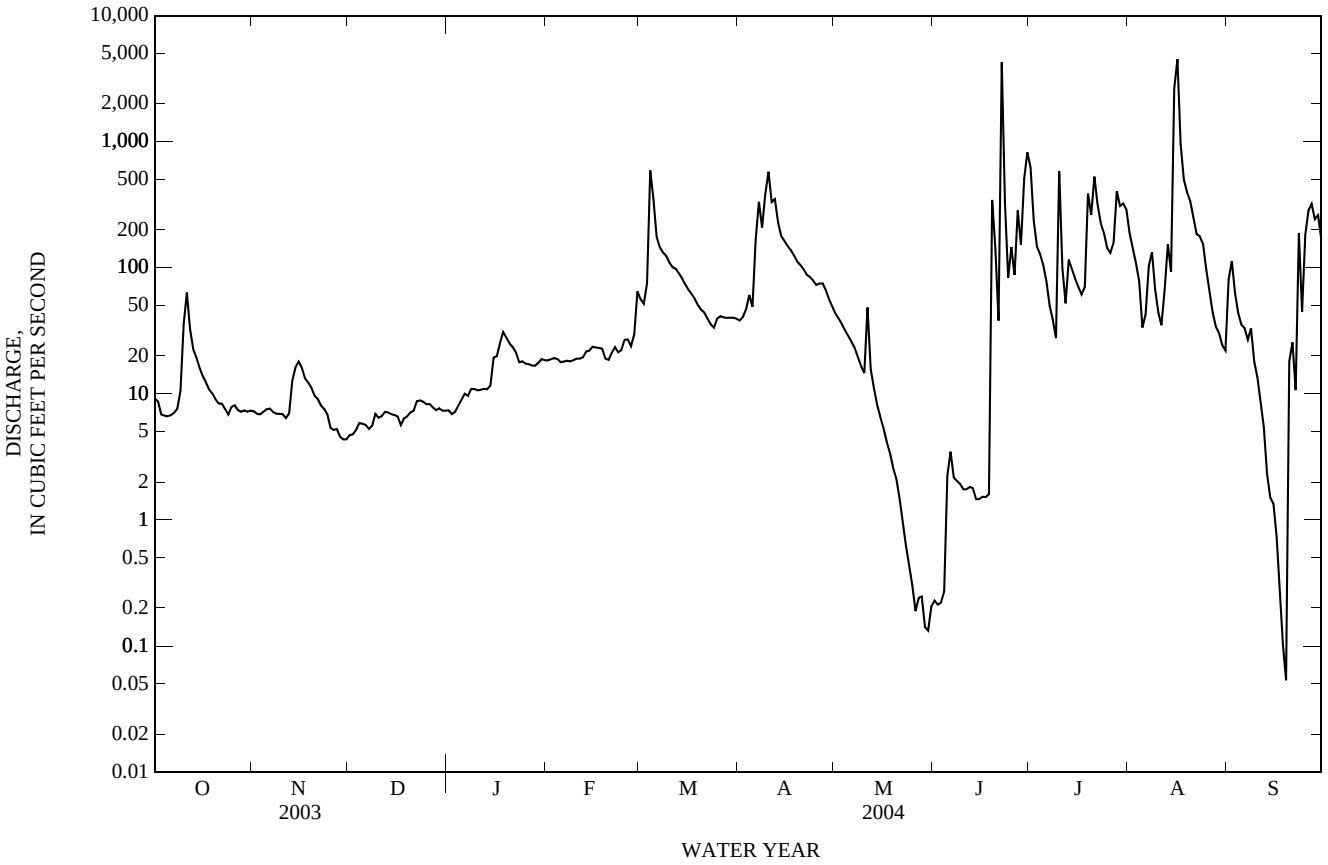
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	7.3	4.7	7.4	18	56	38	43	0.23	627	188	81
2	8.7	6.9	4.8	6.9	19	52	41	39	0.21	235	143	113
3	6.9	6.9	5.2	7.2	19	75	47	36	0.22	148	109	63
4	6.7	7.2	5.9	8.1	19	592	61	32	0.27	129	78	44
5	6.7	7.6	5.8	9.0	18	351	49	29	2.2	106	34	35
6	6.8	7.6	5.6	10	18	177	167	26	3.5	78	43	33
7	7.1	7.2	5.3	9.6	18	145	334	23	2.2	50	103	27
8	7.6	7.0	5.6	11	18	132	209	20	2.0	39	133	33
9	11	6.9	6.9	11	18	125	382	17	1.9	28	66	18
10	36	6.9	6.5	11	19	110	577	15	1.7	586	44	13
11	64	6.4	6.6	11	19	101	333	48	1.8	99	35	8.6
12	32	7.0	7.2	11	20	98	351	16	1.8	52	67	5.4
13	23	13	7.1	11	22	90	230	11	1.8	116	154	2.3
14	19	16	6.9	12	22	83	178	8.2	1.5	97	93	1.5
15	16	18	6.8	19	24	74	163	6.6	1.5	82	2,640	1.3
16	14	16	6.6	20	23	67	148	5.3	1.5	71	4,520	0.74
17	12	13	5.7	25	23	62	138	4.2	1.5	62	958	0.26
18	11	12	6.4	31	23	57	125	3.4	1.6	70	503	0.10
19	10	11	6.6	28	19	50	112	2.6	345	387	398	0.05
20	9.0	9.7	7.1	25	19	46	105	2.1	143	263	338	18
21	8.4	9.1	7.3	23	21	44	98	1.5	38	529	254	26
22	8.4	8.1	8.8	21	23	39	88	0.95	4,280	316	185	11
23	7.6	7.6	8.9	18	21	36	84	0.63	328	226	178	188
24	6.8	6.9	8.7	18	22	33	80	0.44	83	188	155	45
25	7.9	5.4	8.3	17	27	40	73	0.30	146	143	97	182
26	8.1	5.2	8.3	17	27	41	75	0.19	88	131	66	285
27	7.4	5.3	7.8	17	24	40	75	0.24	285	158	44	320
28	7.2	4.6	7.4	17	30	40	67	0.25	152	405	34	242
29	7.4	4.3	7.7	18	65	40	56	0.14	507	309	30	261
30	7.2	4.4	7.4	19	---	40	49	0.13	824	323	24	169
31	7.4	---	7.4	18	---	39	---	0.21	---	290	22	---
TOTAL	400.5	254.5	211.3	487.2	658	2,975	4,533	392.38	7,246.43	6,343	11,736	2,227.25
MEAN	12.9	8.48	6.82	15.7	22.7	96.0	151	12.7	242	205	379	74.2
MAX	64	18	8.9	31	65	592	577	48	4,280	627	4,520	320
MIN	6.7	4.3	4.7	6.9	18	33	38	0.13	0.21	28	22	0.05
AC-FT	794	505	419	966	1,310	5,900	8,990	778	14,370	12,580	23,280	4,420

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2004, BY WATER YEAR (WY)

MEAN	292	75.8	48.5	54.3	49.4	53.2	170	419	517	550	497	521
MAX	5,663	812	458	519	287	608	5,988	6,804	5,288	4,880	3,007	8,016
(WY)	(1942)	(1942)	(1942)	(1943)	(2000)	(2000)	(1942)	(1941)	(1941)	(1941)	(1981)	(1941)
MIN	0.57	1.52	1.25	4.75	3.00	1.86	1.52	2.27	0.95	0.24	0.11	0.00
(WY)	(1981)	(1978)	(1984)	(1978)	(1939)	(1940)	(1978)	(2003)	(1990)	(1998)	(1983)	(2000)

07227500 Canadian River near Amarillo, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1938 - 2004	
ANNUAL TOTAL	17,479.77		37,464.56			
ANNUAL MEAN	47.9		102		265	
HIGHEST ANNUAL MEAN					2,351	1941
LOWEST ANNUAL MEAN					31.8	2002
HIGHEST DAILY MEAN	2,740	Sep 8	4,520	Aug 16	79,600	Sep 23, 1941
LOWEST DAILY MEAN	0.00	Aug 5	0.05	Sep 19	0.00	Aug 7, 1940
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 5	0.20	May 26	0.00	Sep 3, 1983
MAXIMUM PEAK FLOW			11,700	Jun 22	135,000	Jul 25, 1941
MAXIMUM PEAK STAGE			6.62	Jun 22	15.70	Jul 25, 1941
ANNUAL RUNOFF (AC-FT)	34,670		74,310		192,000	
10 PERCENT EXCEEDS	62		227		455	
50 PERCENT EXCEEDS	8.4		21		26	
90 PERCENT EXCEEDS	0.21		2.5		3.6	



07227500 Canadian River near Amarillo, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: July 1948 to Oct. 1949, Feb. 1950 to Sept. 1997, Oct. 1998 to current year.
BIOCHEMICAL DATA: Mar. 1968 to Sept. 1997.
PESTICIDE DATA: Mar. 1968 to June 1981.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct. 1950 to current year.
WATER TEMPERATURE: Aug. 1949 to current year.
SUSPENDED SEDIMENT DISCHARGE: Aug. 1949 to Sept. 1952.

INSTRUMENTATION.--Water-quality monitor since Oct. 1995.

REMARKS.--Temperature records fair. Specific conductance records poor. Interruptions in the record were due to malfunction of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. New regression equations were developed based on data from water years 1995 to 2004. The standard error of estimate for dissolved solids is 5%, chloride is 37%, sulfate is 22% and for hardness is 28%. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 9,180 microsiemens/cm, June 8, 1990; minimum daily, 103 microsiemens/cm, Oct. 22, 2001.
WATER TEMPERATURE: Maximum daily, 39.0°C, July 7, 1973; minimum, -0.9°C, Nov. 19, 2000.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum,7370 microsiemens/cm, Nov 25; minimum, 137 microsiemens/cm, June 25.
WATER TEMPERATURE: Maximum, 33.1°C, Aug 10; minimum, 0.1°C, on several days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
OCT													
22...	1020	8.4	8.9	96	8.1	4,830	13.1	890	720	239dc	70.6dc	50.0dc	12
FEB													
26...	1215	24	13.0	131	8.4	3,770	9.8	530	360	130	50.5	8.13	11
MAR													
24...	1425	30	9.6	133	8.5	4,050	24.6	570	420	135d	56.8d	8.28d	12
MAY													
26...	1425	.14	8.6	123	8.1	4,360	26.8	740	600	189d	64.3d	7.02d	11
JUN													
29...	1315	421	6.6	85	8.0	436	22.2	66	--	18.0	5.05	3.67	3
AUG													
05...	1045	41	7.4	97	8.2	2,960	22.8	370	240	97.1d	32.1d	5.79d	10

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)
OCT													
22...	838dc	167	1120dc	.5	15.0	644dc	3,080	.17	<.04	--	E.06n	E.004n	--
FEB													
26...	596d	172	858d	.6	11.1	438d	2,210	.81	.28	2.42	2.52	.096	.53
MAR													
24...	650d	152	1000d	.7	12.9	484d	2,460	.38	<.04	3.73	3.76	.024	--
MAY													
26...	675d	135	933d	.5	14.2	654d	2,620	.18	<.04	--	<.06	<.008	--
JUN													
29...	54.9	86	47.4	.3	8.1	34.6	225	.29	<.04	.44	.46	.022	--
AUG													
05...	438d	139	642d	.5	10.6	315d	1,630	.17	<.04	--	.25	E.006n	--

07227500 Canadian River near Amarillo, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Ortho-phos-phate, water, fltrd, mg/L (00660)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)
OCT			
22...	--	<.02	<.04
FEB			
26...	.987	.32	.39
MAR			
24...	1.35	.44	.50
MAY			
26...	--	<.02	<.04
JUN			
29...	--	E.01n	E.03n
AUG			
05...	--	<.02	<.04

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

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 2003 TO SEPTEMBER 2004

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.	2003	400.5	3740	2210	2390	820	883	480	518	510
NOV.	2003	254.5	4980	2970	2040	1200	804	630	430	680
DEC.	2003	211.3	6180	3720	2120	1500	882	760	435	840
JAN.	2004	487.2	4410	2620	3450	1000	1330	560	735	600
FEB.	2004	658	3510	2070	3670	760	1340	450	801	480
MAR.	2004	2975	2030	1180	9460	400	3200	270	2140	280
APR.	2004	4533	2060	1200	14650	410	4970	270	3300	280
MAY	2004	392.38	2930	1710	1820	600	640	380	403	400
JUNE	2004	7246.43	567	323	6320	96	1890	76	1500	78
JULY	2004	6343	2020	1170	20030	390	6720	260	4540	280
AUG.	2004	11736	799	457	14490	140	4470	110	3390	110
SEPT	2004	2227.25	1300	751	4510	240	1440	170	1040	180
TOTAL		37464.56	**	**	84960	**	28570	**	19220	**
WTD.AVG.		102	1450	840	**	280	**	190	**	200

07227500 Canadian River near Amarillo, TX—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	e4,500	---	---	e4,530	6,450	5,560	6,200	6,430	5,630	5,910
2	---	---	e4,550	---	---	e4,700	6,360	6,000	6,240	5,980	5,640	5,870
3	---	---	e4,600	---	---	e4,720	6,490	6,190	6,320	6,130	5,790	5,990
4	---	---	e4,650	---	---	e4,810	6,420	6,180	6,310	6,160	5,790	6,000
5	---	---	e4,700	---	---	e4,900	6,440	5,740	6,310	6,310	5,850	6,020
6	---	---	e4,750	---	---	e4,940	6,660	6,230	6,450	---	---	e5,550
7	---	---	e4,800	---	---	e5,110	6,750	6,100	6,510	6,620	---	e6,420
8	---	---	e3,500	---	---	e5,090	6,660	5,950	6,360	6,890	6,500	6,720
9	1,440	248	782	---	---	e5,180	6,390	6,150	6,260	6,900	6,090	6,600
10	3,020	1,440	2,560	---	---	e5,310	6,660	6,040	6,400	6,360	5,690	5,980
11	---	2,980	e3,030	---	---	e5,380	6,670	6,060	6,380	5,860	5,510	5,720
12	---	---	e3,320	---	---	e5,740	6,570	6,010	6,330	5,820	5,320	5,630
13	---	---	e3,540	---	---	e5,120	6,400	5,250	6,060	5,560	4,940	5,460
14	---	---	e3,720	6,120	2,090	4,420	6,650	5,770	6,110	5,730	4,230	5,380
15	---	---	e3,850	5,120	3,860	4,380	6,870	5,960	6,360	4,230	2,790	3,810
16	---	---	e3,980	4,630	3,260	4,140	6,600	5,570	6,260	4,040	3,590	3,820
17	---	---	e4,140	5,210	3,260	4,490	6,620	5,820	6,350	4,050	3,450	3,720
18	---	---	e4,300	4,580	3,060	4,170	6,890	5,950	6,550	3,760	2,610	3,320
19	---	---	e4,440	---	---	e4,200	6,850	6,200	6,470	3,350	2,310	3,140
20	---	---	e4,510	---	---	e3,240	6,360	5,840	6,160	3,520	3,310	3,420
21	---	---	e4,580	5,950	---	e4,940	6,340	5,880	6,110	3,660	3,410	3,550
22	---	---	e4,680	6,500	5,060	5,710	6,110	5,740	5,860	4,180	3,360	3,850
23	5,270	3,580	4,750	---	---	e5,910	5,890	5,540	5,730	4,240	3,850	4,060
24	5,430	3,680	4,950	---	---	e6,500	5,930	5,640	5,790	4,270	3,760	4,020
25	5,400	4,360	4,990	7,370	---	e6,900	6,120	5,670	5,880	4,360	4,000	4,140
26	5,390	1,950	4,140	7,360	6,600	7,060	5,970	5,600	5,780	4,440	3,840	4,160
27	5,420	3,160	4,510	6,600	6,080	6,280	5,960	5,690	5,820	4,500	2,520	4,050
28	---	---	e3,860	6,220	5,700	6,050	6,130	5,700	5,980	4,800	4,070	4,460
29	---	---	e4,250	6,620	6,020	6,290	6,580	5,900	6,200	4,740	3,630	4,320
30	---	---	e4,480	6,630	6,180	6,410	6,800	6,020	6,380	4,500	3,720	4,110
31	---	---	e4,530	---	---	---	6,700	5,910	6,380	4,600	3,370	4,110
MONTH	---	---	4,130	---	---	5,220	6,890	5,250	6,200	---	---	4,820
		FEBRUARY			MARCH			APRIL			MAY	
1	4,460	3,920	4,150	953	850	900	---	2,400	e3,080	3,190	2,770	3,010
2	4,680	3,150	4,030	1,120	832	936	---	---	e3,030	3,630	3,100	3,330
3	4,520	3,290	4,010	1,820	1,000	1,250	6,010	---	e3,640	3,760	3,010	3,370
4	4,390	3,820	4,180	2,140	---	e1,130	5,370	1,670	2,760	4,140	3,240	3,850
5	4,640	4,350	4,490	---	---	e1,250	3,080	1,820	2,350	4,090	3,300	3,740
6	4,940	3,180	4,250	---	---	e1,360	5,330	2,720	3,790	4,070	3,220	3,750
7	4,900	3,160	4,280	---	---	e1,530	4,080	---	e2,480	3,460	2,680	2,880
8	4,790	3,910	4,490	---	---	e1,740	---	1,520	e1,740	3,650	2,980	3,150
9	4,840	4,040	4,520	---	---	e1,930	1,840	932	1,330	3,330	2,360	2,560
10	4,750	3,920	4,350	---	---	e2,170	1,300	715	992	2,850	2,350	2,550
11	4,720	3,950	4,450	---	---	e2,340	1,520	970	1,260	5,770	861	1,750
12	5,070	3,620	4,420	---	---	e2,420	1,730	1,300	1,440	1,880	861	1,240
13	4,880	3,230	4,160	---	---	e2,550	1,480	1,300	1,380	2,180	1,580	1,960
14	5,350	3,650	4,590	---	---	e2,750	1,350	1,340	1,340	2,540	1,920	2,150
15	5,080	3,910	4,480	---	---	e2,850	1,490	1,350	1,410	2,860	2,420	2,570
16	4,440	3,650	4,030	---	---	e3,060	1,750	1,480	1,600	3,320	2,640	2,960
17	4,330	3,880	4,120	---	---	e3,180	2,260	1,750	2,010	3,670	2,940	3,230
18	4,210	3,550	4,040	---	---	e3,250	2,690	2,260	2,460	3,210	1,240	2,370
19	4,240	1,100	2,830	---	---	e3,360	3,070	2,690	2,850	3,450	2,360	3,030
20	4,260	2,300	2,820	---	---	e3,460	3,350	3,060	3,190	3,260	2,240	2,850
21	2,940	2,240	2,640	---	---	e3,560	3,520	3,260	3,360	---	---	e3,530
22	3,180	2,180	2,610	---	---	e3,690	3,610	3,400	3,510	---	---	e3,760
23	3,380	2,470	2,830	---	---	e3,760	3,890	3,560	3,670	---	---	e3,900
24	3,710	2,560	2,720	---	---	e3,900	4,160	3,890	4,070	---	---	e4,030
25	2,990	2,630	2,810	4,180	3,330	3,790	4,320	3,640	4,140	---	---	e4,120
26	3,160	2,580	2,850	3,840	3,000	3,510	4,380	1,840	3,460	3,660	---	e4,200
27	3,680	2,450	2,980	3,750	2,520	3,360	3,700	1,870	2,860	3,900	2,880	3,520
28	3,680	2,250	2,790	3,930	2,330	3,200	3,850	2,280	3,170	3,860	2,670	3,320
29	2,440	941	1,870	4,090	2,540	3,450	3,080	2,270	2,690	3,690	2,720	3,110
30	---	---	---	3,900	2,330	3,200	3,460	2,590	2,940	3,060	2,540	2,810
31	---	---	---	3,520	2,180	3,040	---	---	---	3,920	2,690	3,310
MONTH	5,350	941	3,680	---	---	2,640	---	---	2,600	---	---	3,090

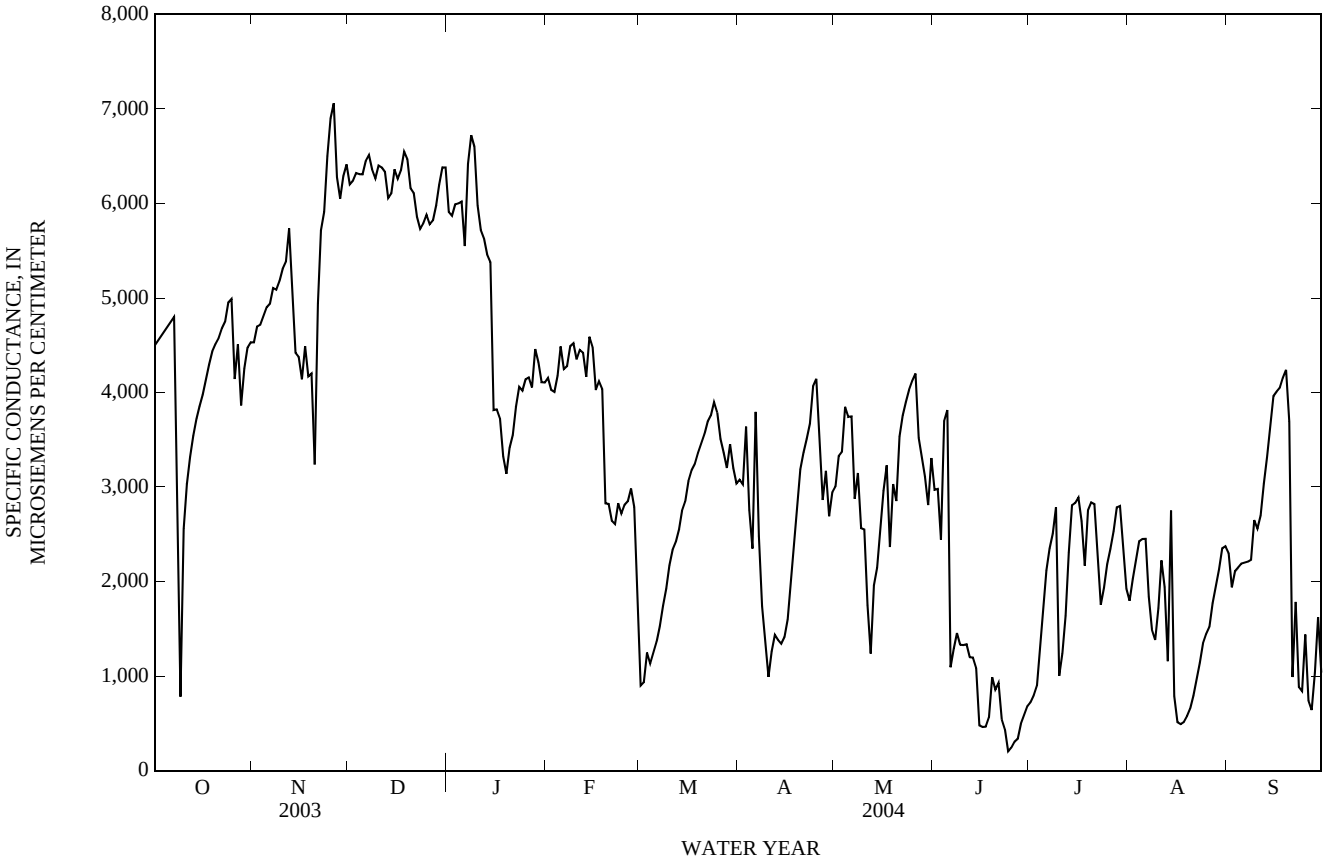
07227500 Canadian River near Amarillo, TX—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	3,340	2,550	2,970	766	676	722	1,860	1,760	1,800	2,550	1,950	2,300
2	4,090	2,140	2,980	827	766	795	2,160	1,860	2,030	---	---	e1,940
3	2,840	1,980	2,440	---	---	e899	2,270	2,160	2,220	---	---	e2,110
4	5,210	2,390	3,700	---	---	e1,320	2,720	2,270	2,430	---	---	e2,150
5	5,690	1,270	3,810	---	---	e1,730	---	---	e2,450	---	---	e2,190
6	1,300	918	1,090	---	---	e2,120	3,050	1,920	2,450	---	---	e2,200
7	1,480	1,120	1,290	---	---	e2,350	2,070	1,400	1,840	---	---	e2,210
8	1,590	1,270	1,460	2,670	2,380	2,510	1,890	1,230	1,490	---	---	e2,230
9	1,580	947	1,330	2,930	2,660	2,790	1,620	1,220	1,380	2,820	2,270	2,650
10	1,570	1,020	1,330	2,930	440	1,000	1,910	1,530	1,720	2,760	2,480	2,560
11	1,530	964	1,340	---	---	e1,240	2,640	1,630	2,220	2,900	2,570	2,700
12	1,530	678	1,200	---	---	e1,640	2,780	1,140	1,940	3,190	2,900	3,030
13	1,510	786	1,200	---	---	e2,310	2,000	561	1,160	3,490	3,190	3,310
14	1,780	418	1,090	---	---	e2,810	4,080	2,000	2,750	3,850	3,490	3,660
15	601	378	478	2,860	2,800	2,830	2,460	186	789	4,060	3,740	3,960
16	980	353	461	2,920	2,860	2,890	633	362	512	4,110	3,930	4,010
17	654	344	465	2,900	2,360	2,640	576	470	493	4,150	3,980	4,050
18	625	439	563	2,640	1,600	2,170	534	497	514	4,310	4,040	4,160
19	4,780	429	988	2,830	2,640	2,750	630	534	578	4,420	4,090	4,240
20	945	803	856	2,860	2,810	2,840	708	630	659	4,630	1,130	3,690
21	1,010	896	928	2,870	2,700	2,820	884	708	794	1,310	841	990
22	979	332	543	2,700	1,830	2,350	1,040	884	961	2,460	880	1,780
23	543	192	434	1,830	1,710	1,750	1,280	1,040	1,140	2,370	509	886
24	395	167	204	2,090	1,750	1,930	1,480	1,270	1,350	1,230	549	841
25	635	137	243	2,260	2,090	2,180	1,480	1,420	1,450	2,560	897	1,440
26	661	167	307	2,410	2,260	2,350	1,640	1,480	1,520	1,150	617	742
27	456	146	337	2,680	2,410	2,530	1,880	1,640	1,770	766	566	642
28	529	456	497	2,860	2,680	2,780	2,050	1,880	1,950	2,880	675	1,030
29	657	529	588	2,900	2,600	2,800	2,220	2,050	2,130	2,880	1,060	1,630
30	704	663	680	2,600	2,030	2,320	2,520	2,220	2,350	1,300	854	1,040
31	---	---	---	2,030	1,830	1,920	2,520	2,200	2,370	---	---	---
MONTH	5,690	137	1,190	---	---	2,130	---	---	1,590	---	---	2,350

e Estimated

07227500 Canadian River near Amarillo, TX—Continued



TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

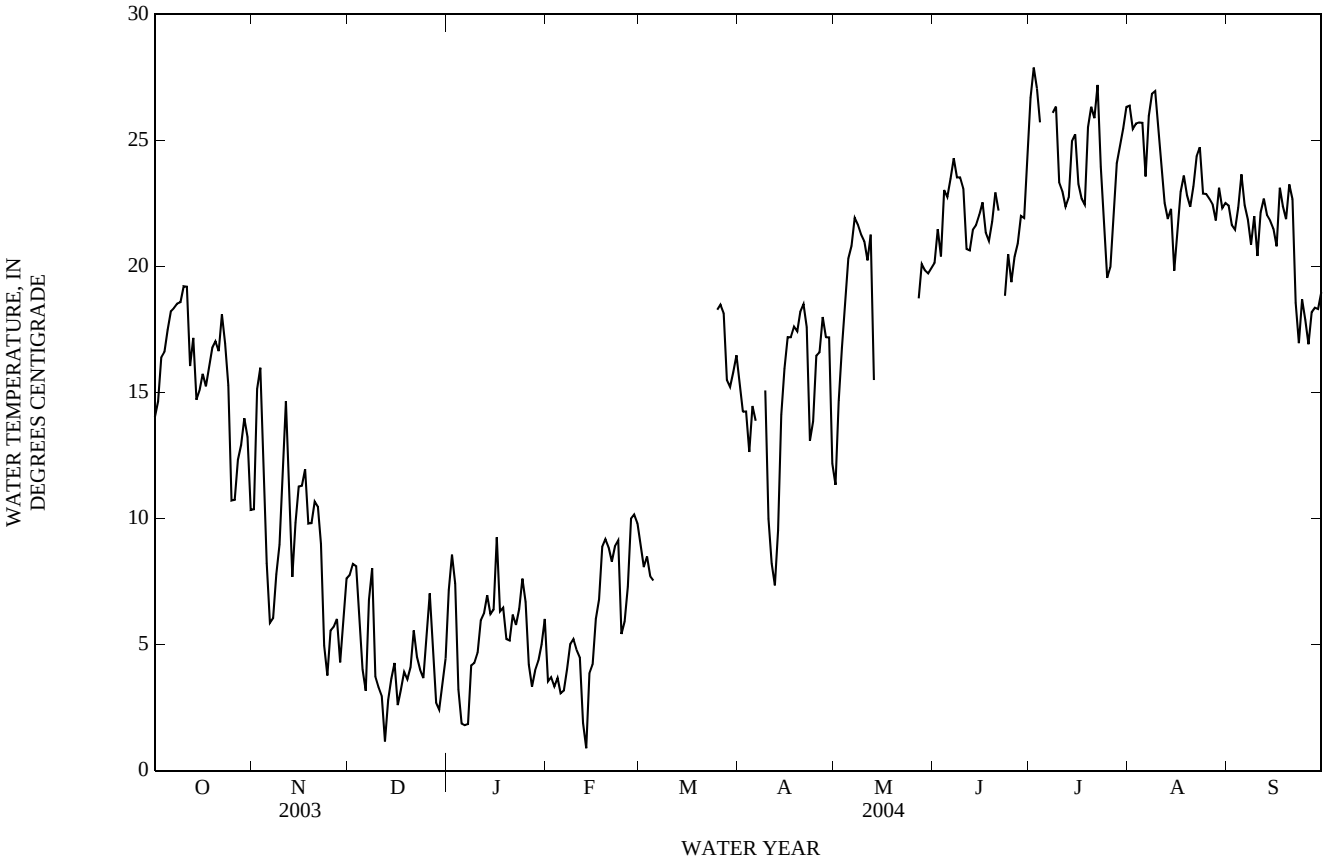
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	15.4	13.0	14.0	12.6	8.7	10.4	13.4	4.0	7.8	12.7	3.8	7.2
2	16.7	12.5	14.6	19.6	11.6	15.1	13.8	5.0	8.2	13.7	5.5	8.6
3	18.8	13.9	16.4	18.2	12.3	16.0	14.2	4.0	8.1	12.6	4.2	7.4
4	17.5	15.9	16.6	15.2	8.4	11.9	12.2	2.5	6.3	7.8	0.6	3.2
5	19.4	15.8	17.5	13.0	5.4	8.2	8.9	0.9	4.0	6.3	0.1	1.9
6	20.0	16.9	18.2	9.1	4.9	5.9	6.8	0.4	3.2	5.2	0.4	1.8
7	19.8	17.2	18.4	8.3	4.0	6.1	13.5	2.2	6.8	3.0	0.8	1.8
8	18.9	18.2	18.5	9.3	6.6	7.8	11.5	5.4	8.0	10.6	0.5	4.2
9	20.1	17.5	18.6	10.2	7.8	9.0	6.5	1.2	3.7	11.0	0.3	4.3
10	20.2	17.8	19.2	16.0	8.6	12.1	9.1	0.3	3.3	10.9	0.3	4.7
11	20.1	18.3	19.2	19.5	10.1	14.7	8.4	0.3	3.0	12.0	1.5	6.0
12	18.5	13.4	16.1	14.2	8.3	11.3	2.8	0.4	1.2	8.7	4.1	6.2
13	20.9	14.8	17.2	8.3	7.2	7.7	8.6	0.2	2.8	13.1	2.7	7.0
14	18.1	11.8	14.7	14.6	6.6	9.8	9.8	0.3	3.7	11.1	2.0	6.2
15	19.3	11.5	15.1	15.7	8.0	11.3	9.3	1.5	4.3	8.7	3.4	6.4
16	18.5	13.2	15.7	16.8	6.5	11.3	6.9	0.3	2.6	10.8	7.4	9.3
17	17.9	12.8	15.2	14.1	10.0	12.0	8.7	0.2	3.2	9.2	5.4	6.3
18	19.5	13.2	16.0	12.8	7.5	9.8	9.9	0.4	3.9	10.7	3.9	6.5
19	20.2	13.8	16.8	14.4	5.9	9.8	9.3	0.3	3.6	8.0	2.8	5.2
20	20.4	13.8	17.0	15.4	6.5	10.7	9.3	0.3	4.1	7.4	3.9	5.2
21	20.2	13.3	16.6	14.2	7.3	10.5	11.1	1.4	5.6	11.3	2.9	6.2
22	25.4	16.6	18.1	13.4	6.2	9.0	6.5	2.7	4.5	11.0	2.4	5.8
23	23.2	12.1	16.9	9.0	2.6	5.0	9.7	0.3	4.0	12.8	2.1	6.4
24	19.1	12.1	15.3	8.0	1.3	3.8	8.6	0.2	3.7	11.0	5.2	7.6
25	12.9	9.0	10.7	10.4	2.8	5.6	10.7	1.3	5.5	12.2	2.8	6.7
26	16.2	7.0	10.7	12.3	1.1	5.7	12.9	2.9	7.0	8.3	1.3	4.2
27	16.4	8.5	12.3	11.0	3.2	6.0	8.8	1.8	4.9	9.8	0.2	3.3
28	16.2	9.9	12.9	9.4	0.5	4.3	8.3	0.3	2.7	9.8	0.5	4.0
29	19.3	10.1	14.0	12.1	1.3	5.8	6.8	0.2	2.4	10.2	0.4	4.4
30	16.4	10.3	13.2	15.0	2.7	7.6	9.2	0.3	3.4	11.4	0.6	5.0
31	13.9	7.8	10.3	---	---	---	9.8	0.6	4.5	12.3	2.3	6.0
MONTH	25.4	7.0	15.7	19.6	0.5	9.1	14.2	0.2	4.5	13.7	0.1	5.5

07227500 Canadian River near Amarillo, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	5.9	1.4	3.5	12.6	5.9	9.0	21.8	11.6	15.3	15.9	8.2	11.3
2	10.2	0.2	3.7	9.5	6.4	8.1	16.7	12.6	14.2	22.1	8.4	14.7
3	6.6	0.9	3.3	11.3	6.9	8.5	17.2	12.7	14.2	22.1	12.1	16.8
4	5.6	2.4	3.7	9.4	7.2	7.7	14.9	10.2	12.6	26.2	12.2	18.3
5	4.4	1.2	3.1	8.0	7.2	7.5	18.0	11.8	14.5	25.7	14.9	20.3
6	9.1	0.1	3.2	---	5.7	---	15.0	13.4	13.9	27.3	15.2	20.8
7	11.3	0.1	4.0	---	---	---	---	12.2	---	27.5	17.4	21.9
8	11.9	0.8	5.0	---	---	---	17.7	---	---	27.2	17.7	21.7
9	11.6	0.9	5.2	---	---	---	19.4	11.7	15.1	26.6	17.1	21.3
10	11.4	0.6	4.8	---	---	---	13.7	8.2	10	25.7	17.7	21.0
11	9.4	1.6	4.5	---	---	---	9.9	6.6	8.2	25.6	16.4	20.2
12	6.0	0.2	1.9	---	---	---	9.1	5.7	7.4	28.4	16.5	21.3
13	2.5	0.1	0.9	---	---	---	16.1	3.9	9.5	19.6	13.0	15.5
14	11.2	0.2	3.9	---	---	---	19.4	9.6	14.1	---	10.7	---
15	10.9	0.1	4.2	---	---	---	22.0	10.8	15.9	---	---	---
16	12.9	1.3	6.0	---	---	---	22.5	12.5	17.2	---	---	---
17	13.6	1.5	6.8	---	---	---	19.8	14.2	17.2	---	---	---
18	15.5	4.5	8.9	---	---	---	20.3	15.2	17.6	---	---	---
19	12.3	6.2	9.2	---	---	---	23.3	12.5	17.4	---	---	---
20	13.4	6.7	8.9	---	---	---	23.8	13.4	18.2	---	---	---
21	11.3	5.9	8.3	---	---	---	25.1	13.0	18.5	---	---	---
22	12.8	6.0	8.9	---	---	---	23.8	13.8	17.6	---	---	---
23	13.7	6.8	9.1	---	---	---	15.9	9.3	13.1	---	---	---
24	8.1	3.9	5.4	24.4	---	---	22.0	7.7	13.9	---	---	---
25	12.7	1.9	5.9	24.2	13.8	18.3	24.4	12.0	16.5	---	---	---
26	14.5	2.1	7.3	24.0	14.9	18.5	23.2	10.9	16.6	26.6	---	---
27	16.7	5.5	10	23.2	13.8	18.2	23.5	13.5	18.0	24.0	15.8	18.7
28	14.2	7.9	10.2	21.8	11.1	15.5	22.4	12.7	17.2	29.9	13.2	20.1
29	12.4	8.1	9.8	22.1	9.8	15.2	22.9	13.3	17.2	26.6	16.0	19.8
30	---	---	---	23.5	9.8	15.8	14.5	10.3	12.2	25.2	15.2	19.7
31	---	---	---	23.5	11.1	16.5	---	---	---	27.9	13.6	19.9
MONTH	16.7	0.1	5.8	---	---	---	---	---	---	---	---	---
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.3	14.5	20.1	31.0	23.1	26.7	31.5	22.0	26.4	26.2	17.8	22.4
2	26.6	17.7	21.5	31.8	24.3	27.9	29.3	22.0	25.5	25.7	18.0	21.6
3	23.8	17.6	20.4	31.6	22.8	27.1	28.5	23.0	25.7	26.4	17.2	21.5
4	31.6	18.0	23.0	28.6	22.4	25.7	29.9	22.4	25.7	27.2	18.6	22.3
5	31.6	17.0	22.8	---	---	---	30.2	22.2	25.7	28.3	20.2	23.7
6	31.4	19.5	23.5	---	---	---	26.4	22.1	23.6	28.3	17.4	22.4
7	30.3	20.5	24.3	---	---	---	32.0	21.3	26.0	27.4	17.2	21.9
8	29.5	19.5	23.5	31.0	21.7	26.1	32.5	22.1	26.8	26.9	15.4	20.9
9	28.8	21.1	23.5	31.7	22.2	26.3	32.9	23.2	27.0	27.4	15.9	22.0
10	28.3	19.6	23.1	27.5	18.4	23.3	33.1	20.6	25.6	26.7	15.3	20.4
11	28.2	15.6	20.7	25.0	22.4	23.0	30.5	19.4	24.2	29.5	16.5	22.1
12	25.5	16.6	20.6	23.0	21.7	22.4	27.0	19.6	22.5	29.2	17.5	22.7
13	27.2	18.1	21.5	24.2	21.9	22.7	25.8	18.9	21.9	27.8	18.3	22.0
14	25.2	20.3	21.6	27.1	23.3	25.0	27.5	18.6	22.3	29.3	17.1	21.8
15	27.0	20.4	22.0	26.9	24.1	25.2	21.6	16.7	19.8	27.2	17.0	21.5
16	29.2	20.2	22.5	24.1	22.5	23.3	24.0	19.5	21.5	27.2	18.9	20.8
17	24.6	19.2	21.3	23.3	22.2	22.7	26.1	20.2	23.0	29.7	18.9	23.1
18	22.2	19.7	21.0	25.3	21.4	22.5	26.9	20.8	23.6	28.7	18.5	22.4
19	25.3	18.8	21.8	29.1	23.0	25.5	24.8	21.5	22.8	27.3	19.3	21.9
20	25.5	20.8	22.9	28.5	24.4	26.3	26.2	19.5	22.4	27.5	20.4	23.3
21	23.3	20.9	22.2	29.7	22.8	25.9	26.8	20.4	23.2	27.1	19.7	22.7
22	---	---	---	29.5	24.4	27.2	29.0	20.5	24.4	20.7	14.9	18.6
23	20.2	17.4	18.8	27.3	21.7	24.0	29.3	20.9	24.7	21.4	13.5	17.0
24	22.0	19.0	20.5	23.6	20.7	21.9	26.1	20.1	22.9	24.3	14.4	18.7
25	20.7	18.6	19.4	20.7	18.7	19.5	28.2	18.5	22.9	20.4	16.6	17.9
26	21.0	19.6	20.4	23.8	17.3	20.0	27.7	18.4	22.7	17.7	16.2	16.9
27	22.8	19.6	20.9	25.7	19.1	22.1	27.5	18.3	22.5	21.1	16.4	18.2
28	22.8	21.2	22.0	27.9	21.3	24.1	27.5	16.9	21.8	20.9	16.7	18.4
29	22.5	21.4	21.9	29.0	21.2	24.8	28.5	18.6	23.1	21.5	15.6	18.3
30	28.4	21.6	24.2	30.5	21.0	25.5	24.8	20.1	22.3	22.8	16.3	19.0
31	---	---	---	31.4	21.9	26.3	29.3	17.2	22.5	---	---	---
MONTH	---	---	---	---	---	---	33.1	16.7	23.7	29.7	13.5	20.9

07227500 Canadian River near Amarillo, TX—Continued



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07227900 Lake Meredith near Sanford, TX

LOCATION.--Lat 35°42'38", long 101°33'03", Hutchinson County, Hydrologic Unit 11090105, in outlet tower near right end of dam on Canadian River 1.2 mi northwest of Sanford, and 508.5 mi upstream from mouth.

DRAINAGE AREA.--20,220 mi^2 of which 4,172 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Oct. 1964 to Sept. 1987, Oct. 1999 to Sept. 2002 (daily mean contents), Oct. 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Aug. 1965, nonrecording gage read daily at same site and datum. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 6,410 ft long. The dam was completed and storage began in Oct. 1964. The service spillway is an uncontrolled concrete drop inlet located near the left end of the dam. The spillway discharges into a 22-ft diameter conduit that is designed to discharge 19,300 ft^3/s at an elevation of 3,004.9 ft. The dam was built by the U.S. Bureau of Reclamation and is owned by the Canadian River Municipal Authority and used for flood control, and municipal and industrial supply for the cities of Amarillo, Borger, Brownfield, Lamesa, Levelland, Lubbock, O'Donnell, Pampa, Plainview, Slaton, and Tahoka. The area-capacity curves are based on sediment resurvey by the Texas Water Development Board. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	3,011.0
Design flood	3,004.9
Crest drop inlet	2,965.0
Lowest gated outlet (invert)	2,850.0

COOPERATION.--Capacity table provided by Canadian Municipal Water Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 546,100 acre-ft, Apr. 28, 1973, elevation, 2,914.91 ft; minimum contents after initial filling, 165,500 acre-ft, May 27, 1981, elevation, 2,876.17 ft; minimum elevation, 2,875.20 ft, Sept. 7, 2003.

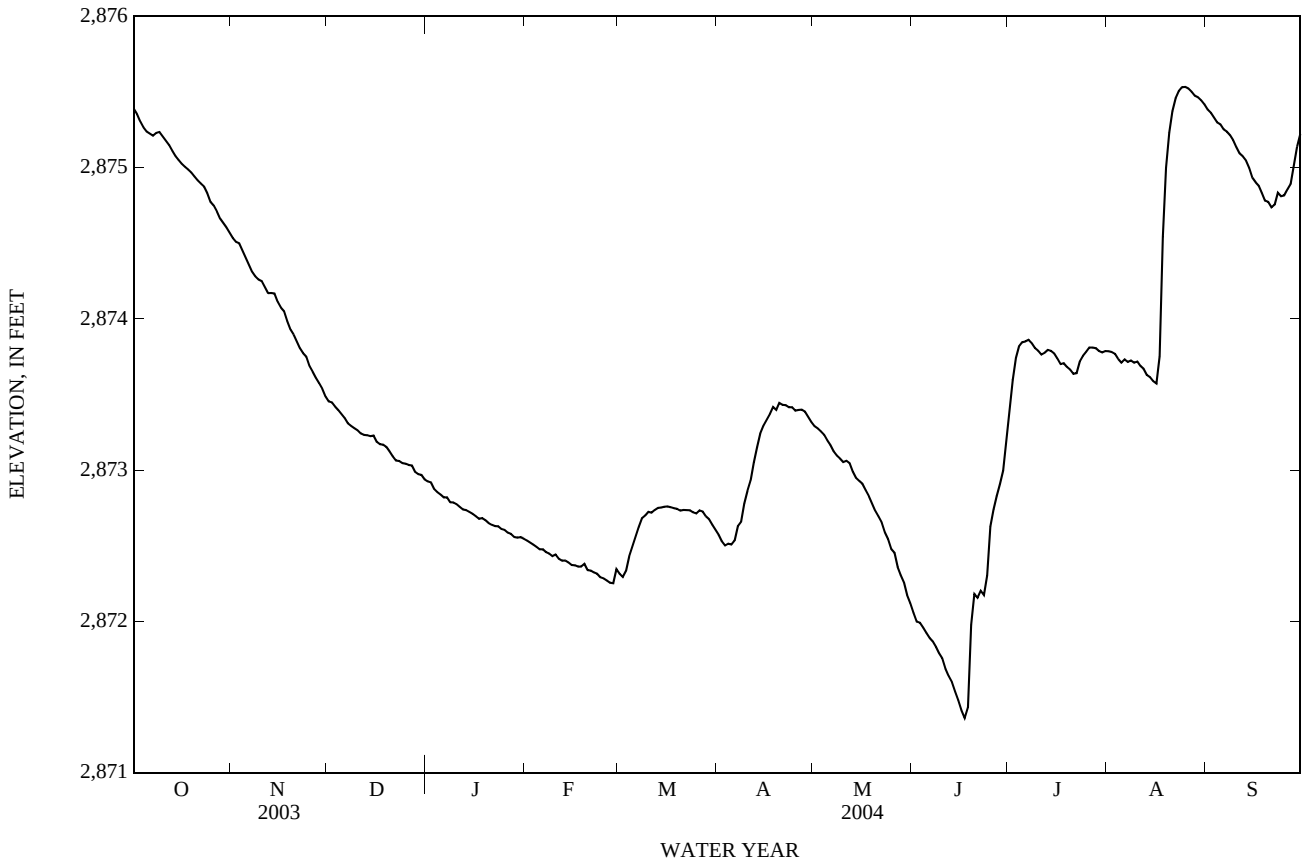
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,875.55 ft, Aug 24; minimum elevation, 2,871.32 ft, June 17.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,875.39	2,874.53	2,873.45	2,872.93	2,872.53	2,872.32	2,872.57	2,873.29	2,872.06	2,873.40	2,873.79	2,875.38
2	2,875.35	2,874.51	2,873.45	2,872.92	2,872.52	2,872.29	2,872.53	2,873.28	2,872.00	2,873.60	2,873.78	2,875.36
3	2,875.30	2,874.50	2,873.42	2,872.88	2,872.51	2,872.33	2,872.50	2,873.26	2,871.99	2,873.74	2,873.77	2,875.33
4	2,875.27	2,874.45	2,873.40	2,872.85	2,872.49	2,872.43	2,872.51	2,873.23	2,871.96	2,873.82	2,873.74	2,875.30
5	2,875.24	2,874.41	2,873.37	2,872.84	2,872.48	2,872.50	2,872.51	2,873.20	2,871.93	2,873.84	2,873.71	2,875.29
6	2,875.22	2,874.36	2,873.34	2,872.82	2,872.48	2,872.56	2,872.53	2,873.16	2,871.89	2,873.85	2,873.73	2,875.25
7	2,875.21	2,874.31	2,873.31	2,872.82	2,872.46	2,872.62	2,872.63	2,873.12	2,871.87	2,873.86	2,873.72	2,875.24
8	2,875.23	2,874.28	2,873.29	2,872.79	2,872.45	2,872.68	2,872.66	2,873.10	2,871.83	2,873.84	2,873.72	2,875.22
9	2,875.24	2,874.26	2,873.28	2,872.79	2,872.43	2,872.70	2,872.78	2,873.08	2,871.79	2,873.81	2,873.71	2,875.18
10	2,875.21	2,874.25	2,873.26	2,872.78	2,872.44	2,872.72	2,872.86	2,873.05	2,871.76	2,873.79	2,873.72	2,875.14
11	2,875.18	2,874.21	2,873.24	2,872.76	2,872.41	2,872.72	2,872.93	2,873.06	2,871.69	2,873.76	2,873.69	2,875.09
12	2,875.15	2,874.17	2,873.23	2,872.74	2,872.40	2,872.74	2,873.05	2,873.05	2,871.64	2,873.78	2,873.67	2,875.07
13	2,875.11	2,874.17	2,873.23	2,872.74	2,872.40	2,872.75	2,873.15	2,872.99	2,871.60	2,873.80	2,873.63	2,875.05
14	2,875.08	2,874.17	2,873.22	2,872.72	2,872.39	2,872.75	2,873.24	2,872.95	2,871.54	2,873.79	2,873.61	2,875.00
15	2,875.05	2,874.11	2,873.23	2,872.71	2,872.37	2,872.76	2,873.29	2,872.93	2,871.48	2,873.77	2,873.59	2,874.93
16	2,875.03	2,874.07	2,873.19	2,872.70	2,872.37	2,872.76	2,873.33	2,872.91	2,871.41	2,873.74	2,873.57	2,874.90
17	2,875.01	2,874.05	2,873.17	2,872.68	2,872.36	2,872.76	2,873.37	2,872.87	2,871.36	2,873.70	2,873.75	2,874.88
18	2,874.99	2,873.99	2,873.17	2,872.68	2,872.36	2,872.75	2,873.42	2,872.83	2,871.43	2,873.71	2,874.54	2,874.83
19	2,874.97	2,873.93	2,873.15	2,872.67	2,872.38	2,872.74	2,873.40	2,872.78	2,871.98	2,873.68	2,875.00	2,874.78
20	2,874.94	2,873.90	2,873.12	2,872.65	2,872.34	2,872.73	2,873.44	2,872.73	2,872.18	2,873.66	2,875.23	2,874.77
21	2,874.92	2,873.85	2,873.09	2,872.64	2,872.34	2,872.74	2,873.43	2,872.69	2,872.16	2,873.64	2,875.37	2,874.74
22	2,874.89	2,873.81	2,873.06	2,872.63	2,872.32	2,872.74	2,873.43	2,872.65	2,872.20	2,873.64	2,875.46	2,874.76
23	2,874.88	2,873.77	2,873.06	2,872.63	2,872.32	2,872.74	2,873.42	2,872.59	2,872.17	2,873.72	2,875.51	2,874.83
24	2,874.83	2,873.75	2,873.05	2,872.61	2,872.29	2,872.72	2,873.42	2,872.54	2,872.30	2,873.76	2,875.53	2,874.81
25	2,874.77	2,873.69	2,873.04	2,872.61	2,872.28	2,872.71	2,873.39	2,872.48	2,872.63	2,873.78	2,875.53	2,874.82
26	2,874.75	2,873.65	2,873.03	2,872.59	2,872.27	2,872.73	2,873.40	2,872.45	2,872.74	2,873.81	2,875.52	2,874.86
27	2,874.71	2,873.61	2,873.03	2,872.58	2,872.26	2,872.73	2,873.40	2,872.36	2,872.83	2,873.81	2,875.50	2,874.89
28	2,874.66	2,873.57	2,872.99	2,872.56	2,872.25	2,872.70	2,873.39	2,872.31	2,872.91	2,873.81	2,875.47	2,875.02
29	2,874.63	2,873.54	2,872.97	2,872.55	2,872.34	2,872.68	2,873.35	2,872.26	2,873.00	2,873.79	2,875.47	2,875.14
30	2,874.60	2,873.49	2,872.97	2,872.56	---	2,872.64	2,873.32	2,872.17	2,873.20	2,873.78	2,875.45	2,875.22
31	2,874.57	---	2,872.94	2,872.55	---	2,872.61	---	2,872.12	---	2,873.79	2,875.42	---
MEAN	2,875.01	2,874.05	2,873.19	2,872.71	2,872.39	2,872.66	2,873.09	2,872.82	2,872.05	2,873.75	2,874.45	2,875.04
MAX	2,875.39	2,874.53	2,873.45	2,872.93	2,872.53	2,872.76	2,873.44	2,873.29	2,873.20	2,873.86	2,875.53	2,875.38
MIN	2,874.57	2,873.49	2,872.94	2,872.55	2,872.25	2,872.29	2,872.50	2,872.12	2,871.36	2,873.40	2,873.57	2,874.74

WTR YR 2004 MEAN 2,873.44 MAX 2,875.53 MIN 2,871.36

07227900 Lake Meredith near Sanford, TX—Continued



07228000 Canadian River near Canadian, TX

LOCATION.--Lat 35°56'06", long 100°22'13", Hemphill County, Hydrologic Unit 11090106, on downstream side of 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 mi^2 of which 4,688 mi^2 probably is noncontributing.

PERIOD OF RECORD.--July 1924 to Aug. 1925 (gage heights only), Jan. 1938 to current year. Prior to Apr. 1938, monthly discharges only, published in WSP 1311. Water-quality records: Chemical data: Aug. 1966 to Sept. 1994. Biochemical data: Aug. 1966 to Sept. 1994. Pesticide data: Oct. 1970 to June 1982. Specific conductance: Oct. 1974 to Sept. 1981. Water temperature: Oct. 1974 to Sept. 1981.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,301.50 ft above NGVD 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, Oct. 12, 1995, to Jan. 30, 1998, water-stage recorder and nonrecording gages; all at site 300 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--Records good. Since installation of gage in Jan. 1938, at least 10% of contributing drainage area has been regulated. Extreme low flow is maintained by springs that enter river about 600 ft upstream from the gage. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 20.0 ft Oct. 2, 1904, from a local resident. Floods of May 2, 1914, and Oct. 5, 1923, reached stages of 12 ft from information furnished by the Chief Engineer Office of the Panhandle and Sante Fe Railroad Company.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	28	37	43	56	110	60	89	19	373	39	33
2	22	29	37	43	54	120	59	86	20	341	37	32
3	23	30	37	43	54	187	58	82	21	312	36	31
4	25	30	36	44	59	388	58	79	22	240	52	30
5	27	30	36	e43	62	551	58	76	20	190	45	29
6	27	30	36	e34	68	398	64	70	20	159	52	28
7	28	31	37	e44	67	326	78	67	18	137	51	28
8	29	32	38	e49	65	215	102	64	16	116	58	28
9	31	33	38	46	63	167	135	62	16	140	63	27
10	30	34	37	45	60	139	253	59	17	165	60	26
11	29	34	38	46	58	121	356	56	16	112	76	25
12	28	34	38	46	58	112	310	56	15	91	78	25
13	27	36	39	46	56	106	238	53	14	79	68	23
14	26	39	39	46	57	99	195	53	14	69	63	21
15	26	38	39	47	56	94	171	51	14	62	82	21
16	27	37	39	48	56	89	150	50	13	54	79	22
17	26	37	38	57	55	86	136	48	28	52	72	21
18	26	37	39	78	54	82	126	46	45	50	62	19
19	26	36	40	71	54	79	118	43	255	45	58	20
20	25	36	39	66	53	75	119	39	879	41	58	20
21	25	37	40	64	53	73	115	37	742	38	54	25
22	25	37	42	61	53	72	116	35	615	36	52	37
23	25	37	46	58	53	70	113	33	570	38	50	83
24	25	36	45	58	52	68	118	30	525	40	45	89
25	24	38	44	58	53	67	113	29	685	41	42	106
26	25	38	44	58	52	65	113	30	671	40	38	170
27	26	38	43	57	53	65	104	27	572	38	36	279
28	27	38	42	58	53	64	96	26	527	38	35	278
29	27	38	43	57	88	63	92	23	425	58	35	143
30	27	38	43	55	---	62	90	21	467	49	34	111
31	27	---	43	56	---	61	---	20	---	44	34	---
TOTAL	812	1,046	1,232	1,625	1,675	4,274	3,914	1,540	7,281	3,288	1,644	1,830
MEAN	26.2	34.9	39.7	52.4	57.8	138	130	49.7	243	106	53.0	61.0
MAX	31	39	46	78	88	551	356	89	879	373	82	279
MIN	21	28	36	34	52	61	58	20	13	36	34	19
AC-FT	1,610	2,070	2,440	3,220	3,320	8,480	7,760	3,050	14,440	6,520	3,260	3,630

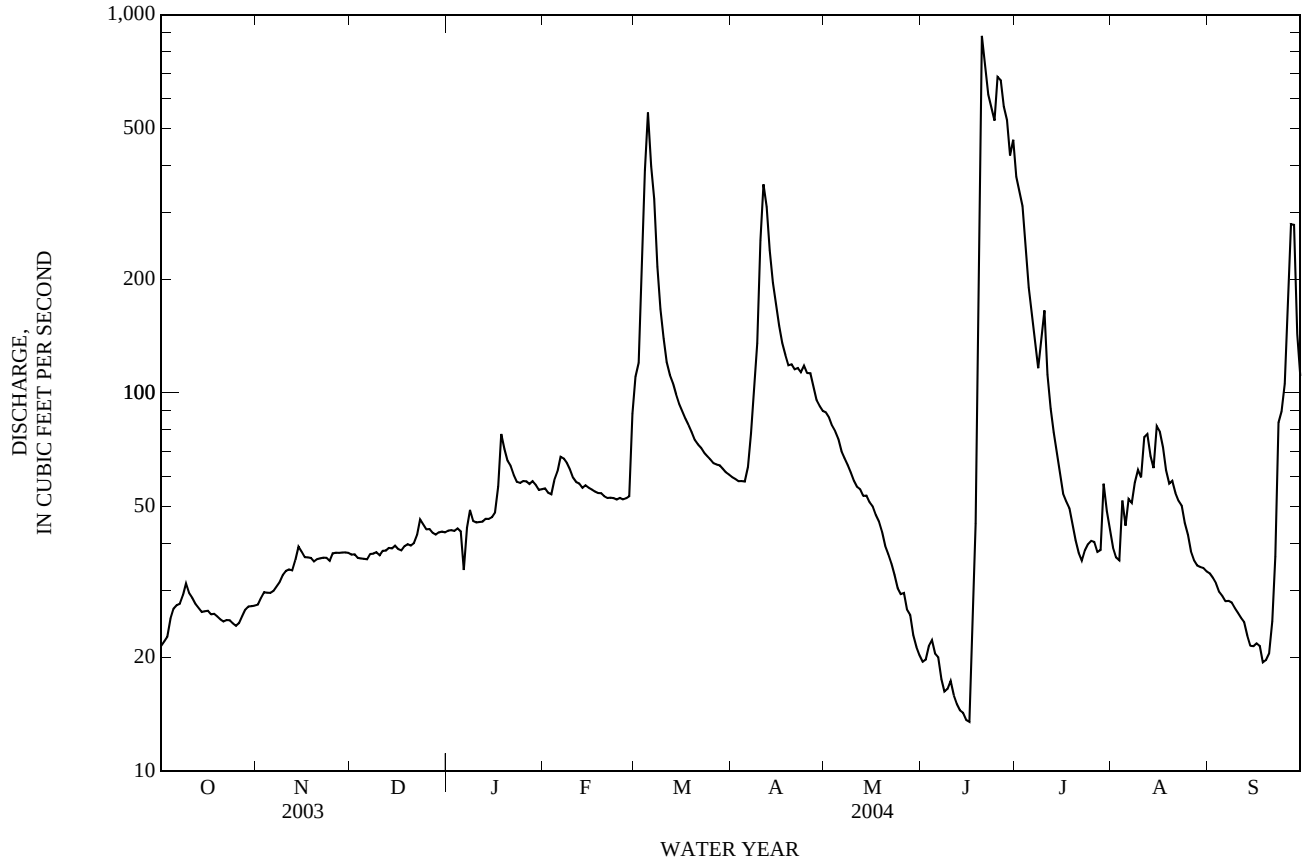
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2004, BY WATER YEAR (WY)

MEAN	354	86.6	94.3	115	103	115	203	562	584	431	301	362
MAX	10,210	1,397	694	541	380	592	5,978	8,164	8,976	6,118	3,524	7,399
(WY)	(1942)	(1942)	(1960)	(1943)	(1960)	(1961)	(1942)	(1941)	(1941)	(1941)	(1941)	(1941)
MIN	0.35	1.03	1.50	1.53	28.3	1.76	1.14	0.46	0.34	0.02	0.02	0.00
(WY)	(1976)	(1946)	(1940)	(1957)	(1959)	(1946)	(1964)	(1962)	(1966)	(1970)	(1980)	(1983)

07228000 Canadian River near Canadian, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1938 - 2004	
ANNUAL TOTAL	20,766.8		30,161			
ANNUAL MEAN	56.9		82.4		270	
HIGHEST ANNUAL MEAN					2,963	1941
LOWEST ANNUAL MEAN					34.5	1964
HIGHEST DAILY MEAN	317	Jun 22	879	Jun 20	60,600	Sep 24, 1941
LOWEST DAILY MEAN	3.4	Aug 28	13	Jun 16	0.00	Jan 4, 1941
ANNUAL SEVEN-DAY MINIMUM	3.9	Aug 22	15	Jun 10	0.00	Apr 8, 1941
MAXIMUM PEAK FLOW			1,080	Jun 20	38,900	Oct 9, 1968
MAXIMUM PEAK STAGE			4.39	Jun 20	9.83	Apr 15, 1973
ANNUAL RUNOFF (AC-FT)	41,190		59,820		196,000	
10 PERCENT EXCEEDS	98		145		303	
50 PERCENT EXCEEDS	45		48		40	
90 PERCENT EXCEEDS	20		25		0.74	

e Estimated



07233500 Palo Duro Creek near Spearman, TX

LOCATION.--Lat 36°12'08", long 101°18'20", Hansford County, Hydrologic Unit 11100104, on right bank at downstream side of bridge on State Highway 15, 6 mi west of Spearman, and 18 mi upstream from Horse Creek.

DRAINAGE AREA.--1,076 mi^2 of which 520 mi^2 probably is noncontributing (revised).

PERIOD OF RECORD.--Aug. 1945 to Sept. 1979, June 1999 to current year.

REVISED RECORDS.--WDR TX-00-1: Drainage area. WDR TX-03-1: 1999-2001.

GAGE.--Water-stage recorder. Datum of gage is 2,958.95 ft above sea level. Aug. 1, 1945, to May 8, 1968, water-stage recorder at present site and at datum 2.68 ft higher than current datum. May 8, 1968, to Dec. 4, 1969, water-stage recorder at site 5 mi downstream at different datum. Dec. 4, 1969 to Sept. 30, 1979, water-stage recorder at present site and at datum 2.68 ft higher than current datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. Small diversion upstream for irrigation. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1936, 25.18 ft, present datum, from floodmark, discharge 34,000 ft^3/s. Flood of June 4, 1936, reached a stage of 23.68 ft, present datum, from floodmark, discharge 26,100 ft^3/s from rating curve extended above 20,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.5	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	23	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.2	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,420	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.6	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.16
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	123	0.00	0.00	0.05
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.1	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.9	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.34	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	1,592.15	30.55	2.10	0.21
MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.1	0.99	0.07	0.01
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	1,420	24	2.1	0.16
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	3,160	61	4.2	0.4

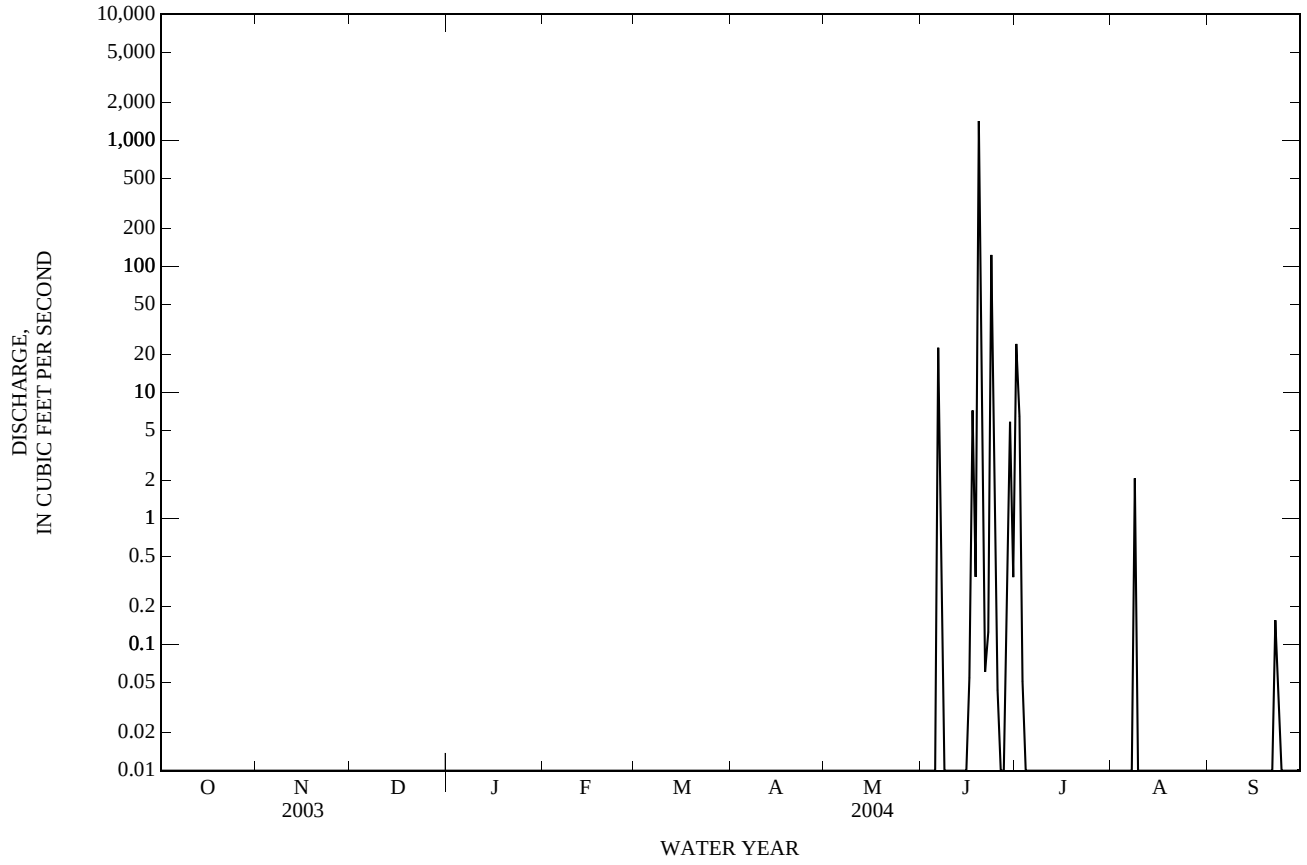
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2004h, BY WATER YEAR (WY)

MEAN	35.0	6.93	1.05	0.65	0.72	1.70	7.96	29.3	50.1	29.3	17.2	16.2
MAX	835	213	7.99	3.00	3.47	36.6	106	349	879	188	91.8	188
(WY)	(1947)	(1972)	(1960)	(1947)	(1964)	(1973)	(1955)	(1951)	(1965)	(1953)	(1950)	(1960)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
(WY)	(1953)	(1956)	(1956)	(1965)	(1965)	(1965)	(1965)	(2004)	(2001)	(1974)	(1964)	(1947)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1945 - 2004h	
ANNUAL TOTAL	171.47		1,625.02			
ANNUAL MEAN	0.47		4.44		16.5	
HIGHEST ANNUAL MEAN					89.9	1965
LOWEST ANNUAL MEAN					0.47	2003
HIGHEST DAILY MEAN	156	Jun 5	1,420	Jun 19	11,400	Oct 7, 1946
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Aug 1, 1945
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Aug 1, 1945
MAXIMUM PEAK FLOW			8,500	Jun 19	21,200	Oct 7, 1946
MAXIMUM PEAK STAGE			20.05	Jun 19	g22.55	Oct 7, 1946
ANNUAL RUNOFF (AC-FT)	340		3,220		11,970	
10 PERCENT EXCEEDS	0.00		0.00		7.0	
50 PERCENT EXCEEDS	0.00		0.00		0.40	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

g Adjusted to present datum.
h See PERIOD OF RECORD paragraph.

07233500 Palo Duro Creek near Spearman, TX—Continued



07233550 Palo Duro Reservoir near Spearman, TX

LOCATION.--Lat 36°21'42", long 101°09'48", Hansford County, Hydrologic Unit 11100104, on intake tower south of dam on Palo Duro Creek, 11 mi north of Spearman.

DRAINAGE AREA.--1,415 mi^2 of which 520 mi^2 probably is noncontributing.

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

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

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 3,800 ft long. The dam was completed Feb. 11, 1991, and storage began May 22, 1991. The dam and lake are owned by the Palo Duro River Authority. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	2,943.0
Design flood (2-foot freeboard)	2,919.0
Crest of spillway	2,915.0
Lowest gated outlet	2,892.0

COOPERATION.--Area-capacity curves developed by Freese and Nichols, Inc. and provided by the Palo Duro River Authority.

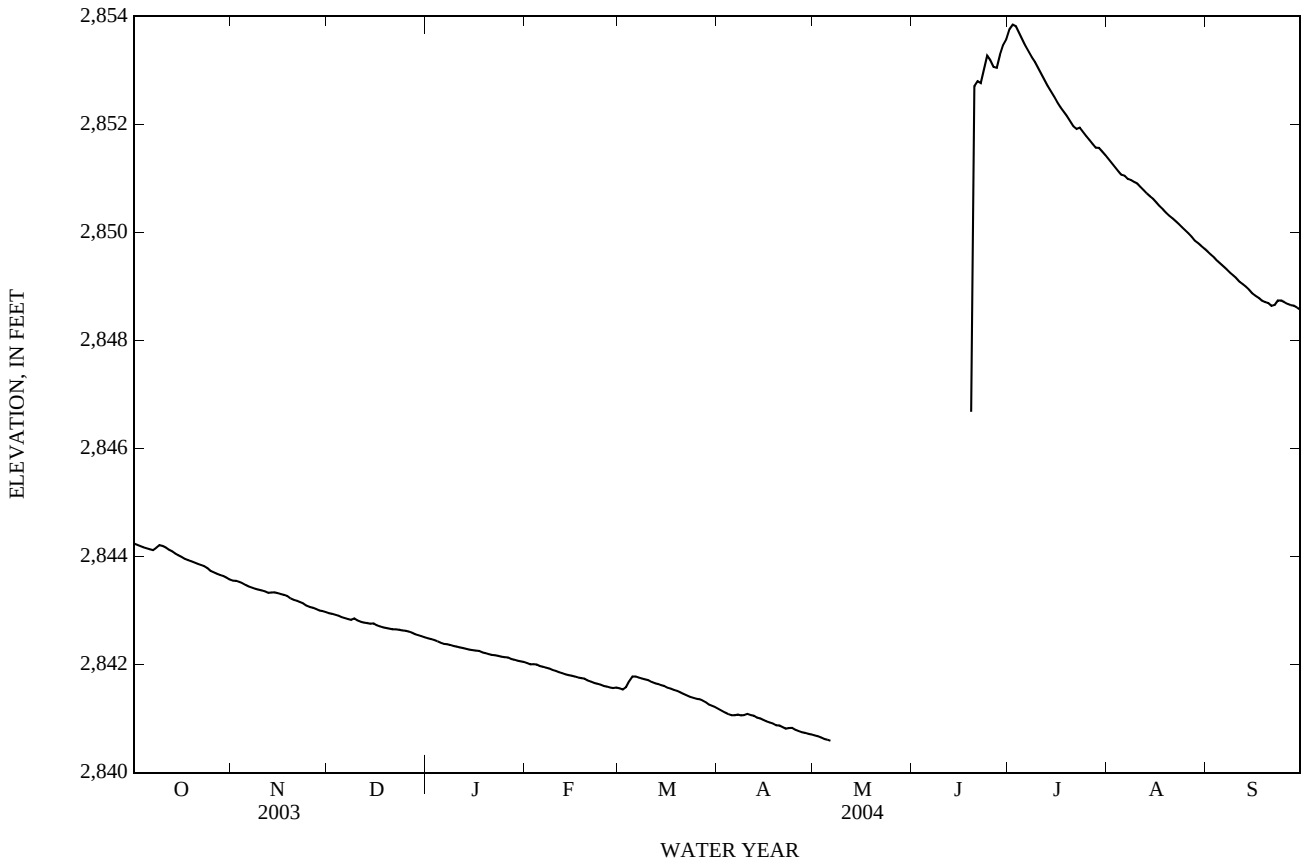
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 32,910 acre-ft, July 1, 1999, elevation, 2,877.89 ft; minimum contents, 4,000 acre-ft, Sept. 30, 2002, elevation, 2,846.23 ft; minumum elevation, 2,840.55 ft, May 6, June 19, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,853.88 July 2; minimum elevation, 2,840.55, May 6 and June 19.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,844.24	2,843.55	2,842.95	2,842.49	2,842.03	2,841.56	2,841.18	2,840.69	---	2,853.76	2,851.36	2,849.65
2	2,844.22	2,843.55	2,842.94	2,842.47	2,842.00	2,841.54	2,841.15	2,840.67	---	2,853.85	2,851.28	2,849.59
3	2,844.19	2,843.53	2,842.92	2,842.45	2,842.01	2,841.58	2,841.11	2,840.65	---	2,853.82	2,851.21	2,849.54
4	2,844.17	2,843.51	2,842.91	2,842.43	2,842.00	2,841.70	2,841.09	2,840.63	---	2,853.70	2,851.14	2,849.48
5	2,844.15	2,843.47	2,842.88	2,842.41	2,841.97	2,841.78	2,841.06	2,840.61	---	2,853.58	2,851.07	2,849.42
6	2,844.14	2,843.45	2,842.86	2,842.38	2,841.96	2,841.78	2,841.06	2,840.59	---	2,853.45	2,851.05	2,849.37
7	2,844.12	2,843.42	2,842.84	2,842.38	2,841.94	2,841.76	2,841.07	---	---	2,853.35	2,850.99	2,849.31
8	2,844.16	2,843.40	2,842.83	2,842.36	2,841.93	2,841.74	2,841.06	---	---	2,853.24	2,850.97	2,849.26
9	2,844.21	2,843.39	2,842.86	2,842.35	2,841.90	2,841.73	2,841.07	---	---	2,853.16	2,850.94	2,849.20
10	2,844.20	2,843.37	2,842.82	2,842.33	2,841.88	2,841.71	2,841.09	---	---	2,853.04	2,850.90	2,849.15
11	2,844.17	2,843.36	2,842.79	2,842.32	2,841.86	2,841.68	2,841.07	---	---	2,852.93	2,850.84	2,849.09
12	2,844.12	2,843.33	2,842.78	2,842.31	2,841.84	2,841.66	2,841.05	---	---	2,852.82	2,850.78	2,849.04
13	2,844.10	2,843.33	2,842.77	2,842.29	2,841.82	2,841.64	2,841.02	---	---	2,852.71	2,850.72	2,848.99
14	2,844.05	2,843.34	2,842.76	2,842.28	2,841.81	2,841.62	2,841.00	---	---	2,852.61	2,850.67	2,848.94
15	2,844.02	2,843.32	2,842.76	2,842.27	2,841.80	2,841.60	2,840.97	---	---	2,852.51	2,850.62	2,848.87
16	2,843.99	2,843.31	2,842.73	2,842.26	2,841.78	2,841.57	2,840.95	---	---	2,852.41	2,850.56	2,848.82
17	2,843.96	2,843.29	2,842.71	2,842.26	2,841.76	2,841.55	2,840.93	---	---	2,852.32	2,850.49	2,848.79
18	2,843.93	2,843.27	2,842.69	2,842.23	2,841.75	2,841.53	2,840.91	---	---	2,852.23	2,850.43	2,848.74
19	2,843.91	2,843.22	2,842.68	2,842.21	2,841.74	2,841.51	2,840.88	---	2,846.68	2,852.15	2,850.36	2,848.71
20	2,843.89	2,843.20	2,842.67	2,842.20	2,841.70	2,841.49	2,840.88	---	2,852.71	2,852.06	2,850.31	2,848.69
21	2,843.87	2,843.18	2,842.65	2,842.18	2,841.68	2,841.46	2,840.84	---	2,852.80	2,851.97	2,850.26	2,848.64
22	2,843.84	2,843.16	2,842.66	2,842.18	2,841.66	2,841.43	2,840.81	---	2,852.77	2,851.92	2,850.21	2,848.66
23	2,843.82	2,843.13	2,842.64	2,842.16	2,841.65	2,841.40	2,840.83	---	2,853.01	2,851.94	2,850.16	2,848.74
24	2,843.79	2,843.09	2,842.63	2,842.15	2,841.63	2,841.39	2,840.83	---	2,853.27	2,851.86	2,850.10	2,848.74
25	2,843.74	2,843.07	2,842.63	2,842.14	2,841.60	2,841.37	2,840.80	---	2,853.19	2,851.78	2,850.04	2,848.71
26	2,843.71	2,843.05	2,842.61	2,842.13	2,841.59	2,841.36	2,840.77	---	2,853.06	2,851.71	2,849.98	2,848.68
27	2,843.68	2,843.03	2,842.59	2,842.11	2,841.57	2,841.34	2,840.75	---	2,853.05	2,851.64	2,849.92	2,848.65
28	2,843.66	2,843.00	2,842.56	2,842.09	2,841.57	2,841.30	2,840.74	---	2,853.29	2,851.57	2,849.85	2,848.64
29	2,843.64	2,842.99	2,842.55	2,842.07	2,841.58	2,841.26	2,840.72	---	2,853.47	2,851.57	2,849.80	2,848.61
30	2,843.61	2,842.97	2,842.53	2,842.06	---	2,841.24	2,840.71	---	2,853.58	2,851.50	2,849.75	2,848.57
31	2,843.57	---	2,842.51	2,842.05	---	2,841.21	---	---	---	2,851.43	2,849.70	---
MEAN	2,843.96	2,843.28	2,842.73	2,842.26	2,841.79	2,841.53	2,840.95	---	---	2,852.53	2,850.53	2,848.98
MAX	2,844.24	2,843.55	2,842.95	2,842.49	2,842.03	2,841.78	2,841.18	---	---	2,853.85	2,851.36	2,849.65
MIN	2,843.57	2,842.97	2,842.51	2,842.05	2,841.57	2,841.21	2,840.71	---	---	2,851.43	2,849.70	2,848.57

07233550 Palo Duro Reservoir near Spearman, TX—Continued



07235000 Wolf Creek at Lipscomb, TX

LOCATION.--Lat 36°14'19", long 100°16'31", Lipscomb County, Hydrologic Unit 11100202, on right bank at downstream side of State Highway 305, 0.3 mi north of Lipscomb, 0.6 mi downstream from Sand Creek, 2.0 mi upstream from Plum Creek, and 61.2 mi upstream from mouth.

DRAINAGE AREA.--697 mi^2 of which 222 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Oct. 1937 to Sept. 1940, monthly discharges only, published in WSP 1311, Oct. 1940 to Sept. 1942 and Oct. 1961 to current year. Water-quality records: Chemical data: May 1980. Biochemical data: May 1980.

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

GAGE.--Water-stage recorder. Datum of gage is 2,371.29 ft above NGVD 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. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those for the period of Jun. 14-Aug. 4, which are fair. Since reactivation of gage in Oct. 1961, at least 10% of contributing drainage area has been regulated. There are small diversions upstream from station for irrigation and recreation. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--5 years (water years 1938-1942), 39.7 ft^3/s, 28,760 acre-feet/yr.

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

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1938-1942: Maximum discharge, 20,000 ft^3/s Oct. 21, 1941 (gage-height, 11.57 ft, present datum), from rating curve extended above 14,000 ft^3/s on basis of velocity-area studies. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.62	0.78	0.62	0.98	1.9	3.0	3.5	2.2	0.60	6.2	0.71	0.75
2	0.62	0.82	0.65	1.0	1.8	3.1	3.0	2.0	0.73	6.6	0.73	0.65
3	0.63	0.86	0.64	1.1	1.9	4.0	2.9	2.0	0.88	5.5	0.85	0.57
4	0.60	0.79	0.63	1.1	2.0	7.8	3.3	1.9	0.76	4.3	0.70	0.57
5	0.58	0.85	0.63	1.1	2.1	11	3.1	1.8	0.98	3.4	0.53	0.55
6	0.59	0.86	0.66	1.1	2.0	11	2.9	1.6	1.2	4.0	1.4	0.53
7	0.64	0.77	0.68	1.1	2.0	13	2.9	1.7	1.1	4.1	1.5	0.53
8	0.66	0.77	0.70	1.2	2.1	11	2.9	1.5	1.1	2.9	1.4	0.55
9	0.61	0.76	0.71	1.2	2.1	9.1	3.6	1.5	1.2	2.5	1.2	0.52
10	0.58	0.77	0.71	1.2	2.1	7.5	4.4	1.5	1.2	2.7	1.1	0.51
11	0.58	0.76	0.75	1.2	2.0	6.4	3.9	1.4	1.4	2.1	1.5	0.49
12	0.59	0.67	0.76	1.3	1.9	5.9	4.3	1.4	1.5	1.6	4.3	0.46
13	0.60	0.76	0.77	1.3	1.9	5.6	3.9	1.4	1.6	1.3	2.8	0.45
14	0.61	0.71	0.77	1.3	1.8	5.2	3.9	1.4	1.2	1.0	2.4	0.49
15	0.64	0.67	0.82	1.3	1.8	5.0	3.9	1.4	1.2	0.75	2.7	0.51
16	0.64	0.67	0.79	1.4	1.7	4.8	4.2	1.3	1.3	0.57	2.6	0.52
17	0.65	0.67	0.74	1.6	1.7	4.6	3.6	1.0	1.6	0.74	2.3	0.43
18	0.67	0.59	0.73	1.8	1.7	4.2	3.1	1.0	1.9	1.1	2.0	0.39
19	0.68	0.58	0.73	1.7	1.7	4.2	3.1	0.98	1.8	0.77	1.9	0.45
20	0.69	0.61	0.73	1.8	1.6	4.2	3.6	0.97	5.0	0.60	1.9	0.47
21	0.71	0.62	0.74	1.8	1.6	4.3	3.4	0.92	12	0.41	1.7	0.54
22	0.73	0.62	0.77	1.8	1.5	3.7	3.1	0.84	14	0.22	1.6	0.76
23	0.76	0.61	0.82	1.8	1.6	3.6	3.3	0.83	12	0.54	1.5	0.88
24	0.73	0.63	0.87	1.7	1.7	3.5	3.2	0.70	12	0.46	1.4	0.58
25	0.72	0.64	0.88	1.7	1.8	3.5	3.0	0.69	7.1	1.0	1.3	0.47
26	0.77	0.66	0.90	1.8	1.9	4.1	2.8	0.71	6.9	1.3	1.1	0.41
27	0.76	0.66	0.93	1.8	2.0	3.6	2.6	0.79	5.9	1.2	0.95	0.49
28	0.77	0.65	0.93	1.8	2.1	3.3	2.3	0.68	5.4	0.89	0.94	0.49
29	0.78	0.65	0.92	1.8	2.9	3.0	2.2	0.62	4.6	1.00	0.81	0.48
30	0.78	0.64	0.96	1.8	---	2.8	2.2	0.60	4.9	0.88	0.79	0.46
31	0.77	---	0.95	1.9	---	2.9	---	0.50	---	0.78	0.77	---
TOTAL	20.76	21.10	23.89	45.48	54.9	168.9	98.1	37.83	113.05	61.41	47.38	15.95
MEAN	0.67	0.70	0.77	1.47	1.89	5.45	3.27	1.22	3.77	1.98	1.53	0.53
MAX	0.78	0.86	0.96	1.9	2.9	13	4.4	2.2	14	6.6	4.3	0.88
MIN	0.58	0.58	0.62	0.98	1.5	2.8	2.2	0.50	0.60	0.22	0.53	0.39
AC-FT	41	42	47	90	109	335	195	75	224	122	94	32
CFSM	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.00
IN.	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.00

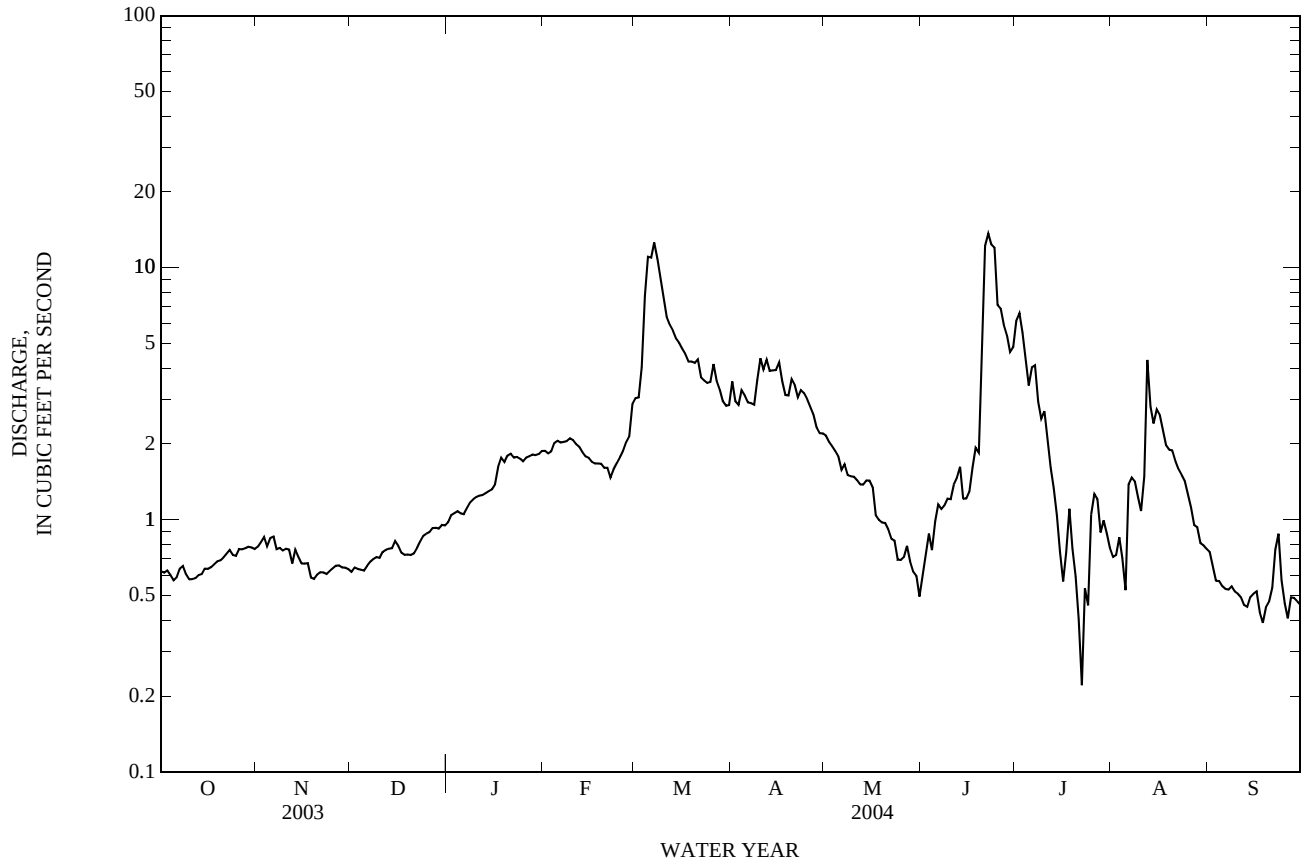
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004hz, BY WATER YEAR (WY)

MEAN	6.22	5.36	3.56	3.79	4.65	7.07	10.6	17.3	17.2	7.49	7.35	12.6
MAX	167	112	14.6	11.8	11.0	53.0	109	124	206	82.7	77.6	323
(WY)	(1969)	(1972)	(1997)	(1969)	(1997)	(1974)	(1999)	(1979)	(1965)	(1967)	(1965)	(1996)
MIN	0.10	0.50	0.60	0.55	0.60	1.10	0.94	0.35	0.12	0.03	0.00	0.21
(WY)	(1965)	(1995)	(1995)	(1986)	(1986)	(1986)	(1986)	(2002)	(2002)	(2002)	(1964)	(1984)

07235000 Wolf Creek at Lipscomb, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004hz	
ANNUAL TOTAL	2,405.95		708.75			
ANNUAL MEAN	6.59		1.94		8.60	
HIGHEST ANNUAL MEAN					30.5	1965
LOWEST ANNUAL MEAN					1.06	2002
HIGHEST DAILY MEAN	1,000	Jun 14	14	Jun 22	5,800	Sep 19, 1996
LOWEST DAILY MEAN	0.35	Aug 28	0.22	Jul 22	0.00	May 24, 1964
ANNUAL SEVEN-DAY MINIMUM	0.46	Aug 22	0.46	Sep 13	0.00	Jul 22, 1964
MAXIMUM PEAK FLOW			21	Jun 24	10,300	Sep 19, 1996
MAXIMUM PEAK STAGE			3.38	Jun 24	12.44	Sep 19, 1996
ANNUAL RUNOFF (AC-FT)	4,770		1,410		6,230	
ANNUAL RUNOFF (CFSM)	0.014		0.004		0.018	
ANNUAL RUNOFF (INCHES)	0.19		0.06		0.25	
10 PERCENT EXCEEDS	3.3		4.2		11	
50 PERCENT EXCEEDS	1.8		1.2		2.5	
90 PERCENT EXCEEDS	0.57		0.58		0.51	

h See PERIOD OF RECORD paragraph.
z Period of regulated streamflow.



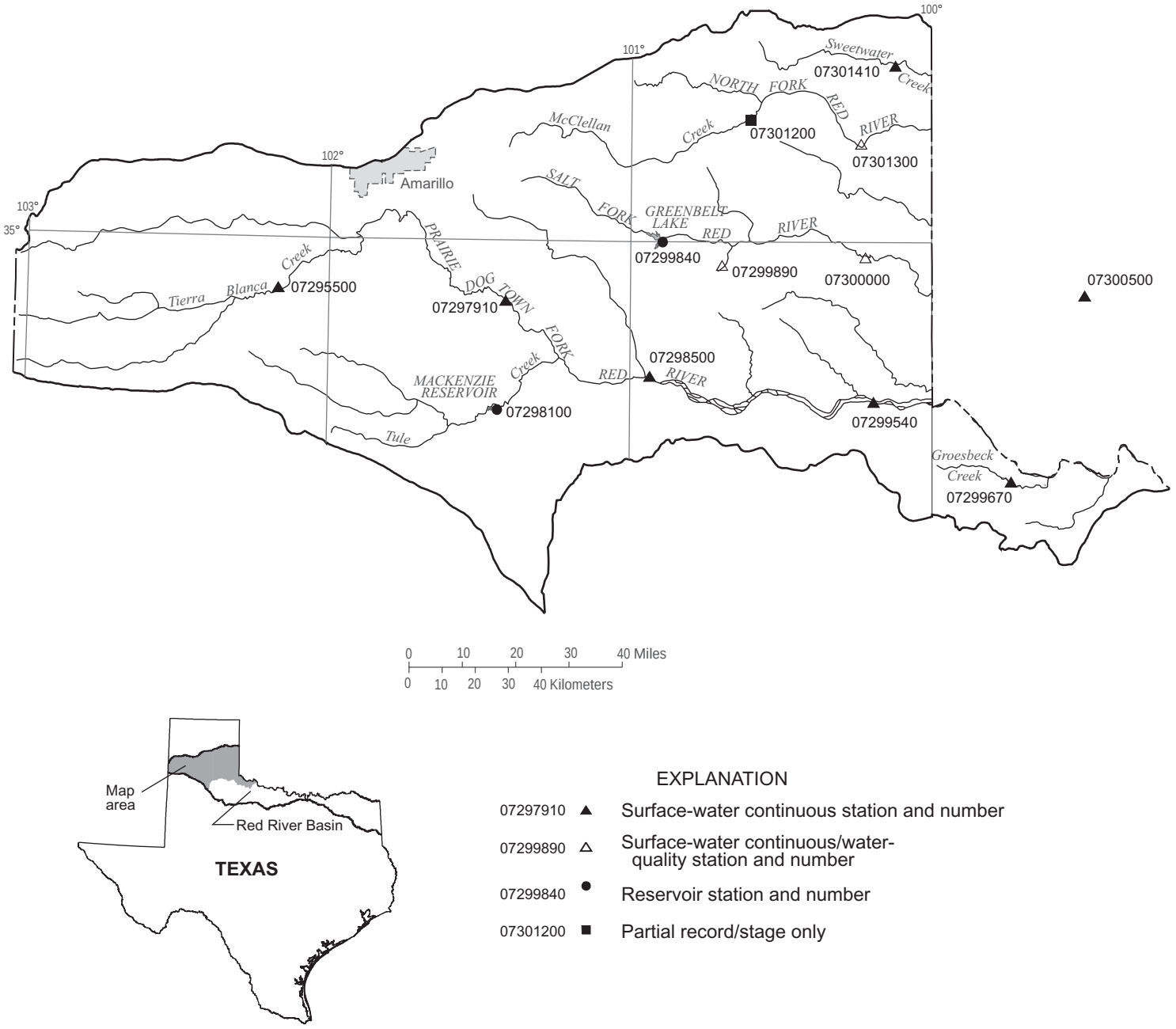


Figure 4.--Map showing location of gaging stations in the first section of the Red River Basin

* Station is not located within the illustrated map area.

07295500 Tierra Blanca Creek above Buffalo Lake near Umbarger, TX

LOCATION.--Lat 34°50'55", long 102°10'32", Deaf Smith County, Hydrologic Unit 11120101, (determinded from Buffalo Lake Quadrangle, 12-minute topographic map, 1961 edition, scale1:62,500) on left bank, 22 ft upstream from a 90° V-notch weir; 8.4 mi southwest of Umbarger, TX; 9 mi upstream from Buffalo Lake Dam.

DRAINAGE AREA.--1,968 mi^2 of which 1,430 mi^2 probably is noncontributing.No Remarks

PERIOD OF RECORD.--1938 to Nov. 1939 (occasional daily discharges), Dec. 1939 to Sept. 1954 published "at reservoir near Umbarger", Mar. 1967 to Sept. 1973, Oct. 2002 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 3,649.13 ft above NGVD of 1929. Satellite telemeter at site.

REMARKS.--No estimated daily discharges. Records good. Surface runoff represents inflow to Buffalo Lake.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	258
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	335
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	19
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	680.15
MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.7
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	335
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,350

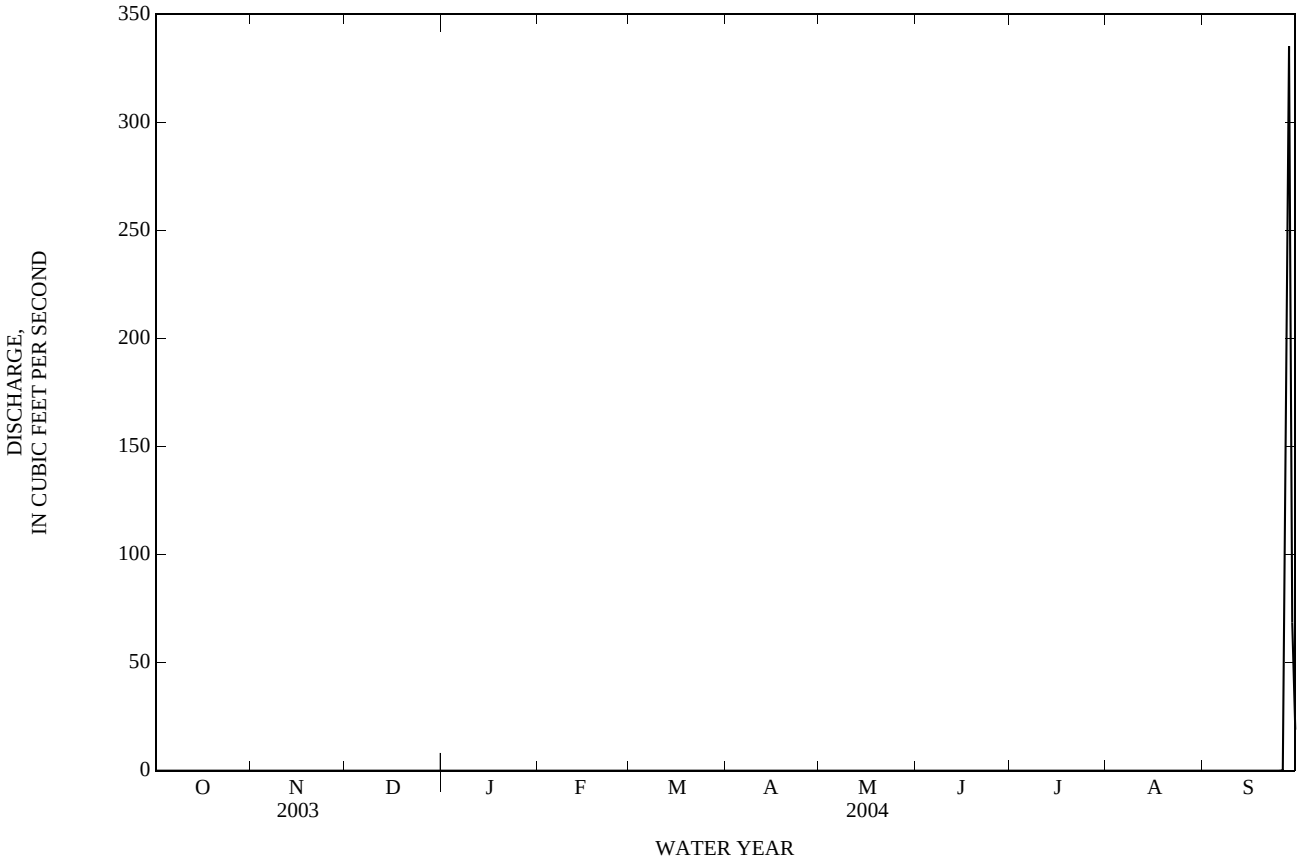
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004h, BY WATER YEAR (WY)

MEAN	19.4	1.57	1.40	1.20	1.18	1.18	2.55	36.7	29.7	6.00	4.08	6.64
MAX	247	14.6	8.01	4.00	4.00	4.75	20.6	386	438	70.4	38.3	69.7
(WY)	(1942)	(1942)	(1943)	(1942)	(1942)	(1942)	(1953)	(1941)	(1941)	(1950)	(1945)	(1971)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1941)	(1948)	(1941)	(1971)	(1971)	(2003)	(1971)	(1973)	(1945)	(1945)	(1946)	(1943)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1940 - 2004h	
ANNUAL TOTAL	0.00		680.15			
ANNUAL MEAN	0.00		1.86		6.62	
HIGHEST ANNUAL MEAN					27.2	1942
LOWEST ANNUAL MEAN					0.00	2003
HIGHEST DAILY MEAN	0.00	Jan 1	335	Sep 28	5,830	Jun 6, 1941
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	May 11, 1940
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1940
MAXIMUM PEAK FLOW			510	Sep 28	11,300	Jun 6, 1941
MAXIMUM PEAK STAGE			5.57	Sep 27		
ANNUAL RUNOFF (AC-FT)	0.00		1,350		4,800	
10 PERCENT EXCEEDS	0.00		0.00		3.3	
50 PERCENT EXCEEDS	0.00		0.00		0.50	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

h See PERIOD OF RECORD paragraph.

07295500 Tierra Blanca Creek above Buffalo Lake near Umbarger, TX—Continued



07297910 Prairie Dog Town Fork Red River near Wayside, TX

LOCATION.--Lat 34°50'15", long 101°24'49", Armstrong County, Hydrologic Unit 11120103, on left bank at downstream side of bridge on State Highway 207, 13 mi northeast of Wayside, 26 mi south of Claude, and at mile 1,145.

DRAINAGE AREA.--4,211 mi^2 of which 3,281 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Oct. 1967 to current year. Water-quality records: Specific conductance: Oct. 1969 to Sept. 1981. Water temperature: Oct. 1969 to Sept. 1981.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,463.74 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. There are several small diversions upstream from station. Wastewater effluent is released into river above station by the city of Amarillo. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

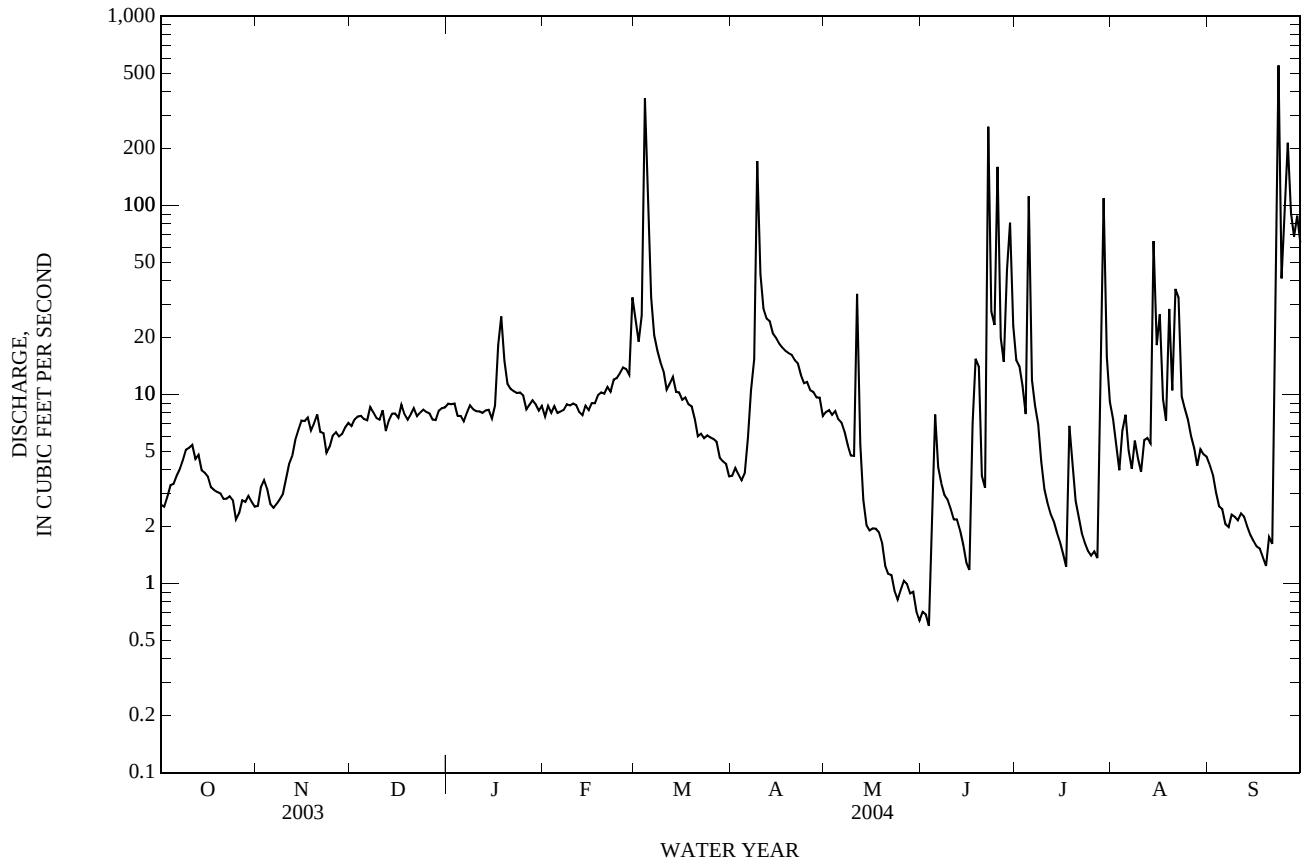
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	2.6	6.8	8.9	7.6	25	3.7	8.1	0.71	15	7.4	4.3
2	2.5	3.2	7.4	8.9	8.7	19	4.1	8.3	0.69	14	5.4	3.8
3	2.9	3.5	7.6	9.0	8.0	26	3.8	7.8	0.60	11	4.0	3.0
4	3.3	3.2	7.7	7.7	8.7	368	3.5	8.2	2.0	7.9	6.4	2.6
5	3.4	2.6	7.4	7.7	8.0	143	3.8	7.4	7.8	112	7.8	2.5
6	3.7	2.5	7.3	7.2	8.1	33	5.9	7.1	4.1	12	5.1	2.1
7	4.0	2.6	8.6	8.0	8.3	21	11	6.4	3.4	8.8	4.0	2.0
8	4.5	2.8	8.0	8.8	8.9	17	15	5.4	2.9	7.0	5.7	2.3
9	5.1	3.0	7.5	8.3	8.7	15	172	4.8	2.8	4.4	4.6	2.3
10	5.2	3.6	7.4	8.2	9.0	13	43	4.7	2.5	3.2	3.9	2.2
11	5.4	4.3	8.2	8.1	8.8	11	28	34	2.2	2.7	5.7	2.3
12	4.6	4.7	6.4	8.0	8.1	11	25	5.5	2.2	2.3	5.9	2.3
13	4.8	5.8	7.3	8.2	7.8	12	24	2.8	1.9	2.1	5.5	2.0
14	4.0	6.5	7.9	8.3	8.7	10	21	2.0	1.6	1.9	65	1.8
15	3.9	7.3	7.9	7.5	8.3	10	20	1.9	1.3	1.7	18	1.7
16	3.7	7.2	7.5	8.7	9.0	9.4	19	2.0	1.2	1.4	27	1.6
17	3.2	7.6	8.8	18	9.0	9.6	18	2.0	7.0	1.2	9.5	1.5
18	3.1	6.4	7.8	26	9.9	8.9	17	1.9	15	6.8	7.3	1.4
19	3.0	7.0	7.4	15	10	8.7	17	1.6	14	4.3	28	1.2
20	3.0	7.8	7.9	11	10	7.4	16	1.2	3.7	2.7	11	1.8
21	2.8	6.3	8.5	11	11	6.0	15	1.1	3.2	2.2	36	1.6
22	2.8	6.2	7.7	10	10	6.2	15	1.1	261	1.8	33	22
23	2.9	4.9	8.0	10	12	5.9	13	0.92	28	1.6	9.8	550
24	2.8	5.3	8.3	10	12	6.1	11	0.82	23	1.5	8.4	41
25	2.2	6.1	8.1	9.9	13	5.9	12	0.92	160	1.4	7.3	101
26	2.4	6.3	7.9	8.4	14	5.8	11	1.0	20	1.5	6.0	215
27	2.8	6.0	7.4	8.8	14	5.6	10	0.99	15	1.4	5.2	91
28	2.7	6.2	7.3	9.3	13	4.6	9.6	0.89	46	11	4.2	68
29	2.9	6.7	8.2	8.9	33	4.4	9.6	0.90	81	109	5.1	88
30	2.7	7.1	8.5	8.2	---	4.3	7.7	0.71	23	16	4.8	64
31	2.6	---	8.5	8.7	---	3.7	---	0.64	---	9.1	4.7	---
TOTAL	105.5	155.3	241.2	304.7	305.6	836.5	584.7	133.09	737.80	378.9	361.7	1,286.3
MEAN	3.40	5.18	7.78	9.83	10.5	27.0	19.5	4.29	24.6	12.2	11.7	42.9
MAX	5.4	7.8	8.8	26	33	368	172	34	261	112	65	550
MIN	2.2	2.5	6.4	7.2	7.6	3.7	3.5	0.64	0.60	1.2	3.9	1.2
AC-FT	209	308	478	604	606	1,660	1,160	264	1,460	752	717	2,550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2004, BY WATER YEAR (WY)

MEAN	26.3	11.8	6.35	6.08	5.72	9.53	24.5	58.5	55.1	28.4	77.8	25.0
MAX	175	147	20.3	24.7	19.0	48.9	448	603	304	207	1,410	110
(WY)	(1999)	(1999)	(1988)	(1988)	(1999)	(1998)	(1997)	(1999)	(1984)	(1996)	(1968)	(1969)
MIN	0.00	0.07	0.10	0.30	0.16	0.34	0.17	0.13	0.47	0.00	0.12	0.00
(WY)	(1976)	(1971)	(1971)	(1971)	(1976)	(1971)	(1978)	(1984)	(1998)	(1974)	(2000)	(1975)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1968 - 2004	
ANNUAL TOTAL	5,808.90		5,431.29			
ANNUAL MEAN	15.9		14.8		28.1	
HIGHEST ANNUAL MEAN					137	1968
LOWEST ANNUAL MEAN					1.90	1983
HIGHEST DAILY MEAN	1,260	Jun 21	550	Sep 23	22,700	Aug 29, 1968
LOWEST DAILY MEAN	0.00	Aug 8	0.60	Jun 3	0.00	Jul 30, 1968
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 8	0.73	May 28	0.00	Jul 30, 1968
MAXIMUM PEAK FLOW			4,600	Sep 23	58,000	Aug 28, 1968
MAXIMUM PEAK STAGE			9.49	Sep 23	13.00	Aug 28, 1968
ANNUAL RUNOFF (AC-FT)	11,520		10,770		20,340	
10 PERCENT EXCEEDS	12		21		24	
50 PERCENT EXCEEDS	5.8		7.3		2.7	
90 PERCENT EXCEEDS	0.15		1.9		0.09	

07297910 Prairie Dog Town Fork Red River near Wayside, TX—Continued



07298100 MacKenzie Reservoir near Silverton, TX

LOCATION.--Lat 34°32'43", long 101°26'16", Briscoe County, Hydrologic Unit 11120104, at upstream side of dam on Tule Creek, 0.9 mi upstream from Rock Creek, 9.5 mi northwest of Silverton, and 22.7 mi upstream from mouth.

DRAINAGE AREA.--1,053 mi^2 of which 904 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Oct. 1974 to Sept. 1986, Apr. 1999 to Sept. 2002 (daily mean contents), Oct. 2002 to current year.

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

REMARKS.--Records good. The reservoir is formed by a rolled earthfill dam 2,100 ft long. The dam was completed in Aug. 1974, and storage began in June 1974. The uncontrolled spillway is an open-cut channel just beyond the right end of the dam. The service spillway is an uncontrolled ogee-type weir across a concrete chute at the right end of the dam. A 30-in gated outlet concrete pipe discharges into a valve vault at the downstream toe of the dam and then into the creek bed downstream. The dam is owned by MacKenzie Municipal Water Authority and the water is used for municipal, industrial, and recreational purposes by the cities of Floydada, Silverton, and Tulia. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	3,127.0
Crest of spillway	3,111.0
Crest of spillway with ogee weir	3,100.0
Lowest gated outlet (invert)	2,961.0

COOPERATION.--Area-capacity curves developed by Freese and Nichols, Inc.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 23,950 acre-ft, Oct. 15, 1986, elevation, 3,065.08 ft; minimum contents, 598 acre-ft, Oct. 1, 1974, elevation, 2,980.61 ft.

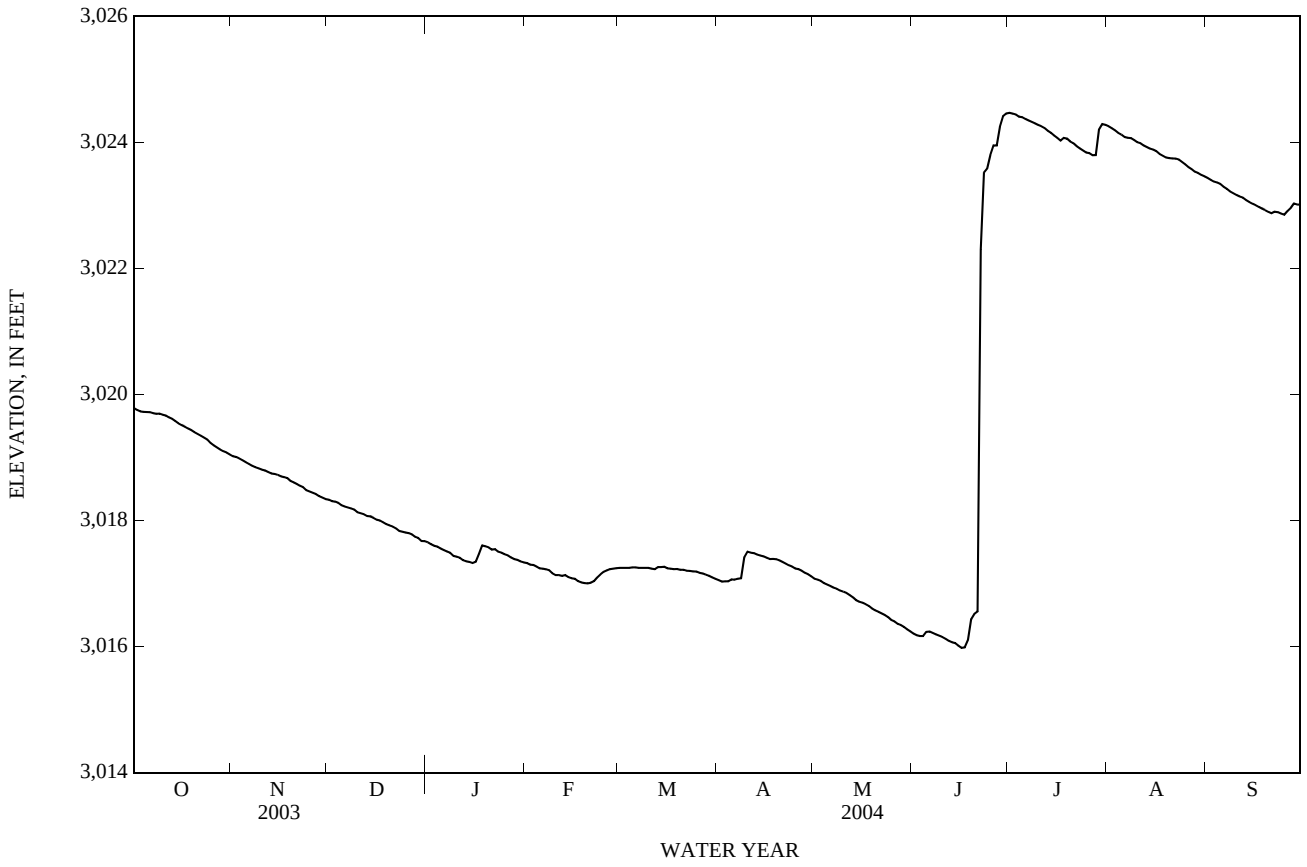
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 3,024.50 ft, July 01; minimum elevation, 3,015.50 ft, June 16, 2004.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,019.78	3,019.02	3,018.33	3,017.66	3,017.32	3,017.25	3,017.05	3,017.08	3,016.21	3,024.47	3,024.26	3,023.43
2	3,019.75	3,019.01	3,018.31	3,017.62	3,017.30	3,017.25	3,017.03	3,017.06	3,016.18	3,024.46	3,024.23	3,023.41
3	3,019.73	3,018.99	3,018.30	3,017.60	3,017.29	3,017.25	3,017.04	3,017.04	3,016.17	3,024.44	3,024.19	3,023.38
4	3,019.72	3,018.96	3,018.28	3,017.59	3,017.27	3,017.25	3,017.04	3,017.01	3,016.17	3,024.41	3,024.15	3,023.36
5	3,019.72	3,018.93	3,018.24	3,017.56	3,017.24	3,017.26	3,017.07	3,016.98	3,016.24	3,024.40	3,024.12	3,023.34
6	3,019.72	3,018.90	3,018.22	3,017.53	3,017.24	3,017.26	3,017.06	3,016.96	3,016.24	3,024.37	3,024.09	3,023.30
7	3,019.70	3,018.87	3,018.21	3,017.51	3,017.23	3,017.25	3,017.08	3,016.93	3,016.22	3,024.35	3,024.07	3,023.26
8	3,019.70	3,018.85	3,018.19	3,017.49	3,017.21	3,017.25	3,017.09	3,016.92	3,016.19	3,024.32	3,024.07	3,023.22
9	3,019.70	3,018.83	3,018.17	3,017.44	3,017.16	3,017.25	3,017.42	3,016.89	3,016.17	3,024.30	3,024.04	3,023.20
10	3,019.68	3,018.81	3,018.13	3,017.43	3,017.14	3,017.25	3,017.51	3,016.87	3,016.15	3,024.28	3,024.00	3,023.17
11	3,019.67	3,018.80	3,018.11	3,017.41	3,017.14	3,017.24	3,017.49	3,016.85	3,016.12	3,024.26	3,023.99	3,023.14
12	3,019.64	3,018.77	3,018.10	3,017.37	3,017.12	3,017.23	3,017.48	3,016.82	3,016.09	3,024.23	3,023.95	3,023.12
13	3,019.61	3,018.75	3,018.07	3,017.35	3,017.13	3,017.26	3,017.46	3,016.78	3,016.07	3,024.19	3,023.93	3,023.09
14	3,019.58	3,018.74	3,018.07	3,017.34	3,017.10	3,017.26	3,017.45	3,016.74	3,016.06	3,024.15	3,023.90	3,023.05
15	3,019.54	3,018.72	3,018.04	3,017.33	3,017.08	3,017.27	3,017.43	3,016.71	3,016.02	3,024.11	3,023.89	3,023.03
16	3,019.51	3,018.70	3,018.01	3,017.35	3,017.08	3,017.24	3,017.41	3,016.70	3,015.98	3,024.07	3,023.86	3,023.00
17	3,019.49	3,018.69	3,018.00	3,017.47	3,017.04	3,017.24	3,017.39	3,016.67	3,015.99	3,024.03	3,023.82	3,022.98
18	3,019.46	3,018.67	3,017.97	3,017.60	3,017.02	3,017.23	3,017.39	3,016.65	3,016.10	3,024.07	3,023.79	3,022.95
19	3,019.43	3,018.63	3,017.94	3,017.59	3,017.01	3,017.23	3,017.39	3,016.61	3,016.43	3,024.06	3,023.76	3,022.93
20	3,019.40	3,018.60	3,017.92	3,017.57	3,017.00	3,017.22	3,017.37	3,016.57	3,016.52	3,024.01	3,023.75	3,022.90
21	3,019.37	3,018.58	3,017.91	3,017.54	3,017.01	3,017.22	3,017.34	3,016.55	3,016.56	3,023.99	3,023.75	3,022.87
22	3,019.35	3,018.55	3,017.88	3,017.55	3,017.04	3,017.20	3,017.32	3,016.53	3,022.30	3,023.94	3,023.74	3,022.90
23	3,019.32	3,018.53	3,017.84	3,017.51	3,017.10	3,017.20	3,017.29	3,016.50	3,023.52	3,023.91	3,023.73	3,022.89
24	3,019.28	3,018.48	3,017.82	3,017.49	3,017.14	3,017.19	3,017.27	3,016.47	3,023.58	3,023.87	3,023.69	3,022.87
25	3,019.23	3,018.46	3,017.81	3,017.47	3,017.18	3,017.19	3,017.24	3,016.42	3,023.80	3,023.84	3,023.65	3,022.85
26	3,019.20	3,018.44	3,017.80	3,017.45	3,017.21	3,017.17	3,017.23	3,016.40	3,023.95	3,023.83	3,023.61	3,022.91
27	3,019.16	3,018.42	3,017.78	3,017.41	3,017.23	3,017.16	3,017.20	3,016.36	3,023.95	3,023.80	3,023.58	3,022.96
28	3,019.13	3,018.39	3,017.74	3,017.39	3,017.24	3,017.14	3,017.17	3,016.34	3,024.25	3,023.80	3,023.53	3,023.03
29	3,019.10	3,018.36	3,017.72	3,017.38	3,017.24	3,017.12	3,017.15	3,016.31	3,024.41	3,024.20	3,023.52	3,023.01
30	3,019.08	3,018.34	3,017.68	3,017.35	---	3,017.10	3,017.12	3,016.28	3,024.46	3,024.29	3,023.49	3,023.01
31	3,019.05	---	3,017.67	3,017.34	---	3,017.07	---	3,016.24	---	3,024.28	3,023.46	---
MEAN	3,019.48	3,018.69	3,018.01	3,017.47	3,017.16	3,017.22	3,017.27	3,016.68	3,018.47	3,024.15	3,023.86	3,023.09
MAX	3,019.78	3,019.02	3,018.33	3,017.66	3,017.32	3,017.27	3,017.51	3,017.08	3,024.46	3,024.47	3,024.26	3,023.43
MIN	3,019.05	3,018.34	3,017.67	3,017.33	3,017.00	3,017.07	3,017.03	3,016.24	3,015.98	3,023.80	3,023.46	3,022.85

CAL YR 2003 MEAN 3,022.19 MAX 3,025.99 MIN 3,017.67
WTR YR 2004 MEAN 3,019.31 MAX 3,024.47 MIN 3,015.98

07298100 MacKenzie Reservoir near Silverton, TX—Continued



07298500 Prairie Dog Town Fork Red River near Brice, TX

LOCATION.--Lat 34°37'40", long 100°56'25", Hall County, Hydrologic Unit 11120103, on left upstream corner of bridge on State Highway 70, 0.5 mi downstream from Battle Creek, 1.5 mi upstream from Mulberry Creek, and 6 mi southwest of Brice, TX.

DRAINAGE AREA.--6,082 mi^2 of which 4,501 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Jan. 1939 to June 1944, Sept. 1949 to July 1959, Dec. 1959 to May 1963. Oct. 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage 2,051.37 ft above NGVD of 1929. Dec. 14, 1938, to June 30, 1944 , at site 2 mi upstream and a datum 24.71 ft higher than present, Aug. 10, 1949 to July 31, 1951, at site 2 mi upstream and a datum 18.71 ft higher than present, Nov. 30, 1959 to May 1963 at different datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. There are several small diversions upstream from gage.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	14	72	1.7	0.21	0.00	23	2.0	3.1
2	0.00	0.00	0.00	0.00	10	72	15	0.20	1.4	20	0.10	0.51
3	0.00	0.00	0.00	0.00	16	94	23	0.22	16	16	0.01	0.07
4	0.00	0.00	0.00	0.00	22	247	18	0.17	1.4	10	6.5	0.01
5	0.00	0.00	0.00	0.00	31	403	22	0.10	2.8	29	11	0.00
6	0.00	0.00	0.00	0.00	31	80	27	0.09	128	40	4.4	0.00
7	0.00	0.00	0.00	0.00	24	37	28	0.09	1.8	21	1.8	0.00
8	0.00	0.00	0.00	0.00	23	28	33	0.09	0.45	10	16	0.00
9	0.00	0.00	0.00	0.00	22	28	351	0.08	0.46	15	12	0.00
10	0.00	0.00	0.00	0.00	19	25	103	0.07	2.0	7.4	2.5	0.00
11	0.00	0.00	0.00	0.00	21	22	30	0.06	0.10	30	0.40	0.00
12	0.00	0.00	0.00	0.00	25	23	17	0.09	0.05	9.6	4.8	0.00
13	0.00	0.00	0.00	0.00	25	43	11	0.92	0.00	2.1	10	0.00
14	0.00	0.00	0.00	0.00	32	38	7.1	0.13	0.00	1.1	2.5	0.00
15	0.00	0.00	0.00	0.00	30	31	4.4	0.10	0.00	0.32	40	0.00
16	0.00	0.00	0.00	0.00	27	24	2.9	0.09	0.00	0.05	21	0.00
17	0.00	0.00	0.00	12	25	22	2.0	0.06	165	0.00	12	0.00
18	0.00	0.00	0.00	23	24	19	1.6	0.05	193	0.93	11	0.00
19	0.00	0.00	0.00	14	22	18	1.9	0.02	59	0.05	3.9	0.00
20	0.00	0.00	0.00	18	18	15	1.5	0.00	1.2	0.00	44	0.00
21	0.00	0.00	0.00	16	17	11	1.0	0.00	0.00	0.00	25	0.00
22	0.00	0.00	0.00	15	18	8.7	0.55	0.00	205	0.00	43	0.00
23	0.00	0.00	0.00	14	35	9.0	0.61	0.00	20	0.00	45	227
24	0.00	0.00	0.00	14	40	9.1	0.84	0.00	2.6	7.0	16	54
25	0.00	0.00	0.00	15	48	8.1	1.1	0.00	46	1.5	7.1	61
26	0.00	0.00	0.00	9.9	40	6.9	2.6	0.00	11	0.04	3.4	145
27	0.00	0.00	0.00	10	37	7.0	0.67	0.00	3.6	0.00	2.1	204
28	0.00	0.00	0.00	11	37	4.7	0.25	0.00	16	1.9	0.61	57
29	0.00	0.00	0.00	15	75	3.7	0.14	0.00	30	140	0.26	35
30	0.00	0.00	0.00	15	---	2.8	0.20	0.00	191	46	6.0	40
31	0.00	---	0.00	12	---	2.2	---	0.00	---	12	9.9	---
TOTAL	0.00	0.00	0.00	213.90	808	1,414.2	709.06	2.84	1,097.86	443.99	364.28	826.69
MEAN	0.00	0.00	0.00	6.90	27.9	45.6	23.6	0.09	36.6	14.3	11.8	27.6
MAX	0.00	0.00	0.00	23	75	403	351	0.92	205	140	45	227
MIN	0.00	0.00	0.00	0.00	10	2.2	0.14	0.00	0.00	0.00	0.01	0.00
AC-FT	0.00	0.00	0.00	424	1,600	2,810	1,410	5.6	2,180	881	723	1,640

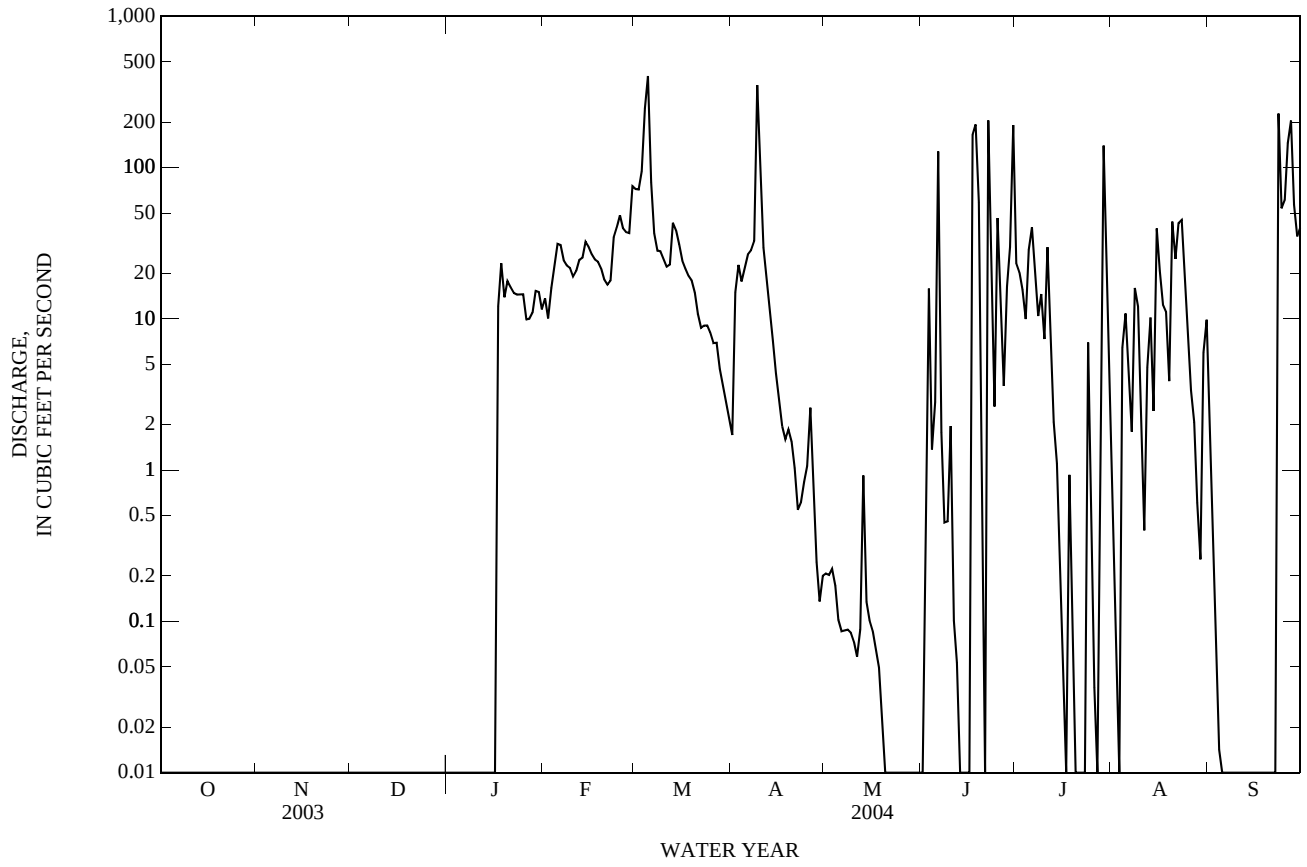
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004h, BY WATER YEAR (WY)

MEAN	176	23.7	10.1	5.57	4.20	6.46	19.8	176	227	114	57.2	64.5
MAX	1,038	102	36.2	21.3	27.9	45.6	132	1,329	1,231	384	144	239
(WY)	(1942)	(1941)	(1943)	(1944)	(2004)	(2004)	(1943)	(1951)	(1941)	(1950)	(1939)	(1950)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	36.6	0.00	0.00	0.00
(WY)	(1940)	(1940)	(1940)	(1940)	(1939)	(1939)	(1944)	(2004)	(2004)	(1940)	(1943)	(1939)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004h	
ANNUAL TOTAL	12,539.73		5,880.82			
ANNUAL MEAN	34.4		16.1		73.5	
HIGHEST ANNUAL MEAN					171	1941
LOWEST ANNUAL MEAN					16.1	2004
HIGHEST DAILY MEAN	2,890	Jun 21	403	Mar 5	14,300	May 17, 1951
LOWEST DAILY MEAN	0.00	May 5	0.00	Oct 1	0.00	Jan 1, 1939
ANNUAL SEVEN-DAY MINIMUM	0.00	May 5	0.00	Oct 1	0.00	Jan 1, 1939
MAXIMUM PEAK FLOW			3,930	Jun 17	49,000	Jun 7, 1960
MAXIMUM PEAK STAGE			7.29	Jun 17	12.20	Jun 7, 1960
ANNUAL RUNOFF (AC-FT)	24,870		11,660		53,230	
10 PERCENT EXCEEDS	13		37		79	
50 PERCENT EXCEEDS	0.01		0.43		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

h See PERIOD OF RECORD paragraph.

07298500 Prairie Dog Town Fork Red River near Brice, TX—Continued



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 mi^2 of which 4,767 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Apr. 1965 to current year. Water-quality records: Chemical data: Oct. 1968 to Sept. 1982, Oct. 1994 to Sept. 1997. Pesticide data: Oct. 1994 to Sept. 1997. Specific conductance: Oct. 1968 to Sept. 1982, Oct. 1994 to Sept. 1997. Water temperature: Oct. 1968 to Sept. 1982, Oct. 1994 to Sept. 1997.

GAGE.--Water-stage recorder. Datum of gage is 1,628.4 ft above NGVD of 1929 (from Texas Department of Transportation benchmark). From Dec. 1964 to Mar. 1965, gage heights from water-stage recorder were not published. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since installation of gage in Dec. 1964, at least 10% of contributing drainage area has been regulated. Many small diversions upstream from station. No flow at times.

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 Texas Department of Transportation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	4.3	6.9	7.4	5.8	225	4.4	17	1.8	836	25	12
2	2.3	5.6	7.9	7.4	6.5	162	22	7.7	140	365	8.1	7.6
3	2.8	6.1	7.8	6.8	6.2	115	29	4.8	151	105	2.5	5.1
4	9.3	5.4	8.1	6.0	16	618	38	2.7	24	41	1.6	4.8
5	6.2	4.8	7.2	6.2	22	1,020	47	3.0	81	16	1.9	6.3
6	4.6	5.1	7.3	5.3	13	442	115	3.6	164	15	2.1	5.0
7	4.1	30	7.8	5.7	9.1	52	76	3.9	209	456	3.1	5.4
8	32	16	8.6	6.3	7.0	38	56	4.3	21	88	231	6.5
9	17	12	8.0	6.4	6.9	37	796	4.0	194	23	45	7.8
10	6.5	11	8.2	6.4	7.3	30	1,270	4.1	60	e11	5.9	8.6
11	3.7	10	7.8	6.6	14	24	174	5.2	9.7	e7.6	2.6	9.2
12	2.2	7.1	8.3	11	13	35	99	3.7	11	e5.2	99	10
13	2.4	6.4	9.2	20	13	61	77	2.8	3.1	e3.6	197	10
14	1.4	14	9.8	11	32	65	63	3.1	1.3	2.1	220	9.5
15	2.2	13	9.5	15	30	61	38	3.4	1.1	1.9	112	11
16	1.8	9.5	7.6	70	22	47	25	3.8	1.3	1.5	31	13
17	1.7	9.5	6.9	194	16	33	21	3.9	25	1.8	9.7	14
18	2.1	5.9	7.0	183	12	23	23	3.7	1,070	4.8	9.9	12
19	2.6	5.5	7.3	127	9.1	18	26	3.3	e300	2.3	6.7	13
20	2.5	5.4	7.5	79	9.3	11	20	2.7	e100	1.3	248	13
21	2.6	5.1	8.2	60	10	4.3	16	2.7	e46	1.1	207	45
22	2.7	6.4	8.1	39	73	5.2	15	2.9	e90	1.2	137	26
23	2.8	5.5	8.3	27	191	5.7	15	2.2	e50	1.4	70	30
24	2.6	5.6	7.4	22	289	6.5	17	2.2	e46	1.8	48	183
25	2.3	6.0	7.2	15	305	6.1	48	2.0	e20	7.6	29	283
26	2.8	6.4	7.8	9.7	206	6.8	109	2.8	e18	4.4	11	236
27	3.4	5.9	7.5	7.8	199	6.1	23	2.3	e12	13	5.8	580
28	3.7	5.7	6.5	6.3	200	4.3	7.1	2.3	e150	323	287	479
29	3.9	6.2	6.1	6.1	640	4.7	13	2.3	1,280	83	59	209
30	3.5	6.6	6.2	5.3	---	4.3	53	1.6	1,970	66	24	105
31	3.7	---	6.1	6.0	---	4.1	---	1.6	---	61	19	---
TOTAL	143.4	246.0	238.1	984.7	2,383.2	3,175.1	3,335.5	115.6	6,250.3	2,551.6	2,158.9	2,359.8
MEAN	4.63	8.20	7.68	31.8	82.2	102	111	3.73	208	82.3	69.6	78.7
MAX	32	30	9.8	194	640	1,020	1,270	17	1,970	836	287	580
MIN	1.4	4.3	6.1	5.3	5.8	4.1	4.4	1.6	1.1	1.1	1.6	4.8
AC-FT	284	488	472	1,950	4,730	6,300	6,620	229	12,400	5,060	4,280	4,680

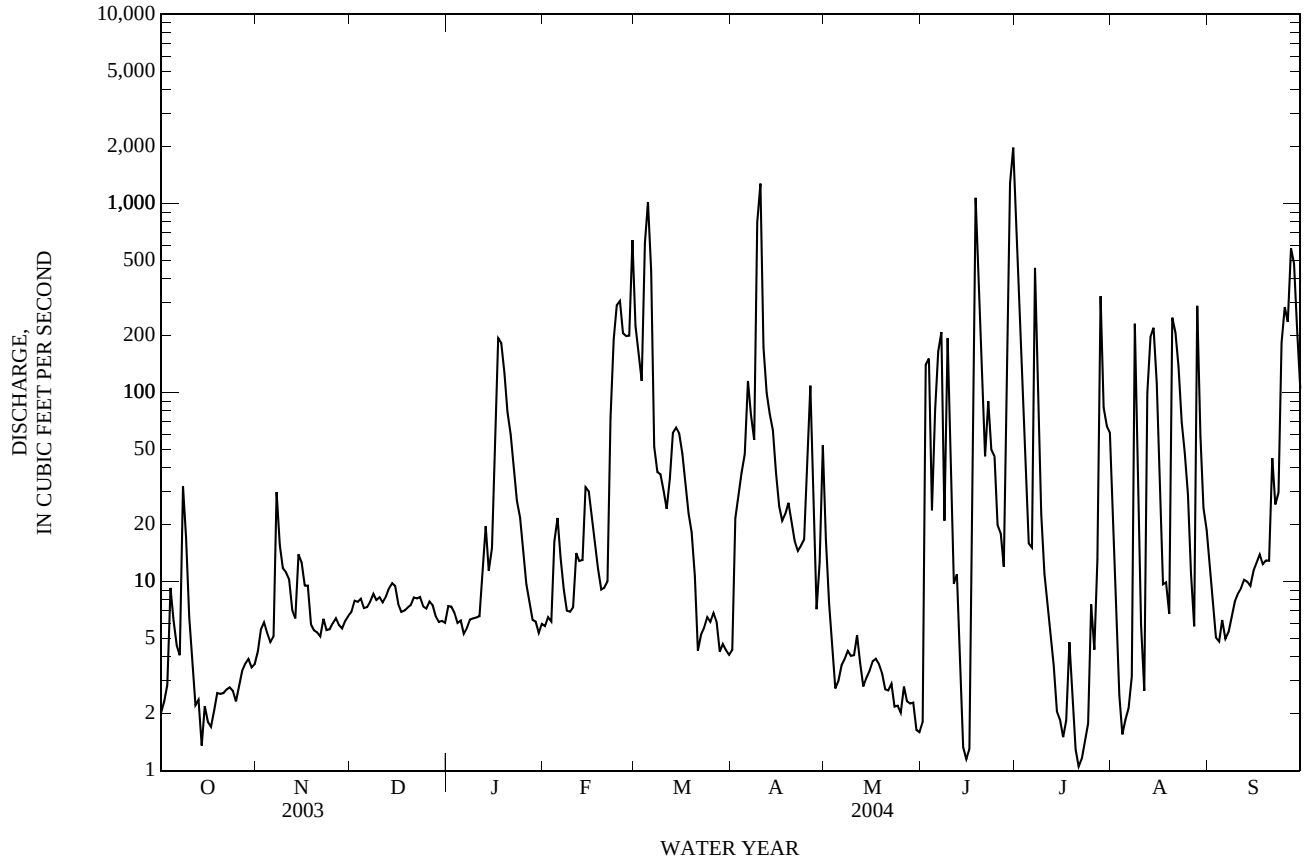
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2004, BY WATER YEAR (WY)

MEAN	98.7	50.3	36.9	37.5	41.8	62.4	108	252	350	94.7	152	137
MAX	1,279	377	265	296	358	500	735	1,835	1,413	367	1,086	470
(WY)	(1987)	(1987)	(1993)	(1993)	(1998)	(1998)	(1997)	(1978)	(1965)	(1972)	(1968)	(1966)
MIN	3.14	1.85	2.27	2.05	2.00	1.72	2.95	1.18	3.46	0.66	1.56	3.39
(WY)	(1985)	(1978)	(1983)	(1971)	(1974)	(1966)	(1978)	(1988)	(1994)	(1974)	(1980)	(1984)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1965 - 2004	
ANNUAL TOTAL	20,854.68		23,942.2			
ANNUAL MEAN	57.1		65.4		117	
HIGHEST ANNUAL MEAN					286	1987
LOWEST ANNUAL MEAN					27.6	1994
HIGHEST DAILY MEAN	4,200	Jun 21	1,970	Jun 30	34,200	May 28, 1978
LOWEST DAILY MEAN	0.39	Aug 28	1.1	Jun 15	0.00	Aug 5, 1970
ANNUAL SEVEN-DAY MINIMUM	0.47	Aug 22	2.0	Oct 12	0.00	Jun 7, 1988
MAXIMUM PEAK FLOW			10,600	Jun 18	86,400	May 28, 1978
MAXIMUM PEAK STAGE			10.11	Jun 18	13.94	May 21, 1977
ANNUAL RUNOFF (AC-FT)	41,370		47,490		84,760	
10 PERCENT EXCEEDS	51		183		174	
50 PERCENT EXCEEDS	7.4		9.1		9.5	
90 PERCENT EXCEEDS	1.4		2.5		1.3	

e Estimated

07299540 Prairie Dog Town Fork Red River near Childress, TX—Continued



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, 2.0 mi downstream from confluence of North and South Groesbeck Creeks, 4.0 mi north of Quanah, and 9.0 mi upstream from mouth.

DRAINAGE AREA.--303 mi^2.

PERIOD OF RECORD.--Nov. 1961 to current year. Prior to Oct. 1974, published as "Groesbeck Creek at State Highway 283".

GAGE.--Water-stage recorder. Datum of gage is 1,425.69 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. There are several diversions upstream from station for farm and ranch use and for a gypsum plant. No flow at times.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

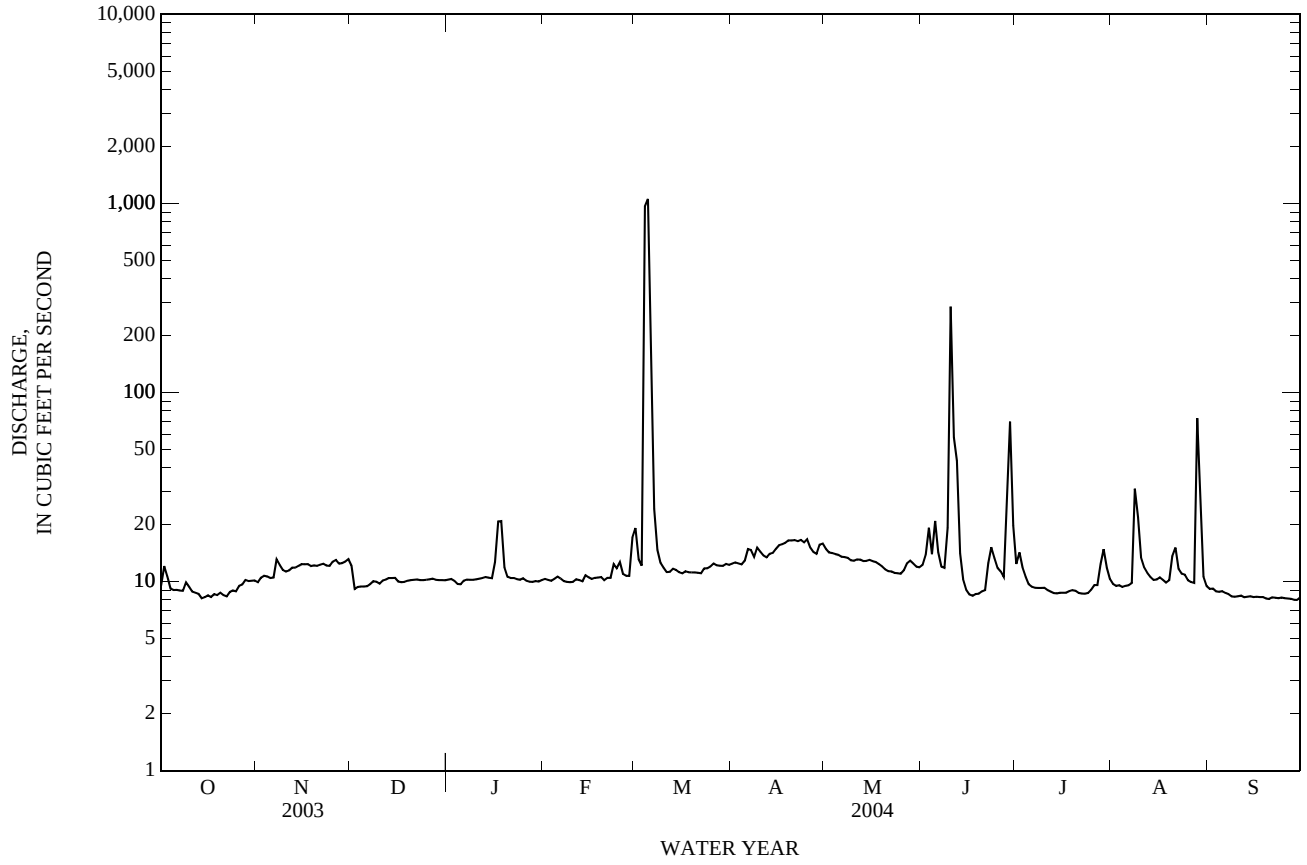
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	9.9	12	10	10	19	12	15	12	12	9.7	9.1
2	12	10	9.2	10	10	13	13	14	14	14	9.5	9.2
3	11	11	9.4	10	10	12	12	14	19	12	9.6	8.9
4	9.2	11	9.4	9.7	10	965	12	14	14	11	9.4	8.8
5	9.0	10	9.4	9.7	11	1,050	13	14	21	9.7	9.5	8.9
6	9.0	10	9.5	10	10	161	15	14	14	9.4	9.6	8.7
7	9.0	13	9.7	10	10	24	15	13	12	9.3	9.8	8.6
8	8.9	12	10	10	10	15	14	13	12	9.3	31	8.3
9	9.9	12	10	10	9.9	13	15	13	19	9.3	22	8.3
10	9.4	11	9.7	10	10	12	14	13	284	9.3	13	8.4
11	8.8	11	10	10	10	11	14	13	58	9.0	12	8.4
12	8.7	12	10	10	10	11	13	13	43	8.9	11	8.3
13	8.6	12	10	11	10	12	14	13	14	8.7	11	8.3
14	8.1	12	10	10	11	12	14	13	10	8.7	10	8.4
15	8.3	12	10	10	11	11	15	13	9.0	8.7	10	8.3
16	8.5	12	10	13	10	11	16	13	8.5	8.7	11	8.3
17	8.3	12	9.9	21	10	11	16	13	8.4	8.7	10	8.3
18	8.6	12	10	21	10	11	16	12	8.6	8.9	9.9	8.3
19	8.5	12	10	12	11	11	17	12	8.6	9.0	10	8.1
20	8.7	12	10	11	10	11	17	12	8.9	8.9	14	8.1
21	8.5	12	10	10	10	11	17	11	9.0	8.7	15	8.3
22	8.4	12	10	10	10	11	16	11	13	8.6	12	8.2
23	8.8	12	10	10	12	12	17	11	15	8.6	11	8.2
24	9.0	12	10	10	12	12	16	11	13	8.7	11	8.2
25	8.9	13	10	10	13	12	17	11	12	9.1	10	8.2
26	9.5	13	10	10	11	12	15	11	11	9.6	9.9	8.1
27	9.6	12	10	10	11	12	14	12	11	9.6	9.8	8.1
28	10	13	10	10	11	12	14	13	33	12	73	8.0
29	10	13	10	10	17	12	16	12	70	15	23	8.0
30	10	13	10	10	---	12	16	12	20	12	11	8.3
31	10	---	10	10	---	12	---	12	---	10	9.5	---
TOTAL	284.7	353.9	308.2	338.4	310.9	2,526	445	391	805.0	305.4	437.2	251.6
MEAN	9.18	11.8	9.94	10.9	10.7	81.5	14.8	12.6	26.8	9.85	14.1	8.39
MAX	12	13	12	21	17	1,050	17	15	284	15	73	9.2
MIN	8.1	9.9	9.2	9.7	9.9	11	12	11	8.4	8.6	9.4	8.0
AC-FT	565	702	611	671	617	5,010	883	776	1,600	606	867	499

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004, BY WATER YEAR (WY)

MEAN	31.6	12.2	10.6	9.62	11.4	15.5	20.8	30.0	53.1	21.4	26.5	44.2
MAX	393	41.3	43.0	26.4	62.0	91.2	271	163	502	228	545	286
(WY)	(1984)	(2002)	(1992)	(2001)	(1997)	(1998)	(1997)	(1987)	(1995)	(1996)	(1995)	(1974)
MIN	0.68	1.33	1.48	1.33	1.35	1.18	1.12	1.74	1.54	0.10	0.00	0.39
(WY)	(1969)	(1969)	(1969)	(1971)	(1971)	(1971)	(1969)	(1967)	(1967)	(1964)	(1964)	(1968)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004	
ANNUAL TOTAL	6,349.4		6,757.3			
ANNUAL MEAN	17.4		18.5		23.6	
HIGHEST ANNUAL MEAN					112	1995
LOWEST ANNUAL MEAN					2.97	1964
HIGHEST DAILY MEAN	975	Aug 31	1,050	Mar 5	9,570	Oct 20, 1983
LOWEST DAILY MEAN	8.1	Oct 14	8.0	Sep 28	0.00	Jul 7, 1964
ANNUAL SEVEN-DAY MINIMUM	8.4	Oct 13	8.1	Sep 23	0.00	Jul 7, 1964
MAXIMUM PEAK FLOW			2,800	Mar 4	18,000	Oct 20, 1983
MAXIMUM PEAK STAGE			16.85	Mar 4	24.78	Oct 20, 1983
ANNUAL RUNOFF (AC-FT)	12,590		13,400		17,060	
10 PERCENT EXCEEDS	15		15		26	
50 PERCENT EXCEEDS	13		10		8.0	
90 PERCENT EXCEEDS	9.4		8.6		1.7	

07299670 Groesbeck Creek at State Highway 6 near Quanah, TX—Continued



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 mi^2 of which 191 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Aug. 1967 to Sept. 2002 (daily mean contents), Oct. 2002 to current year. Prior to Oct. 1973, published as "Greenbelt Reservoir".

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

REMARKS.--Records good. 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 Aug. 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 ft^3/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 Apr. 1964, is based on U.S. Geological Survey topographic maps dated 1962. Data regarding the dam are given in the following table.

	Elevation (feet)
Top of dam	2,686.0
Design flood	2,683.0
Crest of spillway	2,674.0
Crest of morning-glory-type drop inlet	2,663.7
Lowest gated outlet (invert)	2,597.0

COOPERATION.--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 contents after initial filling, 10,940 acre-ft, Aug. 11, 1968, elevation, 2,625.1 ft.

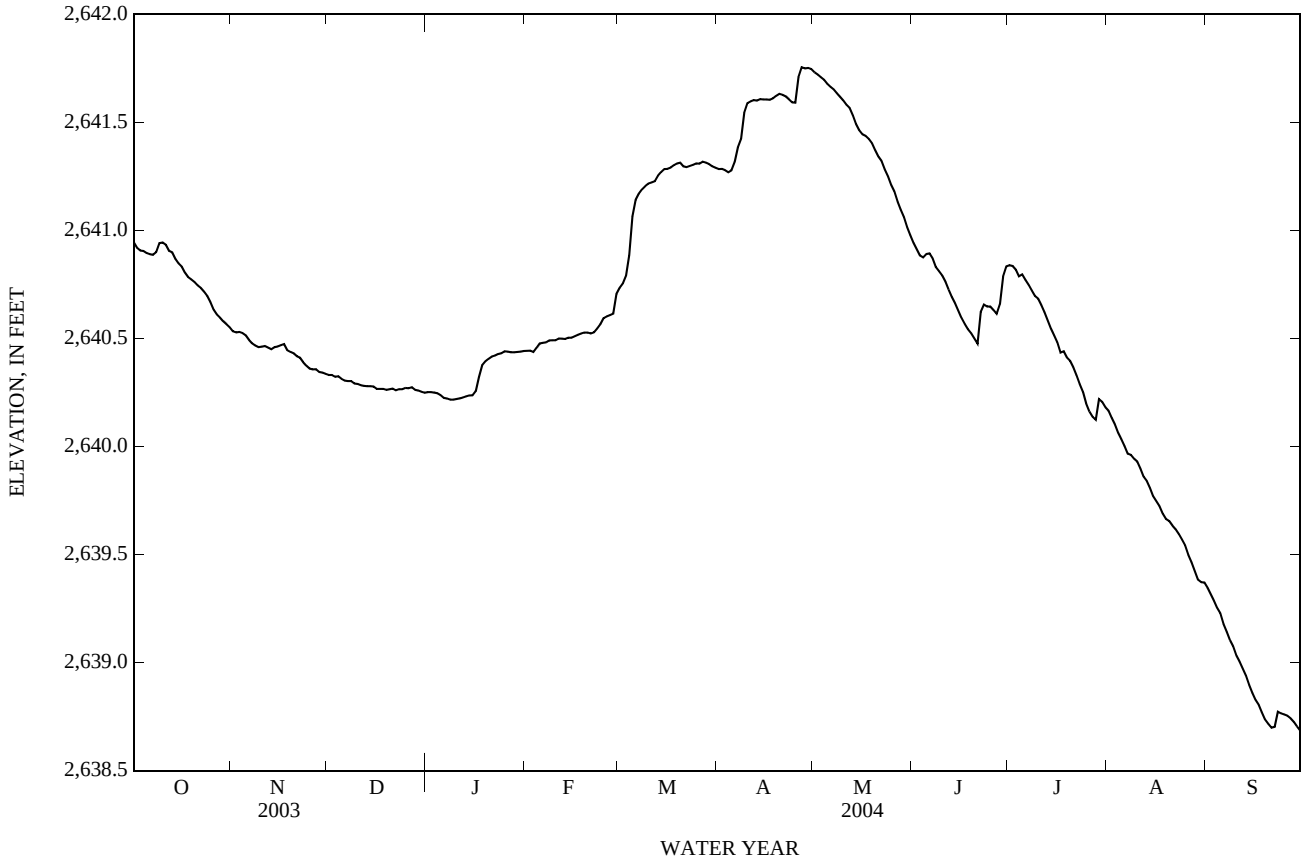
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,641.76 ft, Apr. 27-30; minimum elevation, 2,638.67 ft, Sep. 30.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,640.95	2,640.53	2,640.33	2,640.25	2,640.44	2,640.73	2,641.28	2,641.73	2,640.94	2,640.84	2,640.17	2,639.35
2	2,640.92	2,640.53	2,640.33	2,640.25	2,640.44	2,640.75	2,641.28	2,641.72	2,640.91	2,640.84	2,640.13	2,639.32
3	2,640.91	2,640.53	2,640.32	2,640.25	2,640.44	2,640.79	2,641.28	2,641.71	2,640.88	2,640.82	2,640.10	2,639.29
4	2,640.91	2,640.53	2,640.32	2,640.25	2,640.46	2,640.89	2,641.27	2,641.70	2,640.88	2,640.79	2,640.06	2,639.25
5	2,640.89	2,640.51	2,640.31	2,640.24	2,640.48	2,641.07	2,641.28	2,641.68	2,640.89	2,640.80	2,640.03	2,639.23
6	2,640.89	2,640.49	2,640.30	2,640.22	2,640.48	2,641.14	2,641.32	2,641.66	2,640.89	2,640.77	2,640.00	2,639.18
7	2,640.89	2,640.48	2,640.30	2,640.22	2,640.48	2,641.17	2,641.38	2,641.65	2,640.87	2,640.75	2,639.97	2,639.14
8	2,640.90	2,640.47	2,640.30	2,640.22	2,640.49	2,641.19	2,641.42	2,641.64	2,640.83	2,640.72	2,639.96	2,639.10
9	2,640.94	2,640.46	2,640.29	2,640.22	2,640.49	2,641.20	2,641.55	2,641.62	2,640.81	2,640.70	2,639.94	2,639.07
10	2,640.94	2,640.46	2,640.29	2,640.22	2,640.49	2,641.22	2,641.59	2,641.60	2,640.79	2,640.68	2,639.93	2,639.03
11	2,640.93	2,640.47	2,640.28	2,640.22	2,640.50	2,641.22	2,641.60	2,641.58	2,640.76	2,640.66	2,639.90	2,639.01
12	2,640.91	2,640.46	2,640.28	2,640.23	2,640.50	2,641.23	2,641.60	2,641.57	2,640.73	2,640.62	2,639.86	2,638.97
13	2,640.90	2,640.45	2,640.28	2,640.23	2,640.50	2,641.25	2,641.60	2,641.53	2,640.69	2,640.58	2,639.84	2,638.94
14	2,640.87	2,640.46	2,640.28	2,640.24	2,640.50	2,641.27	2,641.61	2,641.49	2,640.66	2,640.55	2,639.81	2,638.90
15	2,640.85	2,640.46	2,640.28	2,640.24	2,640.50	2,641.28	2,641.61	2,641.46	2,640.63	2,640.51	2,639.77	2,638.86
16	2,640.83	2,640.47	2,640.27	2,640.26	2,640.51	2,641.28	2,641.61	2,641.45	2,640.59	2,640.48	2,639.75	2,638.83
17	2,640.80	2,640.47	2,640.27	2,640.32	2,640.52	2,641.29	2,641.61	2,641.44	2,640.57	2,640.43	2,639.72	2,638.80
18	2,640.78	2,640.45	2,640.27	2,640.38	2,640.52	2,641.30	2,641.61	2,641.42	2,640.54	2,640.44	2,639.69	2,638.77
19	2,640.77	2,640.44	2,640.26	2,640.39	2,640.53	2,641.31	2,641.62	2,641.40	2,640.52	2,640.41	2,639.66	2,638.74
20	2,640.76	2,640.43	2,640.26	2,640.41	2,640.53	2,641.31	2,641.63	2,641.37	2,640.50	2,640.40	2,639.66	2,638.72
21	2,640.75	2,640.42	2,640.27	2,640.42	2,640.52	2,641.30	2,641.63	2,641.34	2,640.48	2,640.37	2,639.63	2,638.70
22	2,640.73	2,640.41	2,640.26	2,640.42	2,640.53	2,641.29	2,641.62	2,641.32	2,640.62	2,640.33	2,639.62	2,638.70
23	2,640.72	2,640.39	2,640.26	2,640.43	2,640.55	2,641.30	2,641.61	2,641.28	2,640.66	2,640.29	2,639.59	2,638.77
24	2,640.70	2,640.37	2,640.26	2,640.43	2,640.57	2,641.30	2,641.59	2,641.25	2,640.65	2,640.25	2,639.57	2,638.76
25	2,640.67	2,640.36	2,640.27	2,640.44	2,640.59	2,641.31	2,641.59	2,641.21	2,640.65	2,640.20	2,639.54	2,638.76
26	2,640.63	2,640.36	2,640.27	2,640.44	2,640.60	2,641.31	2,641.71	2,641.18	2,640.63	2,640.16	2,639.50	2,638.75
27	2,640.61	2,640.36	2,640.27	2,640.44	2,640.61	2,641.32	2,641.76	2,641.13	2,640.61	2,640.14	2,639.46	2,638.74
28	2,640.60	2,640.34	2,640.26	2,640.44	2,640.61	2,641.31	2,641.75	2,641.10	2,640.66	2,640.12	2,639.42	2,638.73
29	2,640.58	2,640.34	2,640.26	2,640.44	2,640.71	2,641.31	2,641.75	2,641.06	2,640.79	2,640.22	2,639.38	2,638.70
30	2,640.57	2,640.34	2,640.25	2,640.44	---	2,641.30	2,641.75	2,641.02	2,640.83	2,640.21	2,639.37	2,638.68
31	2,640.55	---	2,640.25	2,640.44	---	2,641.29	---	2,640.98	---	2,640.18	2,639.37	---
MEAN	2,640.80	2,640.44	2,640.28	2,640.32	2,640.52	2,641.20	2,641.55	2,641.43	2,640.72	2,640.49	2,639.76	2,638.93
MAX	2,640.95	2,640.53	2,640.33	2,640.44	2,640.71	2,641.32	2,641.76	2,641.73	2,640.94	2,640.84	2,640.17	2,639.35
MIN	2,640.55	2,640.34	2,640.25	2,640.22	2,640.44	2,640.73	2,641.27	2,640.98	2,640.48	2,640.12	2,639.37	2,638.68

CAL YR 2003 MEAN 2,640.08 MAX 2,641.34 MIN 2,638.57
WTR YR 2004 MEAN 2,640.54 MAX 2,641.76 MIN 2,638.68

07299840 Greenbelt Lake near Clarendon, TX—Continued



07299890 Lelia Lake Creek below Bell Creek near Hedley, TX

LOCATION.--Lat 34°56'08", long 100°41'46", Donley County, Hydrologic Unit 11120201, on left downstream side of bridge of FM 2471, 1.0 mi downsteam from Bell Creek, and 5.0 mi north of Hedley.

DRAINAGE AREA.--74.0 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Aug. 1964 to Sept. 1995 (miscellaneous measurements), Aug. 1997 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,408.56 ft above NGVD of 1929. Satellite telemeter at site.

REMARKS.--Records good. No known regulation. There are several small diversions upstream from the station for farm and ranch use. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.91	1.0	1.6	1.7	1.8	3.3	2.7	3.3	0.60	1.5	e1.5	0.58
2	0.94	1.1	1.7	1.7	1.8	2.9	3.0	3.2	0.60	1.2	0.44	0.56
3	0.95	1.0	1.6	1.7	1.8	3.1	3.1	3.2	0.71	1.1	0.40	0.57
4	1.0	1.1	1.6	1.7	2.0	8.8	3.1	2.9	0.72	0.96	0.33	0.53
5	1.3	1.1	1.6	1.6	2.1	17	3.3	2.8	1.2	1.3	0.33	0.49
6	1.2	1.2	1.6	1.6	1.9	5.8	3.9	2.8	0.65	1.5	0.41	0.34
7	1.3	1.3	1.7	1.7	1.8	3.9	3.8	2.9	0.56	1.4	0.55	0.34
8	1.2	1.3	1.7	1.8	1.9	3.4	3.7	2.9	0.53	1.2	4.4	0.34
9	1.2	1.3	1.7	1.7	1.9	3.2	10	2.9	0.81	1.1	1.6	0.34
10	1.1	1.4	1.7	1.7	1.8	3.0	8.3	2.8	1.1	0.82	1.1	0.33
11	1.1	1.3	1.7	1.7	1.9	2.9	5.8	2.6	0.65	0.35	0.92	0.25
12	0.96	1.4	1.8	1.7	1.9	2.8	4.7	2.4	0.50	0.25	0.92	0.20
13	0.92	1.4	1.8	1.7	1.9	3.1	4.1	2.2	0.43	0.22	0.99	0.18
14	0.74	1.5	1.8	1.6	2.0	2.9	4.3	2.6	0.43	0.17	1.0	0.06
15	0.77	1.4	1.7	1.6	1.9	2.8	3.7	2.8	0.36	0.12	1.1	0.06
16	0.70	1.4	1.7	2.0	1.9	2.7	3.6	2.8	0.39	0.08	1.0	0.16
17	0.67	1.4	1.7	3.6	1.9	2.6	3.5	2.6	0.53	0.08	0.91	0.20
18	0.74	1.4	1.7	2.7	1.9	2.6	3.7	2.2	0.93	0.40	0.83	0.05
19	0.75	1.4	1.8	2.0	1.9	2.6	3.7	2.0	1.00	0.19	0.81	0.01
20	0.71	1.5	1.7	2.0	2.0	2.4	3.7	1.8	0.77	0.05	0.90	0.17
21	0.70	1.5	1.7	1.9	2.0	2.3	4.2	1.7	0.65	0.02	0.96	0.38
22	0.69	1.6	1.7	1.9	2.1	2.3	3.4	1.4	3.3	0.01	0.90	0.56
23	0.74	1.5	1.7	1.9	2.4	2.4	3.1	1.1	1.5	0.14	0.81	1.4
24	0.70	1.5	1.7	1.9	2.7	2.4	3.2	1.0	0.84	1.3	0.70	0.72
25	0.72	1.6	1.7	1.9	2.7	2.5	3.3	1.0	0.75	0.57	0.55	0.57
26	0.83	1.6	1.7	1.8	2.5	2.6	4.2	1.2	0.80	0.51	0.46	0.65
27	0.89	1.6	1.7	1.7	2.4	2.7	3.5	1.0	0.85	0.46	0.42	0.67
28	0.91	1.6	1.7	1.8	2.6	2.6	3.2	1.1	2.0	0.59	0.42	0.69
29	0.94	1.6	1.7	1.8	4.8	2.6	3.2	0.84	2.8	2.0	0.45	0.72
30	0.91	1.6	1.7	1.8	---	2.7	3.3	0.69	2.4	1.1	0.49	1.0
31	0.98	---	1.7	1.8	---	2.8	---	0.52	---	4.4	0.61	---
TOTAL	28.17	41.6	52.6	57.7	62.2	109.7	120.3	65.25	29.36	25.09	27.21	13.12
MEAN	0.91	1.39	1.70	1.86	2.14	3.54	4.01	2.10	0.98	0.81	0.88	0.44
MAX	1.3	1.6	1.8	3.6	4.8	17	10	3.3	3.3	4.4	4.4	1.4
MIN	0.67	1.0	1.6	1.6	1.8	2.3	2.7	0.52	0.36	0.01	0.33	0.01
AC-FT	56	83	104	114	123	218	239	129	58	50	54	26

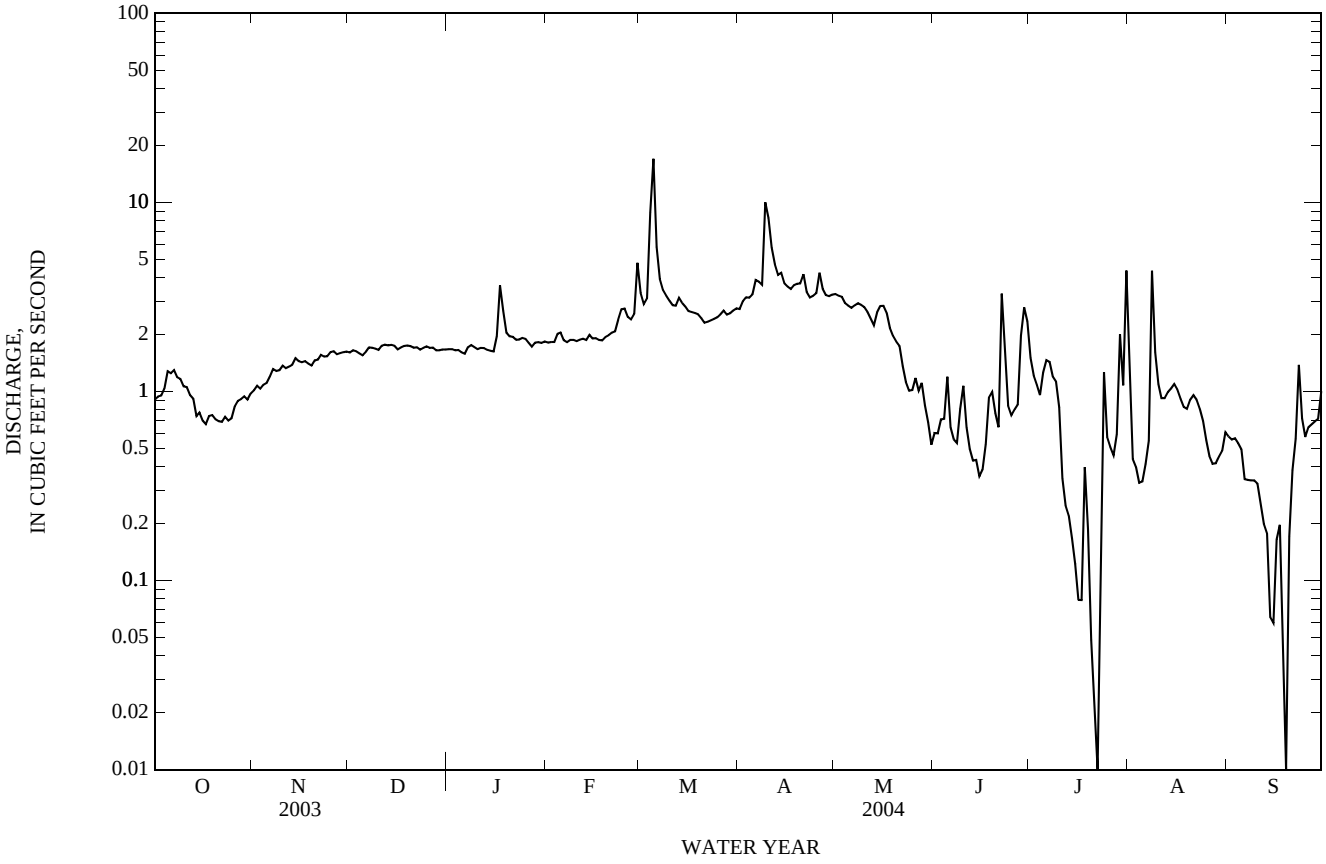
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2004, BY WATER YEAR (WY)

MEAN	2.17	2.90	2.84	3.06	3.49	5.78	4.52	3.29	3.57	1.98	0.96	1.38
MAX	4.95	6.47	5.04	5.70	7.73	13.5	7.48	4.41	9.67	7.75	3.87	4.11
(WY)	(2003)	(2002)	(1998)	(1998)	(1998)	(1998)	(1998)	(2000)	(2003)	(2002)	(1997)	(1997)
MIN	0.80	1.25	1.62	1.72	1.25	0.85	2.83	0.85	0.81	0.20	0.20	0.28
(WY)	(2002)	(2000)	(2000)	(2000)	(2002)	(2002)	(2003)	(2003)	(2002)	(2001)	(2001)	(2000)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1997 - 2004	
ANNUAL TOTAL	994.04		632.30			
ANNUAL MEAN	2.72		1.73		2.92	
HIGHEST ANNUAL MEAN					4.57	1998
LOWEST ANNUAL MEAN					1.73	2004
HIGHEST DAILY MEAN	207	Jun 29	17	Mar 5	207	Jun 29, 2003
LOWEST DAILY MEAN	0.00	Aug 19	0.01	Jul 22	0.00	Aug 3, 2001
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 19	0.10	Sep 14	0.00	Aug 3, 2001
MAXIMUM PEAK FLOW			29	Mar 5	c1,190	Jul 5, 2002
MAXIMUM PEAK STAGE			4.64	Mar 5	a8.59	Jul 5, 2002
ANNUAL RUNOFF (AC-FT)	1,970		1,250		2,120	
10 PERCENT EXCEEDS	3.7		3.2		5.1	
50 PERCENT EXCEEDS	1.6		1.6		1.8	
90 PERCENT EXCEEDS	0.45		0.42		0.44	

a From floodmark.
c From rating curve extended above 300 ft^3/s based on velocity-area study.
e Estimated

07299890 Lelia Lake Creek below Bell Creek near Hedley, TX—Continued



07299890 Lelia Lake Creek below Bell Creek near Hedley, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Aug. 1997 to Sept.30,2004 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Aug. 1997 to Sept.30,2004 (discontinued).
TEMPERATURE: Aug. 1997 to Sept.30,2004 (discontinued).

INSTRUMENTATION.--Water-quality monitor from Aug. 1997 to Sept. 30, 2004 (discontinued).

REMARKS.--Temperature records excellent. Specific-conductance records excellent. Interruption in the record was caused by malfunctions of the instrument.
EXTREMES FOR PERIOD OF DAILY RECORD.--SPECIFIC CONDUCTANCE: Maximum, 1,530 microsiemens/cm, Mar. 4, 1998; minimum, 59 microsiemens/cm, Oct. 9, 2002.
TEMPERATURE: Maximum, 36.5°C, July 13, 1998; minimum, -0.2°C, Feb. 25, 2003.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,130 microsiemens/cm, June 5 and 23; minimum, 183 microsiemens/cm, June 22.
WATER TEMPERATURE: Maximum, 33.3°C, July 3; minimum, -0.1°C, Jan. 6.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

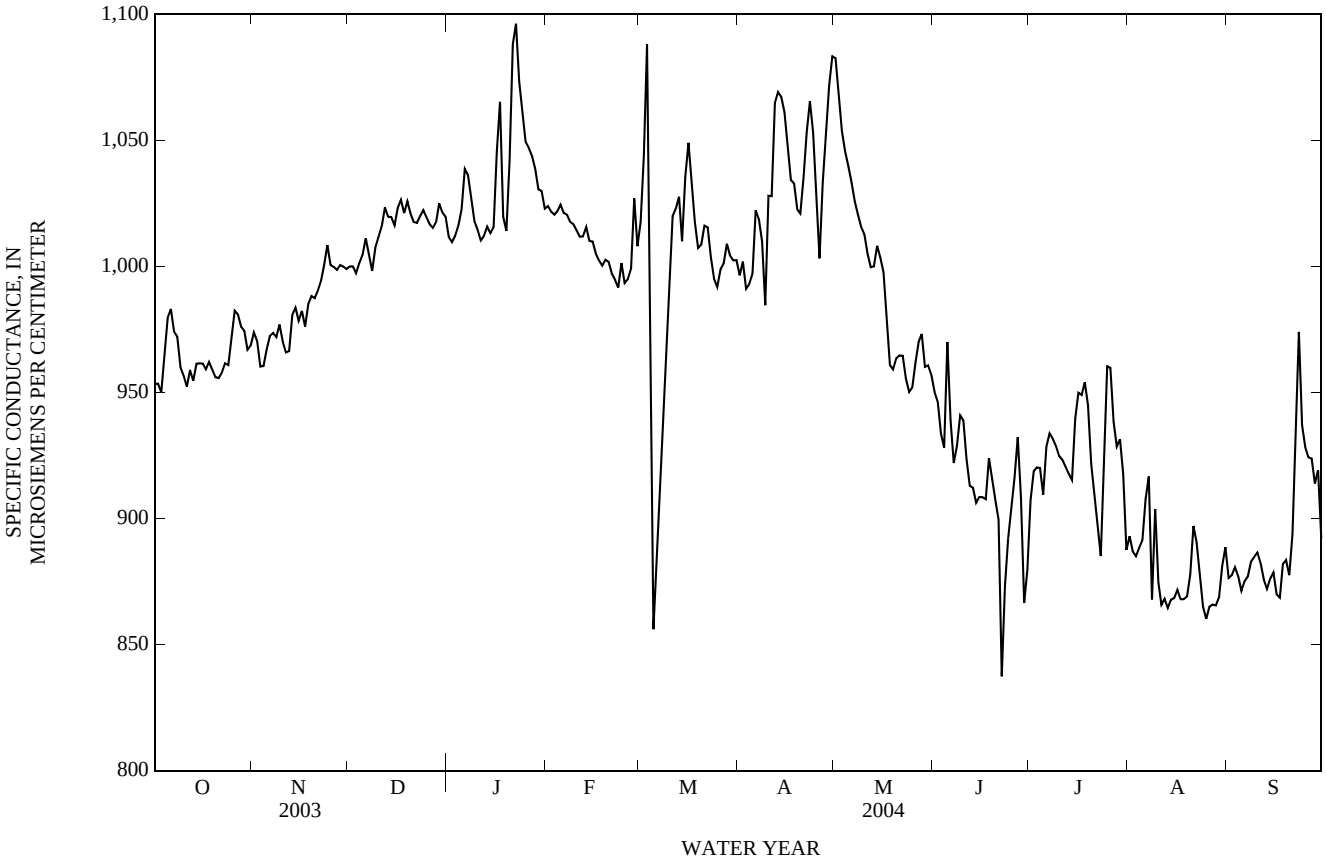
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	976	923	953	985	962	974	1,010	976	1,000	1,030	980	1,010
2	982	916	954	985	953	971	1,020	979	1,000	1,030	983	1,010
3	979	915	950	983	932	960	1,010	972	997	1,030	985	1,010
4	985	944	966	981	933	960	1,020	979	1,000	1,030	994	1,020
5	993	956	980	984	946	967	1,020	986	1,000	1,040	1,000	1,020
6	997	965	983	986	955	972	1,020	994	1,010	1,070	1,010	1,040
7	994	943	974	990	958	974	1,020	982	1,000	1,050	1,010	1,040
8	988	952	972	985	955	972	1,020	972	998	1,040	1,000	1,030
9	986	918	960	985	968	977	1,020	998	1,010	1,030	992	1,020
10	989	916	957	991	943	970	1,020	988	1,010	1,030	994	1,010
11	980	911	952	981	942	966	1,030	996	1,020	1,030	987	1,010
12	987	926	959	983	945	966	1,030	1,020	1,020	1,030	991	1,010
13	983	918	955	988	972	981	1,030	1,000	1,020	1,030	993	1,020
14	990	929	961	995	965	984	1,030	1,000	1,020	1,030	988	1,010
15	989	930	962	994	954	978	1,030	998	1,020	1,030	1,000	1,020
16	988	929	961	999	959	982	1,040	1,000	1,020	1,060	1,030	1,050
17	987	928	959	993	949	976	1,040	1,000	1,030	1,110	1,040	1,070
18	990	933	962	999	962	985	1,030	1,000	1,020	1,040	1,000	1,020
19	987	929	959	1,000	965	988	1,040	1,010	1,030	1,020	1,000	1,010
20	982	925	956	1,000	961	987	1,030	1,000	1,020	1,070	1,020	1,040
21	982	926	956	1,010	965	990	1,030	993	1,020	1,110	1,070	1,090
22	982	930	958	1,010	971	994	1,030	998	1,020	1,110	1,070	1,100
23	984	933	962	1,010	985	1,000	1,030	1,000	1,020	1,090	1,050	1,070
24	982	933	961	1,020	992	1,010	1,040	1,000	1,020	1,070	1,040	1,060
25	989	957	972	1,010	981	1,000	1,030	998	1,020	1,070	1,030	1,050
26	997	965	982	1,010	981	1,000	1,030	991	1,020	1,060	1,030	1,050
27	1,000	959	981	1,010	979	999	1,030	989	1,020	1,060	1,020	1,040
28	995	955	976	1,010	982	1,000	1,030	995	1,020	1,050	1,020	1,040
29	993	952	974	1,010	981	1,000	1,040	1,000	1,030	1,040	1,010	1,030
30	988	943	967	1,010	977	999	1,040	1,000	1,020	1,040	1,010	1,030
31	987	949	969	---	---	---	1,040	998	1,020	1,040	1,000	1,020
MONTH	1,000	911	964	1,020	932	983	1,040	972	1,020	1,110	980	1,030

07299890 Lelia Lake Creek below Bell Creek near Hedley, TX—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1,040	1,010	1,020	1,030	1,000	1,020	1,030	934	996	1,100	1,050	1,080
2	1,040	1,000	1,020	1,080	1,020	1,040	1,030	965	1,000	1,090	1,030	1,070
3	1,030	1,000	1,020	1,110	1,050	1,090	1,020	935	991	1,080	1,020	1,050
4	1,030	1,010	1,020	1,050	854	951	1,020	945	993	1,070	1,010	1,050
5	1,030	1,010	1,020	1,040	753	856	1,020	963	997	1,070	995	1,040
6	1,030	1,000	1,020	897	876	886	1,040	1,000	1,020	1,060	987	1,030
7	1,030	1,000	1,020	940	897	920	1,040	977	1,020	1,060	971	1,030
8	1,030	995	1,020	966	940	950	1,040	927	1,010	1,060	971	1,020
9	1,030	991	1,020	990	963	975	1,030	926	985	1,050	959	1,020
10	1,030	993	1,010	1,010	990	1,000	1,060	982	1,030	1,050	960	1,010
11	1,020	995	1,010	1,030	1,010	1,020	1,060	1,000	1,030	1,040	952	1,010
12	1,020	996	1,010	1,030	1,020	1,020	1,090	1,040	1,060	1,040	944	1,000
13	1,020	1,010	1,020	1,040	1,010	1,030	1,090	1,020	1,070	1,040	951	1,000
14	1,020	990	1,010	1,040	934	1,010	1,100	1,000	1,070	1,050	958	1,010
15	1,020	991	1,010	1,050	1,020	1,040	1,100	988	1,060	1,050	947	1,000
16	1,020	982	1,010	1,060	1,030	1,050	1,090	979	1,050	1,040	949	998
17	1,020	977	1,000	1,050	1,000	1,030	1,080	967	1,030	1,030	916	978
18	1,020	975	1,000	1,030	990	1,020	1,070	971	1,030	1,010	903	961
19	1,020	974	1,000	1,030	977	1,010	1,060	953	1,020	1,010	908	959
20	1,020	970	1,000	1,030	978	1,010	1,060	962	1,020	1,020	913	964
21	1,020	965	997	1,030	990	1,020	1,100	968	1,040	1,010	920	965
22	1,020	966	995	1,040	982	1,020	1,080	995	1,050	1,010	927	965
23	1,020	961	992	1,030	961	1,000	1,080	1,050	1,070	990	928	956
24	1,010	985	1,000	1,020	952	995	1,080	997	1,050	974	936	950
25	1,010	973	993	1,020	948	992	1,070	974	1,030	971	937	952
26	1,010	974	995	1,020	961	999	1,030	972	1,000	991	945	962
27	1,020	970	999	1,030	954	1,000	1,060	1,000	1,030	987	944	970
28	1,040	1,010	1,030	1,030	963	1,010	1,080	1,020	1,050	1,010	940	973
29	1,040	958	1,010	1,040	954	1,000	1,090	1,040	1,070	989	941	960
30	---	---	---	1,030	949	1,000	1,100	1,070	1,080	985	939	961
31	---	---	---	1,030	946	1,000	---	---	---	979	934	957
MONTH	1,040	958	1,010	1,110	753	999	1,100	926	1,030	1,100	903	995
		JUNE			JULY			AUGUST			SEPTEMBER	
1	976	923	950	930	890	907	935	845	893	900	838	876
2	968	924	946	935	883	919	925	851	887	896	848	878
3	957	903	934	944	877	920	921	852	885	904	852	881
4	953	878	928	950	872	920	912	860	888	909	843	877
5	1,130	916	970	938	868	909	906	865	891	904	840	871
6	965	908	939	954	895	929	920	894	908	912	840	875
7	942	892	922	963	886	934	952	881	917	914	848	877
8	944	905	929	965	882	932	914	390	868	914	857	883
9	953	932	941	961	887	929	925	880	904	918	855	885
10	964	907	939	958	878	925	906	833	875	920	858	886
11	951	887	923	961	882	923	895	829	866	919	847	882
12	938	880	913	954	887	921	895	843	868	912	843	876
13	935	878	912	950	883	918	899	812	865	910	846	872
14	933	870	906	941	882	915	898	840	868	893	859	876
15	933	876	909	956	920	940	897	843	868	896	866	878
16	937	870	908	975	924	950	906	840	872	886	848	870
17	932	860	908	972	924	949	904	841	868	907	850	869
18	996	883	924	981	938	954	897	849	868	895	863	882
19	940	878	916	976	899	945	898	843	869	894	871	884
20	944	854	907	951	880	922	900	856	878	893	856	878
21	931	183	900	949	867	909	928	868	897	918	864	894
22	900	183	837	948	845	898	931	853	890	963	227	925
23	899	855	873	940	618	885	917	843	878	1,130	227	974
24	914	854	892	1,040	583	920	894	836	865	960	904	937
25	929	856	905	971	956	960	875	832	860	948	910	928
26	941	870	916	994	914	960	890	823	865	952	896	924
27	952	899	932	972	900	938	898	827	866	956	895	924
28	955	752	908	964	887	929	896	833	865	938	892	914
29	913	786	867	975	894	931	899	835	869	945	896	919
30	899	846	880	959	862	918	900	865	881	944	396	892
31	---	---	---	933	838	888	913	863	889	---	---	---
MONTH	1,130	183	914	1,040	583	926	952	390	878	1,130	227	893
YEAR	1,130	183	970									

07299890 Lelia Lake Creek below Bell Creek near Hedley, TX—Continued



TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

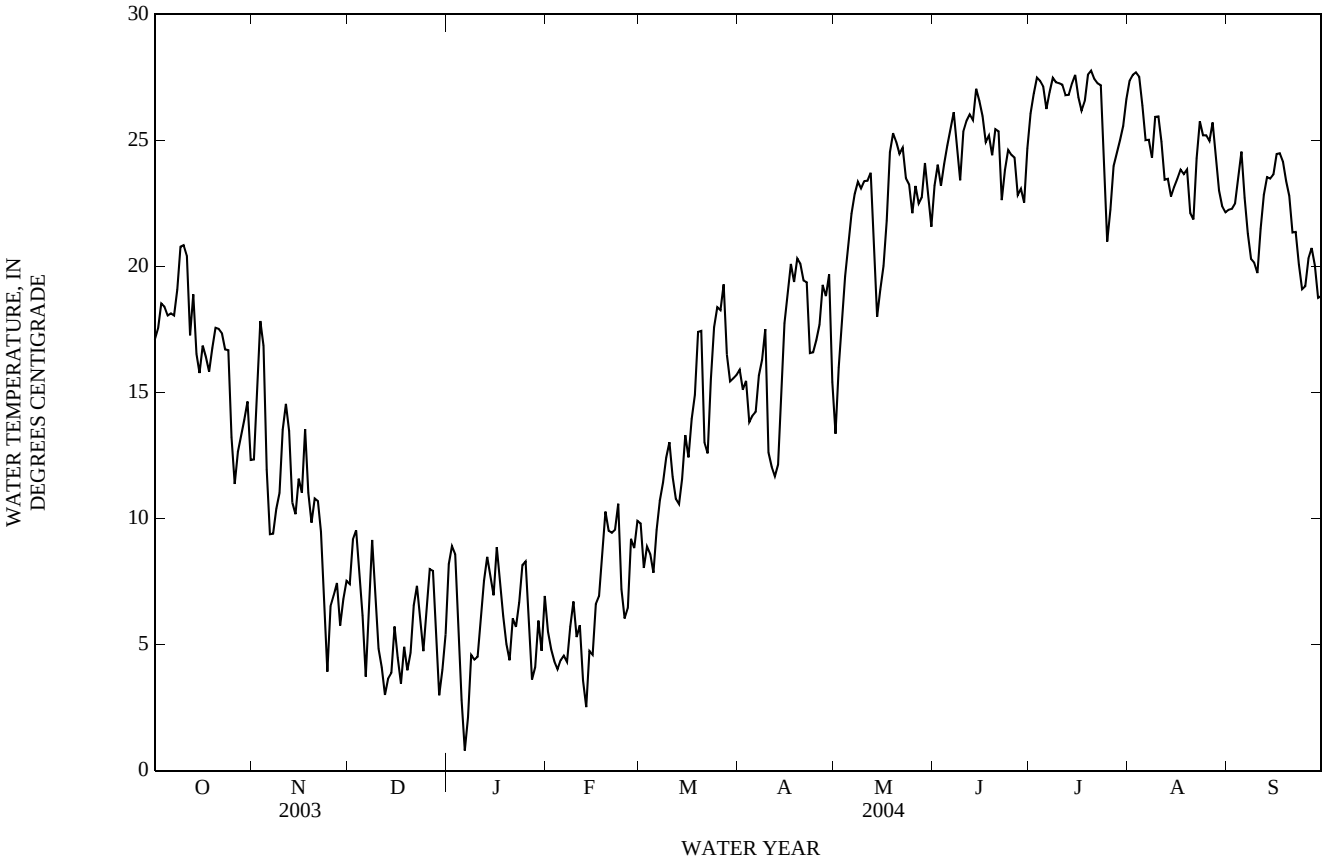
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	18.7	15.3	17.1	13.4	11.6	12.3	10.6	5.2	7.4	11.2	6.5	8.2
2	20.5	15.1	17.5	17.5	12.2	14.8	11.9	6.6	9.2	12.2	6.5	8.9
3	21.6	15.6	18.5	20.9	15.8	17.8	12.3	7.6	9.5	11.4	6.1	8.6
4	19.9	17.8	18.4	19.4	14.0	16.9	11.0	4.9	7.7	7.8	3.7	5.7
5	19.7	17.1	18.1	14.0	10.2	11.9	8.4	3.8	6.2	5.5	0.6	2.8
6	19.4	17.4	18.1	10.9	8.4	9.4	6.3	1.1	3.7	2.2	-0.1	0.8
7	20.3	16.3	18.1	12.0	7.8	9.4	10.4	3.4	6.5	5.1	0.1	2.1
8	20.2	18.0	19.1	11.8	9.3	10.4	11.9	7.0	9.2	7.9	2.7	4.6
9	24.5	17.9	20.8	11.7	10.4	11.0	9.7	4.4	6.9	8.3	1.4	4.4
10	23.8	18.1	20.8	16.7	11.2	13.5	7.8	2.8	4.8	8.3	1.4	4.5
11	21.8	18.3	20.4	16.4	13.2	14.5	7.2	1.5	4.1	9.7	3.5	6.1
12	20.1	14.3	17.3	15.2	11.9	13.5	4.0	2.5	3.0	9.6	5.5	7.5
13	22.8	16.3	18.9	11.9	9.6	10.6	6.8	1.5	3.7	11.5	6.2	8.5
14	19.6	13.8	16.5	11.8	9.1	10.2	7.3	1.1	3.9	11.3	4.9	7.7
15	19.7	12.5	15.8	14.9	9.3	11.6	8.2	4.2	5.7	8.2	5.3	7.0
16	20.5	13.6	16.9	14.3	7.6	11.0	7.1	2.7	4.5	10.0	7.9	8.9
17	19.5	13.7	16.4	15.2	12.3	13.5	7.2	0.5	3.5	9.8	5.9	7.6
18	20.0	12.2	15.8	13.2	9.2	11.0	8.1	2.9	4.9	8.3	4.8	6.1
19	20.8	13.3	16.8	13.7	6.9	9.8	7.4	1.3	4.0	8.1	2.6	5.0
20	21.5	14.2	17.6	14.4	8.1	10.8	8.0	1.6	4.7	5.7	3.0	4.4
21	21.4	14.2	17.5	13.1	8.7	10.7	9.9	3.7	6.6	9.3	4.3	6.0
22	21.0	14.2	17.3	11.5	7.5	9.5	9.3	5.8	7.3	9.6	2.9	5.7
23	20.4	13.3	16.7	9.2	4.1	6.4	9.1	3.8	6.1	11.0	3.2	6.7
24	19.4	14.3	16.7	7.0	1.0	3.9	7.6	2.0	4.7	9.9	6.3	8.2
25	16.0	11.8	13.2	9.5	4.4	6.5	9.4	3.7	6.4	11.4	5.9	8.3
26	15.1	8.4	11.4	10.8	3.8	7.0	11.2	5.4	8.0	7.4	3.5	5.6
27	16.4	9.5	12.6	10.1	5.8	7.4	10.3	6.1	7.9	7.5	0.6	3.6
28	16.6	10.7	13.3	8.7	2.7	5.8	8.1	3.2	5.3	8.1	0.8	4.1
29	17.9	10.7	13.9	10.1	4.1	6.8	6.2	0.5	3.0	9.6	3.7	6.0
30	16.9	12.8	14.6	11.0	4.6	7.5	7.3	1.6	4.0	8.7	1.5	4.8
31	14.8	9.9	12.3	---	---	---	8.6	2.6	5.4	11.2	4.2	6.9
MONTH	24.5	8.4	16.7	20.9	1.0	10.5	12.3	0.5	5.7	12.2	-0.1	6.0

07299890 Lelia Lake Creek below Bell Creek near Hedley, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.6	3.3	5.5	14.0	6.3	9.8	22.0	10.8	15.9	17.6	10.5	13.4
2	9.5	1.6	4.8	9.9	6.3	8.0	17.2	13.4	15.1	23.4	10.5	16.0
3	6.3	2.2	4.3	11.0	7.5	8.9	19.2	13.0	15.5	23.9	12.9	17.8
4	4.5	3.3	4.0	9.8	7.8	8.6	15.6	11.9	13.8	26.2	14.8	19.6
5	5.2	3.8	4.4	9.0	6.4	7.8	16.3	12.5	14.1	28.0	15.4	20.9
6	8.4	2.2	4.6	14.7	5.4	9.6	15.8	13.2	14.2	28.4	17.1	22.1
7	8.9	0.9	4.3	15.2	7.3	10.7	19.3	13.4	15.7	28.8	18.3	22.9
8	10.6	1.9	5.7	16.6	7.5	11.4	21.0	12.6	16.3	29.1	19.4	23.4
9	10.4	4.5	6.7	17.3	9.0	12.4	22.7	13.7	17.5	28.4	19.1	23.1
10	9.2	1.9	5.3	17.7	9.6	13.0	17.7	10.7	12.6	28.7	19.3	23.4
11	7.9	4.5	5.8	14.3	9.8	11.7	16.4	8.7	12.1	27.9	20.0	23.4
12	5.2	1.8	3.6	11.6	10.0	10.8	13.8	9.6	11.7	28.9	19.6	23.7
13	3.4	1.8	2.5	12.4	9.5	10.6	19.1	6.8	12.1	23.7	17.1	20.5
14	9.8	1.8	4.8	13.2	10.4	11.6	21.6	10.3	15.3	24.2	13.2	18.0
15	9.1	1.1	4.6	17.5	10.8	13.3	24.1	13.0	17.8	24.8	14.7	19.1
16	11.0	4.1	6.6	17.0	8.8	12.4	24.8	14.6	19.0	23.8	16.9	20.0
17	12.0	2.9	6.9	19.7	9.6	13.9	24.5	16.7	20.1	26.8	17.5	21.8
18	13.2	4.4	8.4	20.5	10.4	14.9	22.4	17.1	19.4	30.1	19.7	24.5
19	13.3	7.8	10.3	22.9	13.9	17.4	25.2	16.9	20.3	29.8	21.2	25.3
20	12.9	7.1	9.5	22.0	14.2	17.4	23.9	17.1	20.1	29.7	21.0	24.9
21	14.0	6.2	9.4	14.9	11.0	13.0	25.4	14.7	19.4	28.7	21.1	24.5
22	12.7	6.8	9.6	18.0	8.7	12.6	25.1	15.2	19.4	29.9	20.8	24.7
23	12.9	8.8	10.6	20.7	11.9	15.5	19.5	14.4	16.6	28.5	18.9	23.5
24	10.3	5.2	7.2	22.6	14.5	17.6	22.9	12.4	16.6	28.6	18.7	23.3
25	9.6	4.0	6.0	22.6	15.2	18.4	21.0	13.6	17.1	24.5	19.6	22.1
26	11.8	2.0	6.4	20.9	16.6	18.3	24.1	12.9	17.7	27.1	19.9	23.2
27	14.5	4.9	9.2	23.6	16.9	19.3	25.4	14.6	19.3	24.0	20.9	22.5
28	9.8	8.1	8.8	21.1	13.0	16.5	23.3	15.5	18.8	28.6	17.7	22.7
29	13.8	7.5	9.9	21.3	11.0	15.4	25.0	15.9	19.7	28.9	20.2	24.1
30	---	---	---	21.8	10.6	15.6	19.5	12.6	15.4	27.4	18.7	22.8
31	---	---	---	21.6	11.0	15.7	---	---	---	26.9	16.4	21.6
MONTH	14.5	0.9	6.5	23.6	5.4	13.3	25.4	6.8	16.6	30.1	10.5	21.9
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.9	18.0	23.2	30.9	22.7	26.1	32.7	22.9	27.4	26.8	18.8	22.2
2	29.0	19.9	24.0	33.1	22.2	26.9	32.5	23.4	27.6	26.4	18.9	22.3
3	27.8	19.6	23.2	33.3	22.8	27.5	32.1	24.0	27.7	27.0	18.8	22.5
4	28.7	20.1	24.1	32.6	23.3	27.4	31.9	24.0	27.5	27.8	20.1	23.5
5	30.7	20.2	24.8	32.6	22.6	27.1	29.5	23.8	26.4	28.3	22.0	24.6
6	31.0	20.8	25.5	29.9	22.5	26.2	26.9	23.2	25.0	26.1	19.6	22.7
7	31.2	22.0	26.1	32.0	23.1	26.9	28.3	22.4	25.0	25.2	18.1	21.3
8	28.1	21.8	24.7	32.7	23.1	27.5	27.1	21.7	24.3	24.7	16.7	20.3
9	25.1	22.4	23.4	31.4	24.1	27.3	30.5	23.0	25.9	24.7	16.5	20.2
10	31.3	21.4	25.3	31.9	23.6	27.3	31.4	21.8	25.9	24.4	15.9	19.7
11	31.1	21.3	25.8	31.9	23.1	27.2	28.4	21.5	24.9	26.0	17.9	21.5
12	31.1	21.3	26.0	31.6	22.5	26.8	26.8	20.5	23.4	27.0	19.2	22.8
13	30.8	21.2	25.8	31.9	22.4	26.8	27.7	20.4	23.5	26.9	21.0	23.5
14	32.4	22.5	27.0	32.4	22.7	27.3	26.2	19.9	22.8	26.7	21.3	23.5
15	30.4	23.4	26.6	32.9	23.1	27.6	26.6	20.7	23.2	26.3	21.7	23.6
16	30.2	23.0	26.0	30.8	22.6	26.7	28.0	19.8	23.5	27.8	21.9	24.5
17	28.9	21.5	24.9	29.1	23.4	26.2	28.5	19.7	23.8	28.3	21.4	24.5
18	30.4	21.1	25.2	31.6	22.5	26.6	27.2	20.6	23.7	26.8	22.0	24.2
19	27.1	22.2	24.4	32.4	23.5	27.6	27.6	21.4	23.8	24.8	22.3	23.4
20	29.8	22.1	25.4	32.1	24.4	27.8	24.4	20.1	22.1	24.2	21.6	22.8
21	28.7	22.3	25.4	31.9	23.8	27.4	25.2	19.0	21.9	22.7	20.5	21.3
22	26.3	20.4	22.6	31.9	23.4	27.3	29.2	20.7	24.3	23.7	18.1	21.4
23	29.8	19.4	23.8	31.2	24.3	27.2	30.3	22.2	25.8	24.1	17.1	20.1
24	30.3	19.9	24.6	25.5	22.6	23.7	30.2	23.0	25.2	23.5	15.6	19.1
25	28.7	20.5	24.4	22.9	20.0	21.0	29.4	21.9	25.2	21.4	16.9	19.2
26	28.6	21.0	24.3	27.0	18.7	22.3	29.7	21.5	25.0	22.5	18.4	20.3
27	25.7	20.4	22.8	26.9	21.5	24.0	30.0	22.5	25.7	23.3	18.3	20.7
28	26.3	20.6	23.1	28.0	22.1	24.5	27.5	21.5	24.5	22.0	18.5	20.0
29	24.6	20.9	22.5	29.5	21.5	25.0	26.8	19.9	23.0	22.6	15.6	18.8
30	30.0	21.2	24.7	31.2	21.0	25.6	23.6	21.0	22.4	22.5	16.0	18.8
31	---	---	---	32.2	22.0	26.6	25.5	19.4	22.1	---	---	---
MONTH	32.4	18.0	24.7	33.3	18.7	26.3	32.7	19.0	24.6	28.3	15.6	21.8
YEAR	33.3	-0.1	16.2									

07299890 Lelia Lake Creek below Bell Creek near Hedley, TX—Continued



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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, 4.0 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 mi^2 of which 209 mi^2 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 NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges and discharges computed from affected unit values from Aug. 23, to Sep. 30, which are fair. Since water year 1967, at least 10% of contributing drainage area has been regulated. There are several small diversions upstream from gage for irrigation.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--14 years (water years 1953-1966) prior to completion of Greenbelt Lake, 72.6 ft^3/s (52,600 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1953-1966: Maximum discharge, 146,000 ft^3/s May 16, 1957 (gage height, 19.00 ft), from rating curve extended above 11,000 ft^3/s on basis of slope-area measurement of 63,400 ft^3/s; minimum, 0.1 ft^3/s June 19, 1952.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	8.5	11	18	27	81	27	56	3.8	62	6.9	23
2	14	9.3	11	18	30	52	29	56	5.9	45	4.4	19
3	13	9.1	11	17	29	85	42	47	7.7	28	3.4	17
4	16	7.7	11	17	35	224	42	39	5.7	17	3.2	16
5	18	7.4	11	16	47	359	41	32	10	14	3.3	16
6	19	7.6	11	16	49	170	59	28	6.6	11	3.8	16
7	17	8.8	11	16	41	131	260	25	5.7	9.9	4.0	19
8	17	8.9	11	17	37	88	136	23	5.3	8.6	6.5	21
9	26	9.9	12	22	33	72	337	21	12	7.0	4.7	22
10	31	12	11	24	30	63	310	19	12	5.9	4.0	22
11	26	14	10	21	28	48	149	20	6.2	5.3	3.7	21
12	20	14	11	20	29	45	108	18	5.3	5.1	5.5	21
13	17	14	11	18	29	68	83	16	5.5	4.9	6.7	20
14	14	15	12	18	32	73	67	16	4.8	4.8	8.3	21
15	13	16	15	17	33	61	58	15	4.6	4.7	6.6	22
16	11	15	16	24	33	50	53	15	4.6	4.4	5.7	25
17	8.9	14	14	69	32	46	49	e18	8.6	4.4	5.5	25
18	8.4	12	14	110	33	43	45	e13	29	4.8	5.5	26
19	8.1	11	14	70	34	44	50	e8.0	12	4.3	6.1	28
20	8.0	9.8	14	44	30	39	52	e5.6	10	3.8	6.9	28
21	8.2	8.8	15	40	28	31	41	4.6	8.0	3.7	6.5	39
22	8.2	9.2	15	34	30	31	35	4.3	136	3.7	7.8	36
23	8.4	9.2	15	34	40	35	34	4.0	37	20	8.5	61
24	8.1	8.1	14	37	45	37	38	4.0	26	97	13	40
25	7.6	9.2	15	38	67	38	37	4.1	15	9.9	14	37
26	7.9	9.5	16	32	62	38	112	4.2	11	7.1	12	44
27	8.8	9.7	15	28	50	46	110	4.4	9.3	5.4	13	37
28	8.7	9.6	14	29	45	38	75	4.4	18	6.6	17	35
29	8.8	9.7	13	29	123	31	60	4.1	39	8.4	19	34
30	8.5	10	14	27	---	28	53	3.7	66	9.2	24	34
31	8.0	---	16	27	---	26	---	3.8	---	5.6	24	---
TOTAL	410.6	317.0	404	947	1,161	2,221	2,592	536.2	530.6	431.5	263.5	825
MEAN	13.2	10.6	13.0	30.5	40.0	71.6	86.4	17.3	17.7	13.9	8.50	27.5
MAX	31	16	16	110	123	359	337	56	136	97	24	61
MIN	7.6	7.4	10	16	27	26	27	3.7	3.8	3.7	3.2	16
AC-FT	814	629	801	1,880	2,300	4,410	5,140	1,060	1,050	856	523	1,640

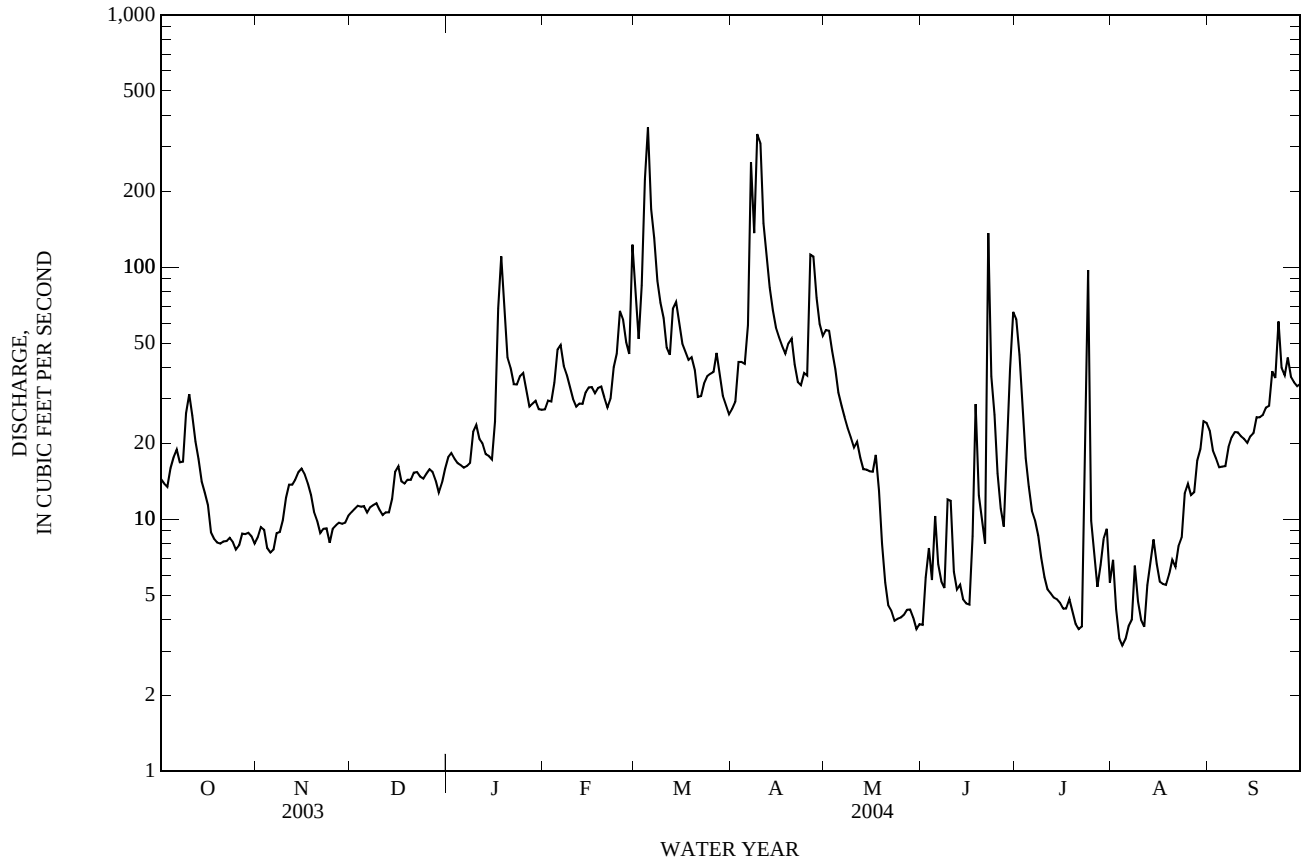
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2004z, BY WATER YEAR (WY)

MEAN	31.6	29.2	28.0	32.4	39.3	47.7	89.2	104	136	30.2	25.5	32.2
MAX	279	213	92.4	86.0	117	165	1,218	468	1,006	155	301	123
(WY)	(1987)	(1987)	(1992)	(1993)	(1998)	(1998)	(1997)	(1977)	(1995)	(1993)	(1968)	(2003)
MIN	3.81	8.03	3.59	10.5	10.9	8.15	6.10	2.61	8.17	2.65	1.68	2.22
(WY)	(2002)	(1981)	(1984)	(1971)	(1967)	(1972)	(1971)	(1971)	(1970)	(1970)	(1970)	(1984)

07300000 Salt Fork Red River near Wellington, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1967 - 2004z	
ANNUAL TOTAL	12,135.20		10,639.4			
ANNUAL MEAN	33.2		29.1		52.0	
HIGHEST ANNUAL MEAN					165	1997
LOWEST ANNUAL MEAN					10.5	1971
HIGHEST DAILY MEAN	2,500	Sep 11	359	Mar 5	17,500	Apr 3, 1997
LOWEST DAILY MEAN	0.91	Aug 28	3.2	Aug 4	0.40	Jun 2, 1985
ANNUAL SEVEN-DAY MINIMUM	1.0	Aug 22	4.1	May 26	0.71	Sep 23, 2002
MAXIMUM PEAK FLOW			652	Apr 7	81,100	Apr 3, 1997
MAXIMUM PEAK STAGE			4.50	Apr 7	17.10	Apr 3, 1997
ANNUAL RUNOFF (AC-FT)	24,070		21,100		37,670	
10 PERCENT EXCEEDS	41		58		71	
50 PERCENT EXCEEDS	15		17		17	
90 PERCENT EXCEEDS	2.6		5.3		4.1	

z Period of regulated streamflow.
e Estimated



07300000 Salt Fork Red River near Wellington, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Feb. 1951 to Oct. 1954, Oct. 1967 to Sept. 1997, Oct. 1999 to current year.
BIOLOGICAL DATA: Oct. 1974 to Sept. 1997, Oct. 1999 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1952 to Sept. 1954, Oct. 1967 to Sept. 1991.
TEMPERATURE: June 1952 to Sept. 1954, Oct. 1967 to Sept. 1991.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
OCT													
28...	1310	9.2	8.0	95	7.9	3,450	19.3	1,600	1,800	562d	91.0	4.41	2
MAR													
25...	1030	39	8.2	100	8.0	2,840	18.8	1,100	1,300	357d	91.3d	4.99d	3
MAY													
27...	1220	4.1	6.8	92	7.9	3,180	25.4	1,700	1,800	570d	90.8d	4.48d	2
AUG													
12...	1240	5.0	6.8	98	7.9	3,100	29.5	1,500	1,600	517d	85.0d	4.12d	2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
28...	207	147	281d	.6	20.2	1570d	2,840	<10	.13	.11	E.03n	1.97	1.98
MAR													
25...	243d	140	307d	.8	21.0	1060d	2,170	<10	.13	.18	<.04	--	.73
MAY													
27...	170d	136	216d	.6	20.1	1500d	2,670	<10	.11	.17	.05	2.46	2.49
AUG													
12...	153d	128	204d	.6	20.5	1500d	2,570	11	.11	E.10n	.04	1.69	1.71

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
OCT									
28...	.011	--	--	<.02	<.004	E.004n	2.1	40	97
MAR									
25...	E.005n	--	--	<.02	E.003n	.007	.92	51	77
MAY									
27...	.024	.06	.12	<.02	<.004	.005	2.7	140	260
AUG									
12...	.014	.07	--	<.02	<.004	.006	--	61	56

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

Value qualifier codes used in this table:
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

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07300500 Salt Fork Red River at Mangum, OK

LOCATION.--Lat 34°51'30", long 99°30'30", in SW ¼ SE ¼ 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 mi^2, of which 209 mi^2 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 sea level (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.--Records fair. U.S. Geological Survey satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	1600	*3,090	*8.59				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	1.2	8.8	15	31	67	86	64	0.01	95	2.2	0.54
2	2.8	1.1	9.3	15	e28	102	83	57	1.0	79	1.6	0.14
3	2.1	1.1	9.8	15	30	92	82	54	1.1	67	0.54	0.02
4	1.9	2.0	9.9	15	35	1,080	82	53	3.0	57	0.00	0.00
5	1.9	2.6	10	e12	36	522	87	51	39	46	0.00	0.00
6	2.1	2.5	e9.0	e10	37	301	94	49	25	38	0.00	0.00
7	2.6	5.2	e10	e10	e36	193	114	46	18	60	0.00	0.00
8	4.9	4.7	11	e11	40	172	183	44	15	47	0.00	0.00
9	12	6.2	12	e14	36	149	172	42	17	36	0.00	0.00
10	11	7.8	11	e15	34	138	195	39	21	25	0.00	0.00
11	9.4	8.5	e11	16	34	129	230	37	21	16	0.00	0.00
12	14	8.6	e10	19	33	122	163	32	19	12	0.00	0.00
13	13	8.7	e11	22	e31	122	121	29	12	8.4	0.00	0.00
14	11	9.1	e12	21	34	124	104	28	6.4	5.2	0.00	0.00
15	10	10	14	21	34	129	89	26	1.3	2.8	0.00	0.00
16	10	11	13	32	33	126	79	24	0.27	0.88	0.00	0.00
17	9.6	12	e11	54	33	e119	69	22	0.43	0.35	0.00	0.00
18	9.0	12	e13	63	35	e113	63	22	1.1	0.27	0.00	0.00
19	8.7	12	14	79	34	108	58	20	0.50	0.20	0.00	0.00
20	8.0	11	14	70	31	107	58	18	0.13	0.16	0.00	0.00
21	7.5	9.5	13	58	29	104	56	12	0.01	0.05	0.00	0.00
22	6.7	9.5	14	49	28	101	55	4.8	11	0.00	0.00	0.00
23	5.7	8.8	14	44	40	101	53	3.4	66	0.00	0.00	0.00
24	4.9	e7.0	14	41	36	98	53	3.1	77	0.00	0.00	0.00
25	4.2	e7.2	15	39	39	98	51	3.2	44	0.00	0.00	0.00
26	3.5	8.3	15	35	44	99	61	1.8	37	0.00	0.00	0.00
27	3.0	8.6	15	e32	52	99	63	1.4	28	0.06	0.00	0.00
28	2.7	8.1	15	33	50	98	77	1.1	39	0.70	2.5	0.00
29	2.3	8.4	15	32	60	99	77	0.48	33	2.7	3.4	0.00
30	1.9	8.6	14	e28	---	96	71	0.17	30	2.9	1.9	0.00
31	1.5	---	14	31	---	90	---	0.08	---	2.6	1.2	---
TOTAL	191.4	221.3	381.8	951	1,053	5,098	2,829	788.53	567.25	605.27	13.34	0.70
MEAN	6.17	7.38	12.3	30.7	36.3	164	94.3	25.4	18.9	19.5	0.43	0.02
MAX	14	12	15	79	60	1,080	230	64	77	95	3.4	0.54
MIN	1.5	1.1	8.8	10	28	67	51	0.08	0.01	0.00	0.00	0.00
AC-FT	380	439	757	1,890	2,090	10,110	5,610	1,560	1,130	1,200	26	1.4

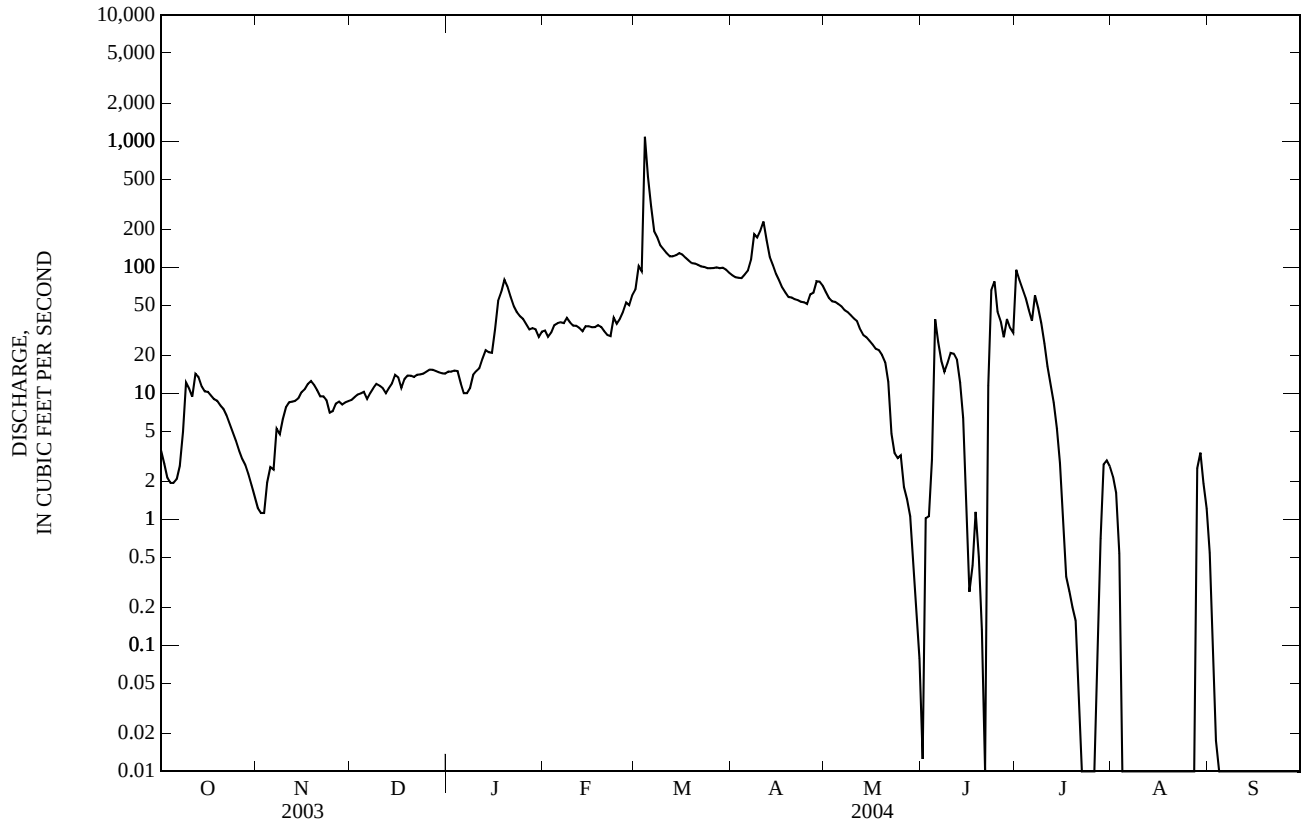
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2004, BY WATER YEAR (WY)

MEAN	74.4	32.1	38.2	47.1	56.6	57.4	103	249	227	62.8	37.8	49.5
MAX	919	196	148	199	263	344	1,292	1,389	1,602	575	539	424
(WY)	(1961)	(1987)	(1992)	(1960)	(1998)	(1998)	(1997)	(1957)	(1941)	(1953)	(1995)	(1995)
MIN	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1941)	(1940)	(1940)	(1940)	(1953)	(1971)	(1955)	(1953)	(1952)	(1963)	(1943)	(1939)

e Estimated

07300500 Salt Fork Red River at Mangum, OK—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1938 - 2004	
ANNUAL TOTAL	11,062.06		12,700.59			
ANNUAL MEAN	30.3		34.7		86.3	
HIGHEST ANNUAL MEAN					277	1941
LOWEST ANNUAL MEAN					12.3	1940
HIGHEST DAILY MEAN	1,320	Sep 11	1,080	Mar 4	22,600	May 28, 1978
LOWEST DAILY MEAN	0.00	at times	0.00	at times	0.00	most years
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 13	0.00	Aug 4	0.00	Aug 14, 1938
MAXIMUM PEAK FLOW			3,090	Mar 4	72,000	May 16, 1957
MAXIMUM PEAK STAGE			8.59	Mar 4	14.70	Jun 16, 1938
ANNUAL RUNOFF (AC-FT)	21,940		25,190		62,510	
10 PERCENT EXCEEDS	49		95		126	
50 PERCENT EXCEEDS	11		12		19	
90 PERCENT EXCEEDS	0.00		0.00		0.00	



07301200 McClellan Creek near McLean, TX

LOCATION.--Lat 35°19'45", long 100°36'32", Gray County, Hydrologic Unit 11120301, on left bank at downstream side of bridge on State Highway 273, 5.0 mi upstream from mouth.

DRAINAGE AREA.--759 mi^2 of which 299 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Oct. 1967 to Sept. 1980 (daily mean discharge), Oct. 1981 to Sept. 1992 (annual maximum), Oct. 1992 to current year (peak discharges greater than base discharge).

REVISED RECORDS.--WDR TX-75-1: 1968-70, 1972, 1973(M), 1974.

GAGE.--Water-stage recorder. Datum of gage is 2,545.99 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in Oct. 1967, at least 10% of contributing drainage area has been regulated.

AVERAGE DISCHARGE.--13 years (water years 1967-80), 20.1 ft^3/s, 14,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,600 ft^3/s May 29, 1975 (gage height, 14.55 ft). No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1912, 21 ft in May 1957, from information by local residents.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)
No peak greater than base discharge.			
June 22	0900	Undetermined	*5.44

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07301300 North Fork Red River near Shamrock, TX

LOCATION.--Lat 35°15'51", long 100°14'29", Wheeler County, Hydrologic Unit 11120302, on left bank at downstream side of bridge on U.S. Highway 83, 2.5 mi north of Shamrock.

DRAINAGE AREA.--1,082 mi^2 of which 379 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1951 to Sept. 1963 (miscellaneous measurements). Oct. 1964 to Sept. 1991, Oct. 1992 to Sept. 2000 (peak discharge greater than base discharge), Oct. 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,165.55 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges and discharges computed from affected unit values on Dec. 6, 10, 17, 29, and Jan. 5, and 6, which are fair. Since installation of gage in Oct. 1951, at least 10% of contributing drainage area has been regulated. Flow is affected at times by discharge from flood-detention pools of eleven floodwater retarding structures with combined detention capacity of 18,290 acre-feet. These structures control runoff from 165 mi^2. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.56	0.19	10	16	21	39	22	15	0.02	156	4.0	1.2
2	0.91	0.77	11	13	17	32	23	13	0.32	58	1.5	0.44
3	2.4	2.2	12	11	20	63	21	9.8	0.30	30	0.58	0.14
4	1.6	3.1	10	10	27	242	23	7.7	0.10	17	0.32	0.09
5	1.5	2.6	9.1	5.7	40	374	26	6.2	0.22	58	0.26	0.08
6	3.6	2.7	6.8	3.6	38	150	44	5.1	0.08	66	2.8	0.07
7	5.0	3.6	9.8	6.0	33	92	94	4.7	0.02	42	2.8	0.07
8	8.9	5.9	12	13	35	70	92	4.5	0.02	20	6.6	0.07
9	54	7.5	13	21	31	79	250	4.0	0.06	11	6.3	0.07
10	30	9.9	9.8	16	28	77	217	3.4	0.04	8.7	4.1	0.06
11	20	11	11	15	29	69	133	3.0	0.02	6.9	19	0.06
12	13	8.7	11	16	25	69	91	2.8	0.01	6.0	3.7	0.06
13	10	8.7	11	15	20	67	69	2.4	0.01	5.0	1.6	0.05
14	6.0	15	12	14	24	60	47	1.9	0.01	4.3	1.2	0.04
15	3.5	18	12	15	26	56	46	2.1	0.01	3.3	0.92	0.05
16	1.3	16	9.3	19	22	52	32	2.0	0.01	2.4	0.93	0.05
17	0.68	14	7.9	67	23	42	18	1.8	0.04	2.0	0.53	0.04
18	0.59	12	11	112	20	41	19	1.6	0.02	1.9	0.31	0.03
19	0.51	8.5	11	92	19	34	17	1.1	0.02	1.6	0.27	0.03
20	0.41	8.8	e12	44	16	32	12	0.45	13	1.0	0.29	0.04
21	0.30	8.3	e14	40	14	39	8.4	0.14	6.2	0.64	0.26	0.49
22	0.22	8.9	15	48	15	42	8.4	0.08	432	0.39	0.23	0.19
23	0.18	7.9	15	52	16	37	13	0.04	477	0.21	0.19	0.74
24	0.13	4.9	15	50	19	46	13	0.03	4.8	1.0	0.17	0.14
25	0.12	8.7	14	54	25	41	13	0.04	1.3	0.55	0.12	0.09
26	0.11	10	15	42	24	35	36	0.04	4.5	0.49	0.09	0.17
27	0.12	9.1	14	34	19	40	44	0.03	0.89	0.35	0.09	0.11
28	0.14	7.8	12	33	17	39	40	0.03	455	1.2	0.14	0.09
29	0.14	8.9	12	35	77	30	33	0.02	103	1.3	0.10	0.10
30	0.12	9.8	14	30	---	24	24	0.02	105	35	0.16	0.10
31	0.12	---	15	26	---	23	---	0.02	---	21	1.2	---
TOTAL	166.16	243.46	366.7	968.3	740	2,136	1,528.8	93.04	1,604.02	563.23	60.76	4.96
MEAN	5.36	8.12	11.8	31.2	25.5	68.9	51.0	3.00	53.5	18.2	1.96	0.17
MAX	54	18	15	112	77	374	250	15	477	156	19	1.2
MIN	0.11	0.19	6.8	3.6	14	23	8.4	0.02	0.01	0.21	0.09	0.03
AC-FT	330	483	727	1,920	1,470	4,240	3,030	185	3,180	1,120	121	9.8

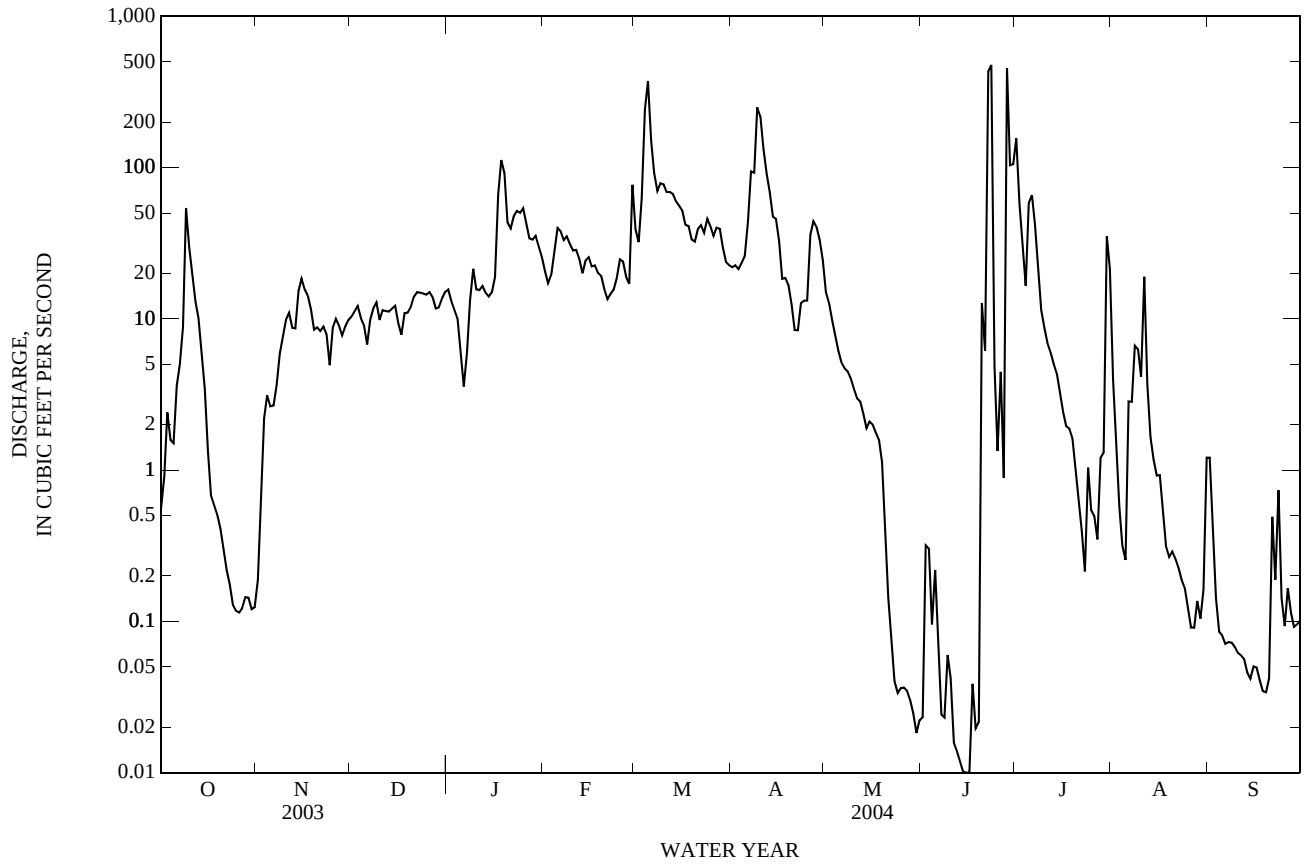
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2004h, BY WATER YEAR (WY)

MEAN	18.7	15.8	20.2	27.5	32.2	38.8	46.0	82.7	77.0	12.2	5.69	14.3
MAX	155	75.2	124	158	97.1	116	252	609	369	73.6	55.5	60.9
(WY)	(1986)	(1976)	(2001)	(1988)	(1988)	(1987)	(1973)	(1977)	(1965)	(1967)	(1969)	(1966)
MIN	0.00	0.00	0.00	0.00	0.48	0.06	0.00	0.36	0.00	0.00	0.00	0.00
(WY)	(1967)	(1967)	(1971)	(1971)	(1981)	(1972)	(1971)	(1984)	(1966)	(1969)	(1965)	(1970)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1965 - 2004h	
ANNUAL TOTAL	9,841.01		8,475.43			
ANNUAL MEAN	27.0		23.2		32.5	
HIGHEST ANNUAL MEAN					91.7	1977
LOWEST ANNUAL MEAN					3.68	1971
HIGHEST DAILY MEAN	1,390	May 16	477	Jun 23	14,200	Feb 2, 1996
LOWEST DAILY MEAN	0.00	Aug 16	0.01	Jun 12	0.00	Oct 1, 1964
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 16	0.02	Jun 10	0.00	Oct 1, 1964
MAXIMUM PEAK FLOW			3,700	Jun 23	25,600	Jun 3, 1995
MAXIMUM PEAK STAGE			3.50	Jun 23	8.49	Jun 3, 1995
ANNUAL RUNOFF (AC-FT)	19,520		16,810		23,560	
10 PERCENT EXCEEDS	50		52		61	
50 PERCENT EXCEEDS	14		8.9		2.0	
90 PERCENT EXCEEDS	0.12		0.07		0.00	

h See PERIOD OF RECORD paragraph.
e Estimated

07301300 North Fork Red River near Shamrock, TX—Continued



07301300 North Fork Red River near Shamrock, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1999 to current year.
BIOLOGICAL DATA: Oct. 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
OCT													
28...	1150	.14	8.7	98	7.4	2,970	16.4	970	1,100	348	60.3	5.15	3
MAR													
25...	0915	47	8.7	101	8.0	2,270	16.3	510	630	184d	42.2d	4.06d	4
MAY													
27...	1105	.02	7.3	90	7.8	2,730	20.2	850	1,000	321d	54.7d	5.44d	3
AUG													
12...	1130	3.6	7.2	95	7.9	3,010	24.8	770	870	261d	53.7d	5.98d	4

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
OCT													
28...	237	151	435d	.7	20.5	847d	2,040	<10	.32	.28	.15	.11	<.008
MAR													
25...	230d	127	447d	.6	19.6	376d	1,380	<10	.15	.14	<.04	.06	<.008
MAY													
27...	215d	178	397d	.7	24.5	670d	1,790	<10	.32	.32	.18	<.06	E.007n
AUG													
12...	291d	105	578d	.6	22.7	578d	1,850	<10	.18	.19	<.04	<.06	<.008

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
OCT								
28...	.18	.13	<.02	E.002n	E.002n	.39	260	340
MAR								
25...	--	--	<.02	E.003n	.006	.20	56k	110
MAY								
27...	.14	.15	<.02	<.004	.004	--	3,800	3,700
AUG								
12...	--	--	<.02	E.002n	.006	--	130	93

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

Value qualifier codes used in this table:
d -- Diluted sample: method hi range exceeded
k -- Counts outside acceptable range
n -- Below the LRL and above the LT-MDL

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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, 5.0 mi north of Kelton, 8.0 mi upstream from Texas-Oklahoma State line, and 8.5 mi northeast of Wheeler.

DRAINAGE AREA.--287 mi^2 of which 20 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Nov. 1961 to current year. Water-quality records: Chemical data: Oct. 1969 to June 1985.

GAGE.--Water-stage recorder. Datum of gage is 2,230 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those for the period of Oct. 1-Feb. 11, and Aug. 28-Sep. 30, which are fair. No known regulation. There are many small diversions upstream from the station for ranch use. No flow at times.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

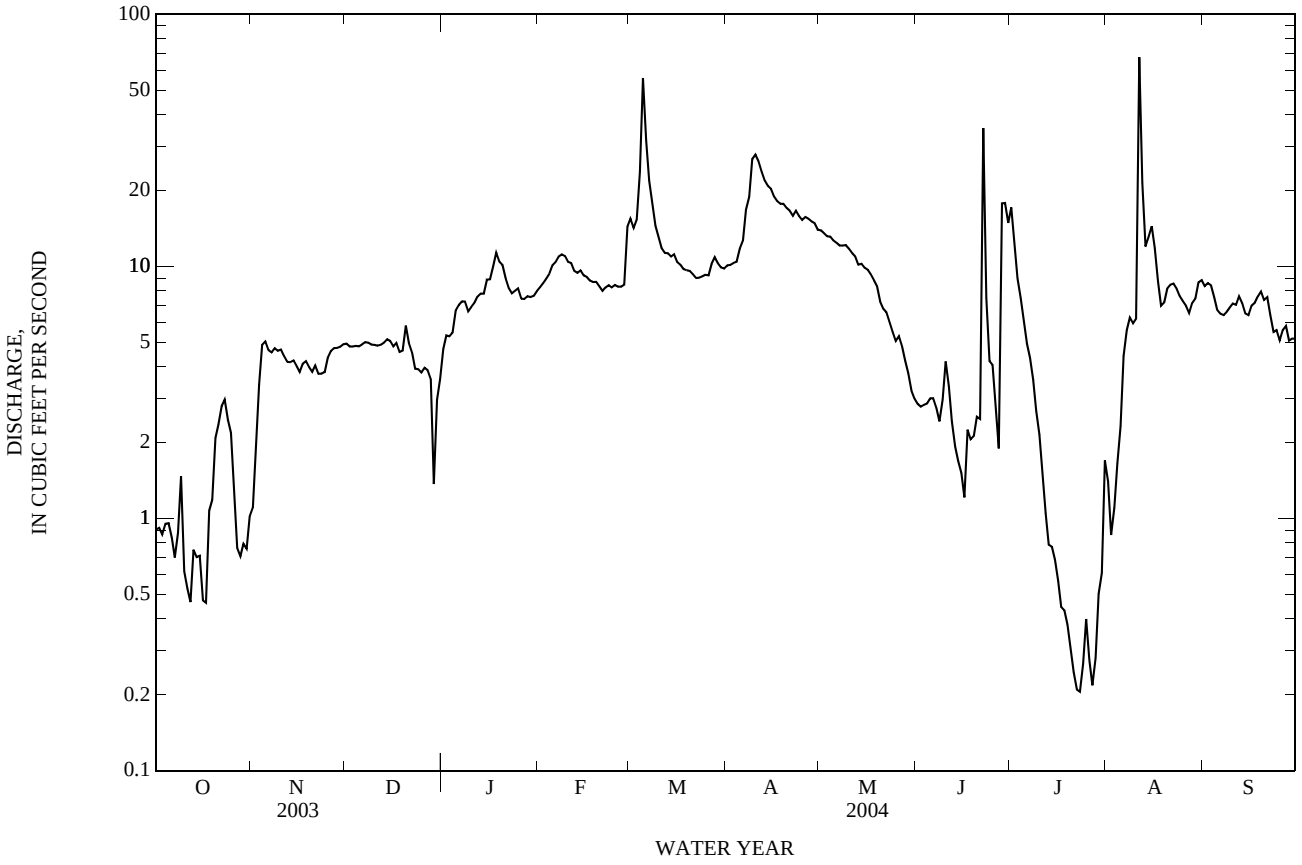
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.90	1.1	4.9	4.7	8.3	15	10	14	2.8	17	1.4	8.4
2	0.92	2.0	4.8	5.3	8.6	14	10	14	2.8	12	0.86	8.6
3	0.86	3.4	4.8	5.3	9.0	15	10	13	2.8	9.0	1.1	8.4
4	0.95	4.9	4.8	5.5	9.4	24	10	13	2.9	7.5	1.7	7.6
5	0.96	5.0	4.8	6.7	10	56	12	13	3.0	6.1	2.3	6.7
6	0.84	4.7	4.9	7.0	10	32	13	12	3.0	4.9	4.4	6.5
7	0.70	4.6	5.0	7.3	11	22	17	12	2.7	4.3	5.6	6.4
8	0.88	4.7	5.0	7.3	11	18	19	12	2.4	3.5	6.3	6.6
9	1.5	4.6	4.9	6.6	11	15	27	12	3.0	2.7	6.0	6.9
10	0.62	4.7	4.9	6.9	10	13	28	12	4.2	2.1	6.2	7.1
11	0.53	4.4	4.8	7.2	10	12	26	11	3.3	1.5	68	7.0
12	0.47	4.2	4.9	7.6	9.6	11	24	11	2.4	1.0	21	7.6
13	0.75	4.2	5.0	7.8	9.4	11	22	10	1.9	0.79	12	7.1
14	0.70	4.2	5.1	7.8	9.6	11	21	10	1.7	0.77	13	6.5
15	0.71	4.0	5.1	8.9	9.2	11	20	9.9	1.5	0.69	14	6.4
16	0.47	3.8	4.8	8.9	9.1	10	19	9.7	1.2	0.57	12	7.0
17	0.46	4.1	5.0	10	8.8	10	18	9.3	2.3	0.45	8.7	7.2
18	1.1	4.2	4.6	11	8.7	9.7	18	8.8	2.1	0.43	7.0	7.6
19	1.2	4.0	4.6	10	8.7	9.7	18	8.3	2.1	0.38	7.2	8.0
20	2.1	3.8	5.8	10	8.4	9.6	17	7.2	2.5	0.30	8.2	7.4
21	2.4	4.0	5.0	9.0	8.0	9.3	17	6.8	2.5	0.25	8.5	7.6
22	2.8	3.8	4.6	8.2	8.3	9.0	16	6.6	35	0.21	8.5	6.4
23	3.0	3.8	3.9	7.8	8.4	9.0	17	6.0	7.5	0.21	8.2	5.5
24	2.5	3.8	3.9	8.0	8.3	9.1	16	5.5	4.2	0.27	7.6	5.6
25	2.2	4.3	3.8	8.2	8.4	9.3	15	5.1	4.1	0.40	7.3	5.1
26	1.4	4.6	4.0	7.5	8.3	9.2	16	5.3	2.7	0.27	7.0	5.6
27	0.77	4.7	3.9	7.4	8.3	10	15	4.8	1.9	0.22	6.5	5.8
28	0.71	4.8	3.6	7.6	8.5	11	15	4.2	18	0.28	7.2	5.1
29	0.79	4.8	1.4	7.6	14	10	15	3.8	18	0.50	7.5	5.2
30	0.76	4.9	3.0	7.7	---	9.9	14	3.2	15	0.61	8.6	5.2
31	1.0	---	3.6	8.0	---	9.8	---	3.0	---	1.7	8.8	---
TOTAL	35.95	124.1	139.2	238.8	270.3	434.6	515	276.5	159.5	80.90	292.66	202.1
MEAN	1.16	4.14	4.49	7.70	9.32	14.0	17.2	8.92	5.32	2.61	9.44	6.74
MAX	3.0	5.0	5.8	11	14	56	28	14	35	17	68	8.6
MIN	0.46	1.1	1.4	4.7	8.0	9.0	10	3.0	1.2	0.21	0.86	5.1
AC-FT	71	246	276	474	536	862	1,020	548	316	160	580	401

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004, BY WATER YEAR (WY)

MEAN	8.40	10.4	12.1	13.4	16.1	18.6	21.8	25.2	22.0	5.87	5.10	6.91
MAX	42.1	34.5	27.1	27.6	30.5	42.2	100	196	86.3	32.3	42.7	40.9
(WY)	(1987)	(1975)	(1998)	(1998)	(2001)	(1998)	(1997)	(1977)	(1965)	(1967)	(1963)	(1988)
MIN	0.30	1.05	3.11	5.78	6.82	9.09	8.72	3.38	2.80	0.44	0.00	0.03
(WY)	(1985)	(1985)	(1984)	(1995)	(1995)	(1977)	(1971)	(1971)	(1966)	(1974)	(1964)	(1984)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004	
ANNUAL TOTAL	3,284.12		2,769.61			
ANNUAL MEAN	9.00		7.57		13.6	
HIGHEST ANNUAL MEAN					33.5	1997
LOWEST ANNUAL MEAN					4.89	1984
HIGHEST DAILY MEAN	53	May 16	68	Aug 11	1,820	May 21, 1977
LOWEST DAILY MEAN	0.06	Aug 28	0.21	Jul 22	0.00	Jul 29, 1964
ANNUAL SEVEN-DAY MINIMUM	0.07	Aug 22	0.26	Jul 21	0.00	Jul 29, 1964
MAXIMUM PEAK FLOW			240	Aug 11	2,890	May 20, 1977
MAXIMUM PEAK STAGE			10.64	Aug 11	15.73	May 20, 1977
ANNUAL RUNOFF (AC-FT)	6,510		5,490		9,890	
10 PERCENT EXCEEDS	19		15		23	
50 PERCENT EXCEEDS	6.8		6.6		10	
90 PERCENT EXCEEDS	0.46		0.91		0.82	

07301410 Sweetwater Creek near Kelton, TX—Continued



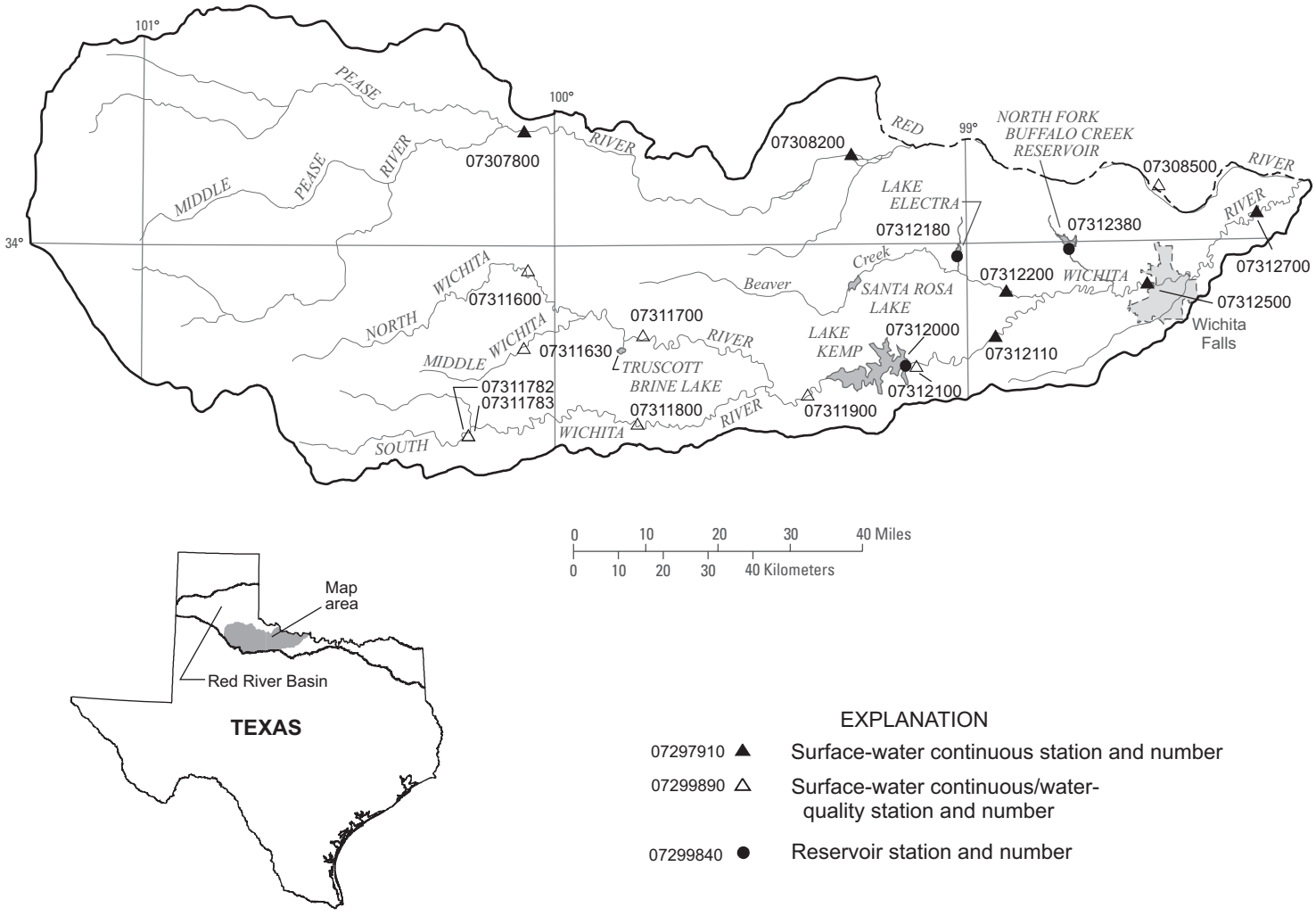


Figure 5.--Map showing location of gaging stations in the second section of the Red River Basin

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 State Highway 207, 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 mi^2 of which 559 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Dec. 1959 to Sept. 1962, Oct. 1967 to current year. Water-quality records: Chemical data: July 1968 to Sept. 1982, Oct. 1994 to Sept. 1997. Pesticide data: Oct. 1994 to Sept. 1997. Specific conductance: Oct. 1994 to Sept. 1997. Water temperature: Oct. 1994 to Sept. 1997.

GAGE.--Water-stage recorder. Datum of gage is 1,492.98 ft above NGVD of 1929. Prior to Dec. 21, 1959, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation. There are three small diversions for irrigation above station. Flow is affected at times by discharge from the flood-detention pools of six floodwater-retarding structures with a combined detention capacity of 1,360 acre-ft. These structures control runoff from 6.27 mi^2 in the Kent Creek drainage basin. No flow at times.

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.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	3.6	4.4	6.0	6.7	44	12	62	4.8	630	18	33
2	3.9	3.9	4.8	6.4	6.4	35	14	35	6.1	305	14	17
3	1.8	3.9	5.0	6.4	6.2	38	21	23	12	212	10	13
4	2.2	3.7	4.9	6.2	16	827	39	18	9.9	114	19	12
5	2.4	3.5	4.9	6.9	15	695	26	16	55	67	38	10
6	2.6	4.1	4.9	7.2	12	312	50	14	40	44	5.5	9.3
7	2.8	20	5.0	7.6	9.4	163	53	12	295	28	4.1	8.3
8	10	13	5.1	7.5	12	103	48	10	108	17	171	7.4
9	6.3	9.0	4.7	7.8	11	109	97	8.8	565	10	64	7.0
10	4.3	8.0	4.7	8.2	9.4	85	170	8.7	2,020	7.8	27	5.8
11	3.5	7.2	4.9	8.3	8.7	56	116	8.5	460	7.1	19	5.2
12	3.4	6.5	4.9	8.2	8.7	49	79	8.0	182	5.9	25	4.2
13	3.3	5.9	4.8	8.4	7.8	57	59	7.8	80	4.9	36	3.5
14	3.3	6.6	5.2	8.6	10	59	45	7.8	56	4.6	36	2.9
15	3.5	6.7	4.7	9.3	10	56	36	7.9	41	4.3	48	2.2
16	3.4	6.2	4.1	19	9.0	44	29	7.9	30	3.7	41	1.9
17	3.4	6.8	3.7	40	7.9	37	24	7.7	27	3.4	31	1.3
18	3.2	5.9	3.5	46	7.2	31	21	7.1	38	3.8	24	1.2
19	3.3	4.9	3.3	24	6.6	25	21	6.5	28	3.3	16	1.2
20	3.4	3.5	3.4	16	5.8	19	20	6.1	21	3.1	155	1.2
21	3.4	3.5	3.8	13	5.7	17	17	6.3	15	4.1	52	1.3
22	3.4	4.1	4.0	10	6.3	16	16	6.3	119	4.5	27	1.2
23	3.3	3.7	4.1	8.9	12	14	16	6.1	94	4.2	100	1.4
24	3.1	4.1	4.2	8.4	18	14	16	5.9	44	4.4	93	4.7
25	2.9	4.5	4.3	8.0	31	14	23	5.8	34	7.0	35	12
26	2.9	4.5	5.0	6.8	21	14	62	6.3	32	11	18	7.0
27	3.3	4.3	5.0	6.7	16	13	34	6.4	33	11	11	4.8
28	3.5	4.3	4.9	6.7	17	12	20	6.3	142	16	e8.5	3.8
29	3.4	4.3	5.2	6.5	50	12	21	5.7	151	70	e7.5	3.6
30	3.3	4.3	5.4	6.3	---	12	67	5.1	801	48	15	3.8
31	3.3	---	5.9	6.8	---	12	---	5.0	---	26	167	---
TOTAL	113.0	174.5	142.7	346.1	362.8	2,994	1,272	348.0	5,543.8	1,685.1	1,335.6	191.2
MEAN	3.65	5.82	4.60	11.2	12.5	96.6	42.4	11.2	185	54.4	43.1	6.37
MAX	10	20	5.9	46	50	827	170	62	2,020	630	171	33
MIN	1.8	3.5	3.3	6.0	5.7	12	12	5.0	4.8	3.1	4.1	1.2
AC-FT	224	346	283	686	720	5,940	2,520	690	11,000	3,340	2,650	379
CFSM	0.00	0.00	0.00	0.01	0.01	0.04	0.02	0.01	0.08	0.02	0.02	0.00
IN.	0.00	0.00	0.00	0.01	0.01	0.05	0.02	0.01	0.09	0.03	0.02	0.00

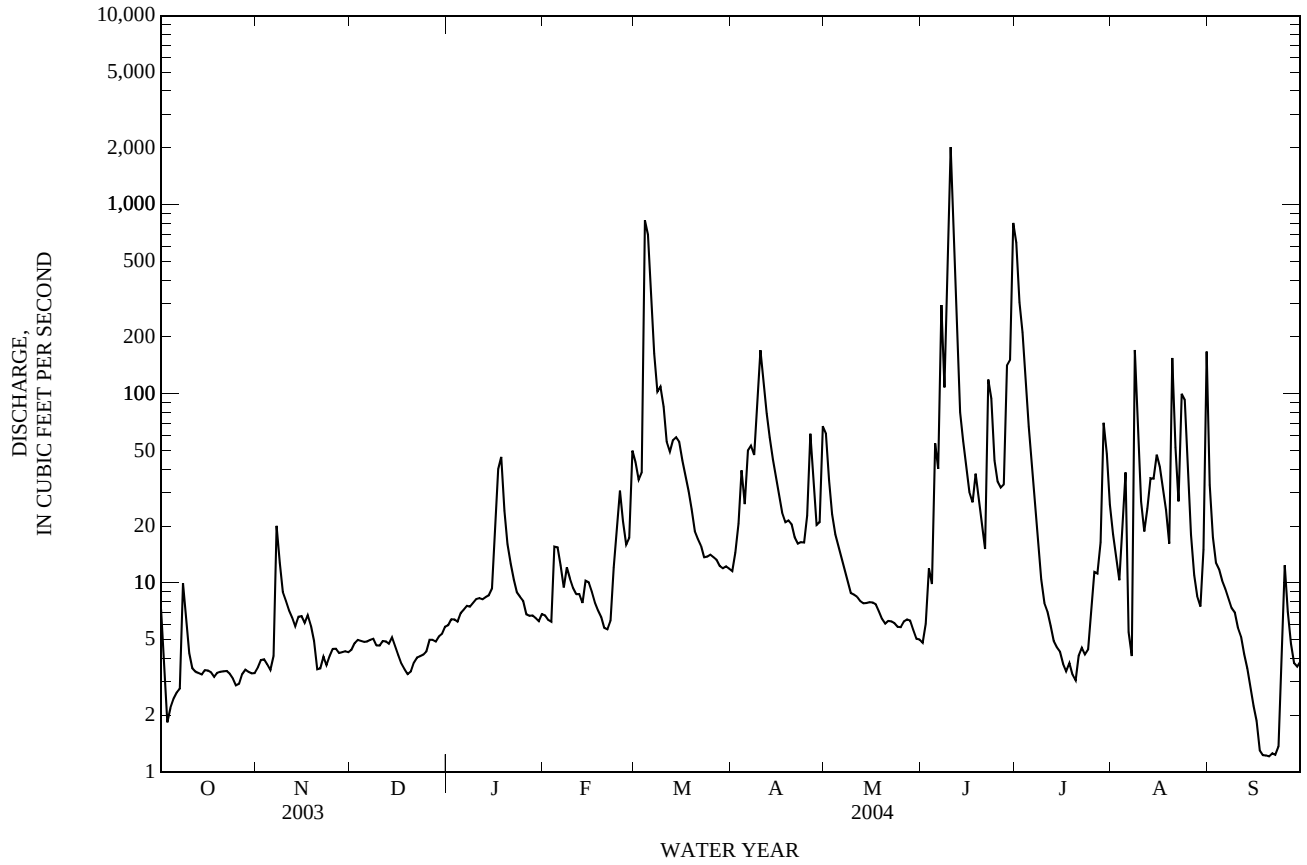
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004h, BY WATER YEAR (WY)

MEAN	87.1	22.0	19.6	19.8	24.7	34.4	55.7	85.9	197	49.1	59.7	79.5
MAX	895	154	132	158	170	181	750	424	858	248	723	683
(WY)	(1984)	(1987)	(1992)	(1992)	(1992)	(1973)	(1997)	(1997)	(1995)	(1961)	(1995)	(1995)
MIN	1.68	3.04	3.74	2.70	2.83	2.78	2.87	3.67	2.47	0.28	0.13	0.58
(WY)	(1981)	(1978)	(1979)	(1971)	(1971)	(1971)	(1960)	(1961)	(2001)	(1980)	(1980)	(2000)

07307800 Pease River near Childress, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004h	
ANNUAL TOTAL	6,573.30		14,508.8			
ANNUAL MEAN	18.0		39.6		60.7	
HIGHEST ANNUAL MEAN					204	1995
LOWEST ANNUAL MEAN					15.8	1994
HIGHEST DAILY MEAN	459	Jun 24	2,020	Jun 10	14,800	Oct 20, 1983
LOWEST DAILY MEAN	0.03	Aug 26	1.2	Sep 18	0.00	Aug 10, 1969
ANNUAL SEVEN-DAY MINIMUM	0.10	Aug 22	1.3	Sep 17	0.00	Aug 10, 1969
MAXIMUM PEAK FLOW			6,440	Jun 10	28,500	Jun 5, 1995
MAXIMUM PEAK STAGE			11.29	Jun 10	17.12	Jun 5, 1995
ANNUAL RUNOFF (AC-FT)	13,040		28,780		43,980	
ANNUAL RUNOFF (CFSM)	0.008		0.018		0.028	
ANNUAL RUNOFF (INCHES)	0.11		0.25		0.38	
10 PERCENT EXCEEDS	20		63		89	
50 PERCENT EXCEEDS	6.3		8.4		9.0	
90 PERCENT EXCEEDS	0.94		3.4		1.7	

h See PERIOD OF RECORD paragraph.
e Estimated



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 87, 1.0 mi west of Vernon, and 12.0 mi upstream from mouth.

DRAINAGE AREA.--3,488 mi^2 of which 559 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Dec. 1959 to Sept. 1982, Oct. 1982 to Sept. 1987 (annual maximum), Mar. 1992 to current year. Water-quality records: Chemical data: Nov. 1967 to Sept. 1981. Specific conductance: Oct. 1998 to Sept. 1999. Water Temperature: Oct. 1998 to Sept. 1999.

GAGE.--Water-stage recorder. Datum of gage is 1,179.04 ft above NGVD of 1929. From Nov. 28, 1959 to Mar. 21, 2002, at site 2.0 mi downstream at different datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Flow is affected at times by discharge from the flood-detention pools of six flood-retarding structures with a combined detention capacity of 1,360 acre-ft. These structures control runoff from 6.27 mi^2 in the Kent Creek drainage basin. There are four small diversions for irrigation above station. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 24 ft in 1891. The flood in Sept. 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.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	7.2	53	24	137	3.5	228	0.84	19
2	0.00	0.00	0.00	0.00	6.4	52	24	70	6.2	980	3.8	29
3	0.00	0.00	0.00	0.00	8.0	55	23	83	32	555	2.4	45
4	0.00	0.00	0.00	0.00	7.0	221	23	67	12	324	0.67	24
5	0.00	0.00	0.00	0.00	12	2,550	24	52	46	229	0.49	16
6	0.00	0.00	0.00	0.00	17	830	37	42	59	150	0.21	48
7	0.00	0.00	0.00	0.00	15	586	61	36	65	104	4.6	20
8	0.00	0.00	0.00	0.00	18	350	56	31	63	73	9.8	12
9	0.00	0.00	0.00	0.00	14	239	66	29	126	53	46	7.8
10	0.00	0.00	0.00	0.00	12	179	67	26	1,040	39	44	5.3
11	0.00	0.00	0.00	0.00	12	140	80	23	987	29	62	3.3
12	0.00	0.00	0.00	0.00	8.2	119	126	21	838	21	25	2.0
13	0.00	0.00	0.00	0.00	7.7	110	112	32	425	16	20	1.2
14	0.00	0.00	0.00	0.00	7.7	103	84	27	270	12	15	0.38
15	0.00	0.00	0.00	0.00	9.4	93	66	18	195	9.2	15	0.15
16	0.00	0.00	0.00	0.28	10	84	57	18	154	6.1	16	0.07
17	0.00	0.00	0.00	0.97	8.9	84	49	17	125	3.9	16	0.04
18	0.00	0.00	0.00	31	7.8	75	43	15	102	2.3	24	0.00
19	0.00	0.00	0.00	37	9.2	65	41	13	255	1.4	38	0.00
20	0.00	0.00	0.00	42	7.8	55	40	12	166	0.68	79	0.00
21	0.00	0.00	0.00	27	7.0	47	36	11	95	0.25	289	0.00
22	0.00	0.00	0.00	16	6.2	42	31	10	135	0.12	166	0.00
23	0.00	0.00	0.00	11	7.5	38	30	9.0	124	0.08	92	0.00
24	0.00	0.00	0.00	8.3	9.6	35	35	8.1	97	1.0	56	0.00
25	0.00	0.00	0.00	8.2	19	34	39	7.0	114	0.18	45	0.00
26	0.00	0.00	0.00	6.6	25	32	186	7.9	79	0.23	73	0.00
27	0.00	0.00	0.00	7.2	25	32	56	7.7	58	0.09	48	0.00
28	0.00	0.00	0.00	7.5	26	28	55	7.2	166	2.7	34	0.00
29	0.00	0.00	0.00	6.7	42	27	52	6.3	243	8.8	85	0.00
30	0.00	0.00	0.00	6.7	---	25	353	4.8	100	3.0	61	0.31
31	0.00	---	0.00	6.4	---	24	---	4.0	---	2.3	27	---
TOTAL	0.00	0.00	0.00	222.85	372.6	6,407	1,976	852.0	6,180.7	2,855.33	1,398.81	233.55
MEAN	0.00	0.00	0.00	7.19	12.8	207	65.9	27.5	206	92.1	45.1	7.79
MAX	0.00	0.00	0.00	42	42	2,550	353	137	1,040	980	289	48
MIN	0.00	0.00	0.00	0.00	6.2	24	23	4.0	3.5	0.08	0.21	0.00
AC-FT	0.00	0.00	0.00	442	739	12,710	3,920	1,690	12,260	5,660	2,770	463

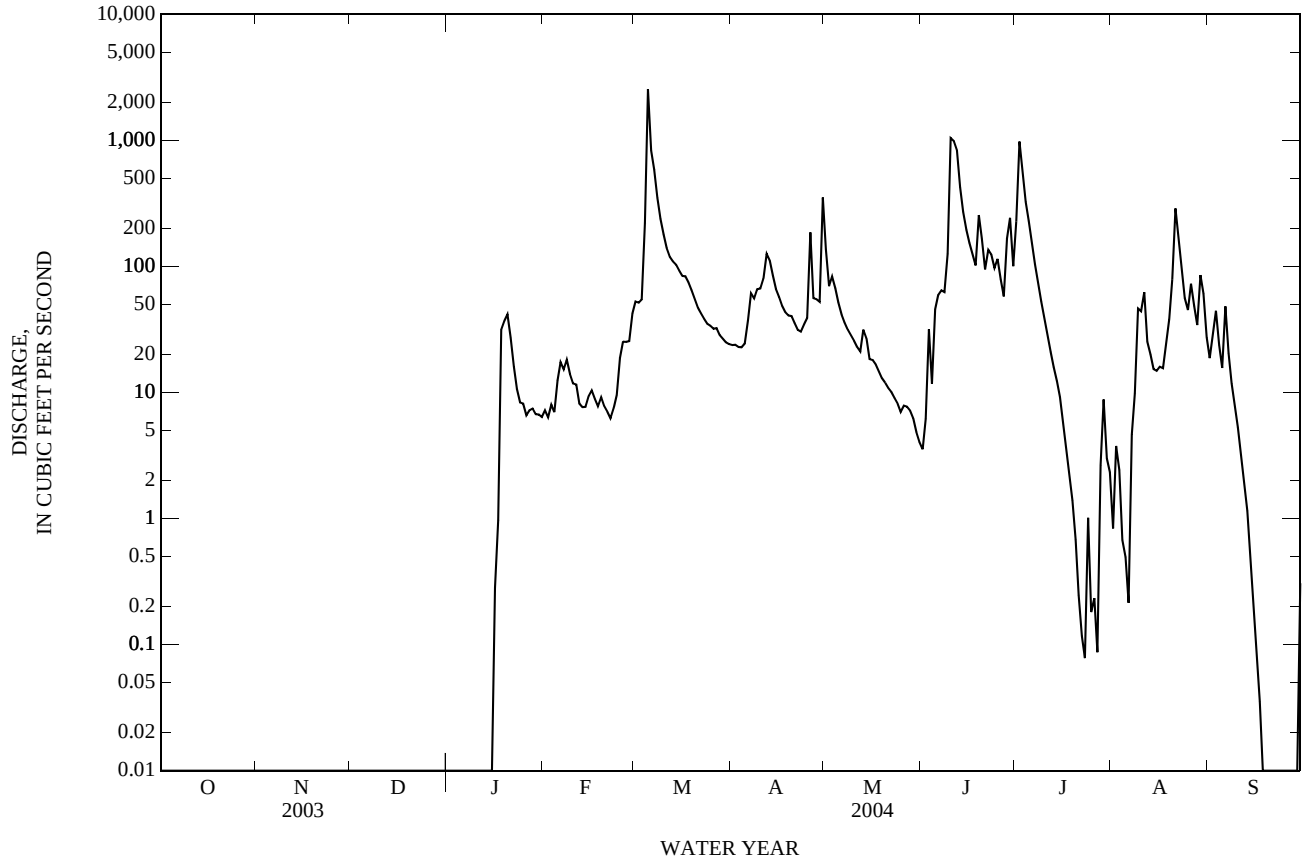
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004h, BY WATER YEAR (WY)

MEAN	90.4	52.0	26.7	24.5	27.8	50.5	64.5	178	307	122	101	165
MAX	1,057	427	163	138	172	269	359	777	2,196	1,185	1,657	895
(WY)	(1961)	(2001)	(1960)	(2001)	(1993)	(1973)	(1973)	(1977)	(1995)	(1975)	(1995)	(1965)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.12	6.86	0.00	0.00	0.20
(WY)	(1964)	(1971)	(1971)	(1971)	(1971)	(1971)	(1971)	(1961)	(1998)	(1964)	(1980)	(1980)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004h	
ANNUAL TOTAL	10,952.99		20,498.84			
ANNUAL MEAN	30.0		56.0		98.6	
HIGHEST ANNUAL MEAN					441	1995
LOWEST ANNUAL MEAN					7.23	2000
HIGHEST DAILY MEAN	1,480	Jun 6	2,550	Mar 5	20,400	Jun 5, 1995
LOWEST DAILY MEAN	0.00	Jul 28	0.00	Oct 1	0.00	Aug 7, 1960
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 28	0.00	Oct 1	0.00	Aug 7, 1960
MAXIMUM PEAK FLOW			4,130	Mar 5	40,500	Oct 2, 1983
MAXIMUM PEAK STAGE			9.83	Jun 10	20.15	Oct 2, 1983
ANNUAL RUNOFF (AC-FT)	21,730		40,660		71,440	
10 PERCENT EXCEEDS	54		116		141	
50 PERCENT EXCEEDS	13		8.6		9.7	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

h See PERIOD OF RECORD paragraph.

07308200 Pease River near Vernon, TX—Continued



07308500 Red River near Burkburnett, TX

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

DRAINAGE AREA.--20,570 mi^2 of which 5,936 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 952.57 ft above NGVD 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. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. There are many small diversions upstream from station for irrigation. No flow at times.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	17	34	34	98	254	e40	1,570	56	4,760	e190	604
2	69	17	31	34	108	232	39	1,340	55	2,230	e160	372
3	66	22	35	33	102	298	51	755	117	2,960	e139	227
4	66	22	38	35	110	830	43	909	172	6,240	e96	163
5	63	20	38	35	122	4,680	37	511	332	5,800	90	369
6	60	24	37	22	123	21,300	663	404	622	2,170	96	292
7	57	e50	33	19	122	25,300	799	384	655	1,630	109	179
8	56	64	36	20	120	7,550	347	381	709	2,110	107	127
9	54	76	33	20	120	3,090	183	346	414	6,810	90	100
10	52	e51	37	20	117	2,180	147	323	326	2,000	83	79
11	47	e92	37	21	128	1,640	181	305	920	1,040	115	59
12	43	e74	39	22	132	1,280	667	305	4,640	600	160	45
13	46	e51	42	22	137	1,040	1,020	305	2,510	446	171	32
14	40	e51	40	22	145	840	562	336	1,100	344	113	23
15	33	e52	38	22	152	696	363	357	597	309	206	17
16	22	48	40	25	157	567	257	274	392	264	342	16
17	27	e47	40	50	159	438	177	235	278	247	286	13
18	25	e48	38	54	155	349	119	210	246	e220	123	12
19	25	e48	38	340	136	280	99	189	237	194	93	8.0
20	31	e49	35	629	119	243	88	175	264	180	136	5.8
21	31	51	33	705	108	191	76	157	397	155	195	4.0
22	31	46	33	417	101	145	62	139	883	131	289	2.9
23	31	45	34	297	143	108	56	118	739	114	702	3.3
24	28	44	33	235	188	84	68	99	1,970	115	455	3.5
25	26	38	32	202	184	77	97	86	2,560	118	263	e10
26	27	40	29	158	176	70	83	78	2,720	140	179	e65
27	24	37	32	136	166	62	182	77	1,110	126	141	90
28	22	37	33	123	169	66	876	75	683	267	393	92
29	26	35	33	106	205	61	379	65	537	326	239	76
30	20	35	31	98	---	57	723	66	3,730	268	291	49
31	18	---	34	96	---	e49	---	61	---	228	1,240	---
TOTAL	1,242	1,331	1,096	4,052	4,002	74,057	8,484	10,635	29,971	42,542	7,292	3,138.5
MEAN	40.1	44.4	35.4	131	138	2,389	283	343	999	1,372	235	105
MAX	76	92	42	705	205	25,300	1,020	1,570	4,640	6,810	1,240	604
MIN	18	17	29	19	98	49	37	61	55	114	83	2.9
AC-FT	2,460	2,640	2,170	8,040	7,940	146,900	16,830	21,090	59,450	84,380	14,460	6,230

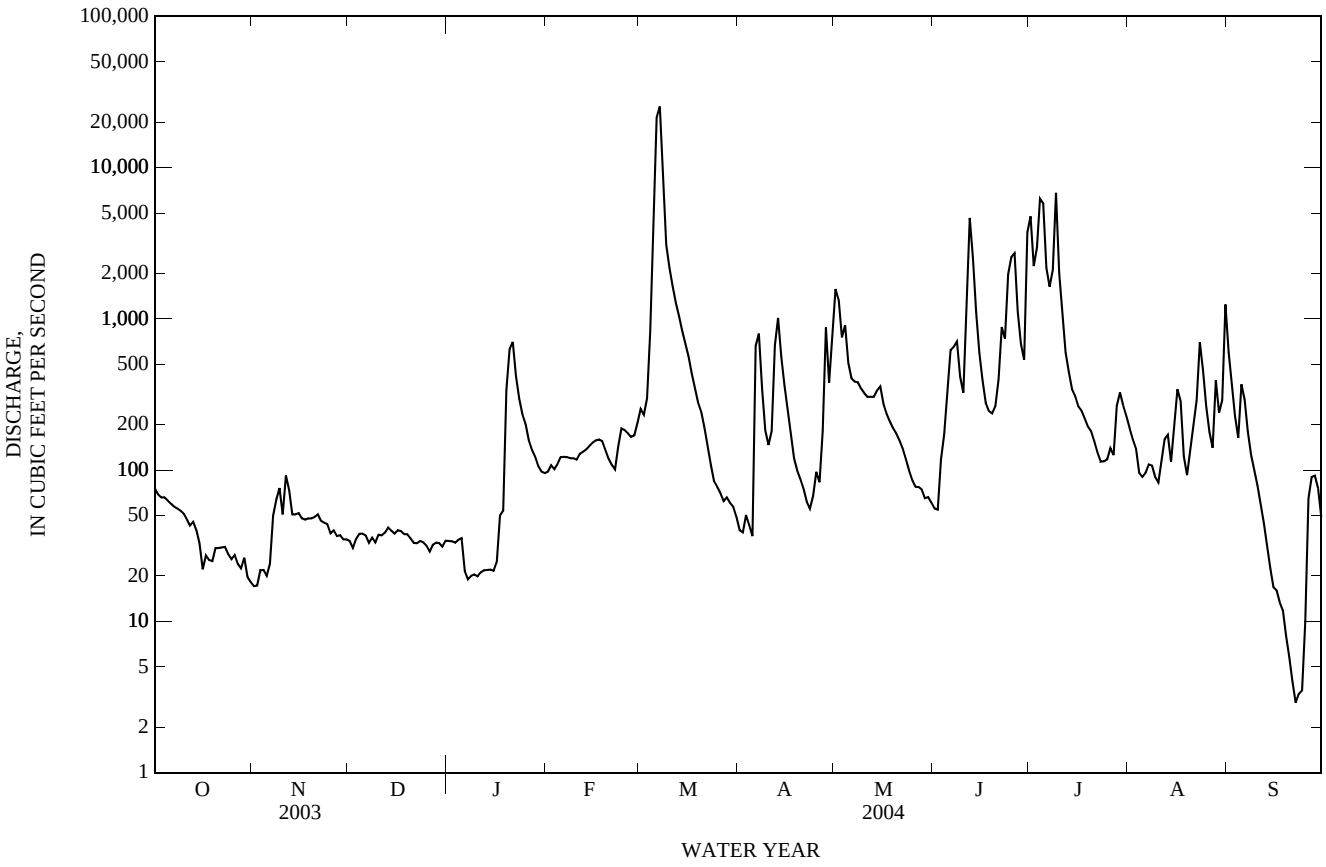
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004, BY WATER YEAR (WY)

MEAN	1,425	671	558	489	703	985	1,073	2,271	3,256	882	820	1,258
MAX	14,900	4,960	4,435	2,293	4,986	10,050	13,040	12,470	24,780	5,947	10,540	6,381
(WY)	(1987)	(1987)	(1992)	(1998)	(1998)	(1998)	(1997)	(1977)	(1995)	(1975)	(1995)	(1996)
MIN	21.9	0.96	2.98	5.53	8.37	7.97	0.15	11.4	148	0.06	1.29	29.9
(WY)	(1971)	(1971)	(1971)	(1971)	(1971)	(1971)	(1971)	(1971)	(1970)	(1970)	(1964)	(2002)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004	
ANNUAL TOTAL	122,481.8		187,842.5			
ANNUAL MEAN	336		513		1,202	
HIGHEST ANNUAL MEAN					4,424	1987
LOWEST ANNUAL MEAN					178	1964
HIGHEST DAILY MEAN	9,980	Jun 7	25,300	Mar 7	144,000	Jun 6, 1995
LOWEST DAILY MEAN	7.1	Aug 25	2.9	Sep 22	0.00	Jul 19, 1964
ANNUAL SEVEN-DAY MINIMUM	8.1	Aug 23	5.4	Sep 19	0.00	Jul 19, 1964
MAXIMUM PEAK FLOW			30,300	Mar 7	174,000	Jun 6, 1995
MAXIMUM PEAK STAGE			8.48	Mar 7	16.90	Oct 21, 1983
ANNUAL RUNOFF (AC-FT)	242,900		372,600		870,800	
10 PERCENT EXCEEDS	823		851		2,400	
50 PERCENT EXCEEDS	114		114		299	
90 PERCENT EXCEEDS	28		26		51	

e Estimated

07308500 Red River near Burkburnett, TX—Continued



07308500 Red River near Burkburnett, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: May 1968 to current year.
BIOCHEMICAL DATA: Oct. 1974 to Aug. 1994.
PESTICIDE DATA: Oct. 1973 to Sept. 1982, Oct. 1996 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1968 to Sept. 1981, Oct. 1994 to Jan. 2003, Dec. 2003 to current year.
WATER TEMPERATURE: July 1968 to Sept. 1981, Oct. 1994 to May 2003, Nov. 2003 to current year.

INSTRUMENTATION.--Water-quality monitor Dec. 1968 to Sept. 1981 and Oct. 1994 to May 2003, Nov. 2003 to current year.

REMARKS.--Records fair. Interruptions in the record were due to malfunction of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous years using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. New regression equations were developed based on data from water years 1995 to 2004. The standard error of estimate for dissolved solids is 3%, chloride is 7%, sulfate is 15% and for hardness is 11%. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 17,400 microsiemens/cm, July 30, 1972; minimum, 440 microsiemens/cm, Apr. 13, 2002.
WATER TEMPERATURE: Maximum, 38.0°C, July 24, 2001; minimum, 0.0°C, on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 15,100 microsiemens/cm, Apr 13; minimum, 933 microsiemens/cm, July 8.
WATER TEMPERATURE: Maximum, 35.1°C, Aug 10; minimum, 0.0°C, Feb 14.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
OCT													
23...	1340	32	9.3	111	8.1	10,200	22.5	1,500	1,400	397d	135d	12.7d	19
NOV													
19...	1605	48	10.4	109	8.1	9,570	16.6	1,600	1,500	421d	145d	10.4d	18
DEC													
11...	1125	37	13.4	105	7.9	10,200	3.7	1,700	1,600	441d	152d	11.2d	18
JAN													
13...	1230	21	11.8	114	8.2	9,780	12.7	1,700	1,600	434d	147d	9.79d	16
FEB													
03...	1320	100	13.4	111	8.2	9,810	6.1	1,600	1,500	443d	130d	11.4d	18
MAR													
31...	1015	41	10.2	104	7.9	8,880	15.4	1,600	1,500	420d	135d	11.8d	16
APR													
26...	1115	83	9.1	104	7.9	7,440	18.9	1,300	1,200	332d	105d	8.86d	14
MAY													
07...	1235	374	8.6	107	8.0	7,390	23.9	1,200	1,100	331d	96.3d	11.2d	15
JUN													
23...	1200	657	7.3	94	7.9	12,400	24.5	1,500	1,400	444d	87.2d	14.1d	24
JUL													
13...	1050	423	7.2	96	8.2	6,380	27.1	860	760	242d	62.0d	10.8d	15
AUG													
20...	1110	130	7.8	95	7.9	7,010	22.8	1,100	1,000	278d	97.1d	10.8d	15
SEP													
07...	1005	195	8.2	95	7.9	5,470	20.5	920	830	273d	58.9d	10.2d	11

07308500 Red River near Burkburnett, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium, water, fltrd, mg/L (00930)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
OCT													
23...	1680d	111	2790d	.4	7.3	1220d	6,310	19	.60	E.02n	--	<.06	<.008
NOV													
19...	1680d	123	2600d	.4	4.8	1210d	6,140	24	.68	.06	--	.24	E.006n
DEC													
11...	1700d	129	2700d	.5	3.4	1300d	6,380	<10	.52	.08	.37	.38	.015
JAN													
13...	1510d	139	2630d	.4	.6r	1300d	6,110	12	.69	<.04	.32	.34	.017
FEB													
03...	1650d	159	2640d	.5	6.9	1270d	6,250	12	.52	.06	.86	.87	.015
MAR													
31...	1440d	100	2230d	.4	5.6	1260d	5,570	57	.91	<.04	--	<.06	<.008
APR													
26...	1120d	104	1850d	.4	5.2	1010d	4,490	140d	.99	<.04	--	<.06	<.008
MAY													
07...	1210d	107	1990d	.4	6.3	960d	4,670	146d	.94	<.04	--	<.06	<.008
JUN													
23...	2150d	84	3480d	.5	8.3	1290d	7,520	1360dr	3.0	.04	--	.43	E.007n
JUL													
13...	1010d	100	1650d	.4	8.3	724d	3,770	244d	1.1	<.04	--	<.06	<.008
AUG													
20...	1110d	92	1740d	.4	5.2	889d	4,180	123d	1.2	<.04	--	<.06	<.008
SEP													
07...	749d	91	1270d	.4	7.0	815d	3,240	450d	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L (00660)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)
OCT													
23...	--	--	<.02	<.04	E.03n	--	1.8d	6dc	103d	110d	<.20d	<.20d	<1.6d
NOV													
19...	.62	--	<.02	<.04	E.03n	.92	1.2d	<2	81d	89d	<.16d	<.16d	<.8
DEC													
11...	.44	--	<.02	<.04	E.03n	.90	.3	<2	13	75d	<.04	<.20d	<1.6d
JAN													
13...	--	--	<.02	<.04	E.03n	1.0	1.9d	<2	58d	65d	<.16d	<.16d	<.8
FEB													
03...	.46	.113	.04	.05	.07	1.4	2.8d	3	64d	74d	<.16d	<.16d	<.8
MAR													
31...	--	--	<.02	<.04	.11	--	1.2d	4	99d	110d	<.16d	<.16d	<.8
APR													
26...	--	--	<.02	<.04	.16	--	1.6d	3	91d	119d	<.12d	E.08nd	<.8
MAY													
07...	--	--	<.02	<.04	.18	--	2.1d	3	118d	156d	<.12d	<.12d	<.8
JUN													
23...	3.0	--	<.02	E.02n	1.46	3.4	3.0d	12dr	116d	460d	<.20d	.25d	<1.6d
JUL													
13...	--	--	<.02	<.04	.34	--	5.2d	5	211d	277d	<.12d	<.12d	<.8
AUG													
20...	--	--	<.02	<.04	.20	--	3.1d	5	125d	168d	<.08d	<.12d	<.8
SEP													
07...	--	--	--	--	--	--	3.2d	8	147d	215d	<.12d	E.10nd	<.8

07308500 Red River near Burkburnett, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recoverable, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recoverable, ug/L (01067)
OCT 23...	<1.6d	6.3d	13.2d	<64d	290d	<.40d	E.17nd	18.5d	47d	E.01n	.02	9.08d	14.5d
NOV 19...	E.6n	6.4d	16.3d	<64d	280	<.32d	.24d	13.1d	41d	<.02	<.02	1.58d	17.3d
DEC 11...	<1.6d	1.1	18.8d	<32d	120d	<.40d	E.26nd	5.6	36d	<.02	<.02	1.53	20.9d
JAN 13...	<.8	6.3d	24.4d	<64d	50d	<.32d	<.24d	26.9d	39d	<.02	<.02	10.0d	17.8d
FEB 03...	<.8	6.0d	12.6d	<64d	260d	E.28nd	E.14nd	14.0d	29d	<.02	<.02	7.47d	11.7d
MAR 31...	E.6n	6.5d	11.2d	<32d	610	<.32d	.58d	12.9d	46d	<.02	<.02	6.09d	10.7d
APR 26...	1.7	5.7d	10.3d	<32d	1,620	<.24d	1.75d	15.6d	106d	<.02	<.02	5.69d	16.7d
MAY 07...	1.9	5.8d	10.3d	<32d	2260d	<.24d	1.97d	3.5d	98d	<.02	<.018	2.81d	11.5d
JUN 23...	29.7d	12.2d	47.5d	<64d	18400d	.70d	26.9dr	<1.0d	1310d	<.02	.02	11.0d	55.9d
JUL 13...	5.6	6.4d	14.1d	<32d	3620d	<.24d	3.44d	.6d	167d	<.02	<.02	7.53d	14.1d
AUG 20...	2.2	4.7d	11.0d	<32d	1,560	E.14nd	1.59d	15.8d	165d	<.02	<.02	6.62d	16.6d
SEP 07...	10.1	11.0d	25.6d	<19d	7380d	.26d	5.90d	.7d	227d	<.02	<.02	4.76d	21.6d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recoverable, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha-Endosulfan, water, unfltrd ug/L (34361)	alpha-HCH, water, unfltrd ug/L (39337)	alpha-HCH-d6, surrog, Sch1608 water, unfltrd pct rcv (99778)	Aroclor 1016 + 1242, water, unfltrd ug/L (81648)	Aroclor 1221, water, unfltrd ug/L (39488)	Aroclor 1232, water, unfltrd ug/L (39492)
OCT 23...	3.8d	2.6d	<1.0d	<.80d	3.3d	E5nd	--	--	--	--	--	--	--
NOV 19...	4	4	<.8d	<.64d	4.8d	E8nd	--	--	--	--	--	--	--
DEC 11...	7	5	<.2	<.80d	.8	11d	--	--	--	--	--	--	--
JAN 13...	6	7	<.8d	<.64d	4.3d	11d	--	--	--	--	--	--	--
FEB 03...	6	5	E.6nd	<.64d	<2.4d	8d	--	--	--	--	--	--	--
MAR 31...	5	6	<.8d	<.64d	4.5d	8d	--	--	--	--	--	--	--
APR 26...	2	3	<.6d	<.48d	3.8d	45d	<.04	<.1	<.03	E69.7	<.1	<1	<.1
MAY 07...	3	3	<.6d	<.48d	3.2d	10d	--	--	--	--	--	--	--
JUN 23...	2	4	<1.0d	<.80d	6.6d	88d	<.04	<.1	<.03	E99.2	<.1	<1	<.1
JUL 13...	2	3	<.6d	<.48d	2.4d	19d	--	--	--	--	--	--	--
AUG 20...	2	2	<.4d	<.48d	3.2d	9d	--	--	--	--	--	--	--
SEP 07...	2	3	<.6d	<.48d	8.2d	33d	--	--	--	--	--	--	--

07308500 Red River near Burkburnett, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Aroclor 1248, water, unfltrd ug/L (39500)	Aroclor 1254, water, unfltrd ug/L (39504)	Aroclor 1260, water, unfltrd ug/L (39508)	beta-Endo-sulfan, water, unfltrd ug/L (34356)	beta-HCH, water, unfltrd ug/L (39338)	Chlor-dane, tech-nical, water, unfltrd ug/L (39350)	cis-Chlor-dane, water, unfltrd ug/L (39062)	delta-HCH, water, unfltrd ug/L (34259)	Diel-drin, water, unfltrd ug/L (39380)	Endo-sulfan sulfate water unfltrd ug/L (34351)	Endrin alde-hyde, water, unfltrd ug/L (34366)	Endrin, water, unfltrd ug/L (39390)	Hepta-chlor epoxide water unfltrd ug/L (39420)
OCT 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 31...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 26...	<.1	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8
MAY 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 23...	<.1	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8
JUL 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Hepta-chlor, water, unfltrd ug/L (39410)	Lindane water, unfltrd ug/L (39340)	p,p'-DDD, water, unfltrd ug/L (39310)	p,p'-DDE, water, unfltrd ug/L (39320)	p,p'-DDT, water, unfltrd ug/L (39300)	PCB 207, surrog, Sch1608 water, unfltrd pct rcv (99781)	Toxa-phene, water, unfltrd ug/L (39400)	trans-Chlor-dane, water, unfltrd ug/L (39065)
OCT 23...	--	--	--	--	--	--	--	--
NOV 19...	--	--	--	--	--	--	--	--
DEC 11...	--	--	--	--	--	--	--	--
JAN 13...	--	--	--	--	--	--	--	--
FEB 03...	--	--	--	--	--	--	--	--
MAR 31...	--	--	--	--	--	--	--	--
APR 26...	<.03	<.03	<.1	<.04	<.1	E72.8	<2	<.1
MAY 07...	--	--	--	--	--	--	--	--
JUN 23...	<.03	<.03	<.1	<.04	<.1	E95.9	<2	<.1
JUL 13...	--	--	--	--	--	--	--	--
AUG 20...	--	--	--	--	--	--	--	--
SEP 07...	--	--	--	--	--	--	--	--

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

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL
r -- Value verified by rerun, same method

07308500 Red River near Burkburnett, TX—Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 2003 TO SEPTEMBER 2004

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.	2003	1242			0.00	0.00	0.00	0.00	0.00	
NOV.	2003	1331			0.00	0.00	0.00	0.00	0.00	
DEC.	2003	1096	6790	4260	12600	1800	5240	920	2740	1100
JAN.	2004	4052	9160	5740	62800	2400	25890	1300	13870	1500
FEB.	2004	4002	9380	5880	63550	2400	26020	1300	14210	1600
MAR.	2004	74057	3800	2400	479800	850	170200	670	134000	790
APR.	2004	8484	7920	4970	113800	2000	46300	1100	25740	1300
MAY	2004	10635	6070	3820	109800	1400	41380	980	28200	1200
JUNE	2004	29971	6430	4050	327600	1500	124700	1000	82890	1200
JULY	2004	42542	4110	2590	297600	940	108300	700	80360	820
AUG.	2004	7292	5730	3610	71050	1400	26620	930	18400	1100
SEPT	2004	3138.5	4970	3140	26590	1100	9630	850	7220	1000
TOTAL		187842.5	**	**	1565300	**	584200	**	407600	**
WTD.AVG.		513	4900	3090	**	1200	**	800	**	950

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	---	---	---	10,200	9,950	10,100
2	---	---	---	---	---	---	---	---	---	10,000	9,920	9,960
3	---	---	---	---	---	---	---	---	---	10,000	9,720	9,870
4	---	---	---	---	---	---	---	---	---	10,200	9,710	9,940
5	---	---	---	---	---	---	---	---	---	---	---	e10,100
6	---	---	---	---	---	---	---	---	---	---	---	e10,200
7	---	---	---	---	---	---	---	---	---	10,400	10,100	10,300
8	---	---	---	---	---	---	---	---	---	10,100	9,830	9,940
9	---	---	---	---	---	---	---	---	---	10,200	10,000	10,100
10	---	---	---	---	---	---	---	---	---	10,300	9,980	10,100
11	---	---	---	---	---	---	---	---	e10,100	10,100	9,930	10,000
12	---	---	---	---	---	---	---	---	e9,880	10,200	9,720	10,000
13	---	---	---	---	---	---	---	---	e9,780	9,840	9,700	9,760
14	---	---	---	---	---	---	---	---	e9,240	9,820	9,620	9,720
15	---	---	---	---	---	---	---	---	e9,210	9,720	9,520	9,630
16	---	---	---	---	---	---	---	---	e9,490	9,600	8,720	9,330
17	---	---	---	---	---	---	---	---	e9,700	8,760	7,970	8,400
18	---	---	---	---	---	---	---	---	e9,900	8,650	8,070	8,500
19	---	---	---	---	---	---	---	---	e10,200	8,480	6,340	8,060
20	---	---	---	---	---	---	10,500	10,200	10,300	6,340	4,310	5,030
21	---	---	---	---	---	---	10,500	10,300	10,400	10,400	5,860	8,180
22	---	---	---	---	---	---	10,400	10,100	10,300	10,300	9,810	10,000
23	---	---	---	---	---	---	10,500	10,200	10,400	12,800	10,300	11,500
24	---	---	---	---	---	---	10,400	10,200	10,300	13,000	11,900	12,700
25	---	---	---	---	---	---	10,400	10,200	10,300	12,000	10,900	11,500
26	---	---	---	---	---	---	10,400	10,200	10,300	10,900	10,500	10,600
27	---	---	---	---	---	---	10,300	10,100	10,200	10,500	10,300	10,400
28	---	---	---	---	---	---	10,300	10,200	10,200	10,600	10,400	10,500
29	---	---	---	---	---	---	10,300	10,000	10,100	10,800	10,500	10,600
30	---	---	---	---	---	---	10,300	10,100	10,200	10,900	10,800	10,800
31	---	---	---	---	---	---	10,300	10,100	10,200	11,100	10,900	11,000
MONTH	---	---	---	---	---	---	---	---	---	---	---	9,900

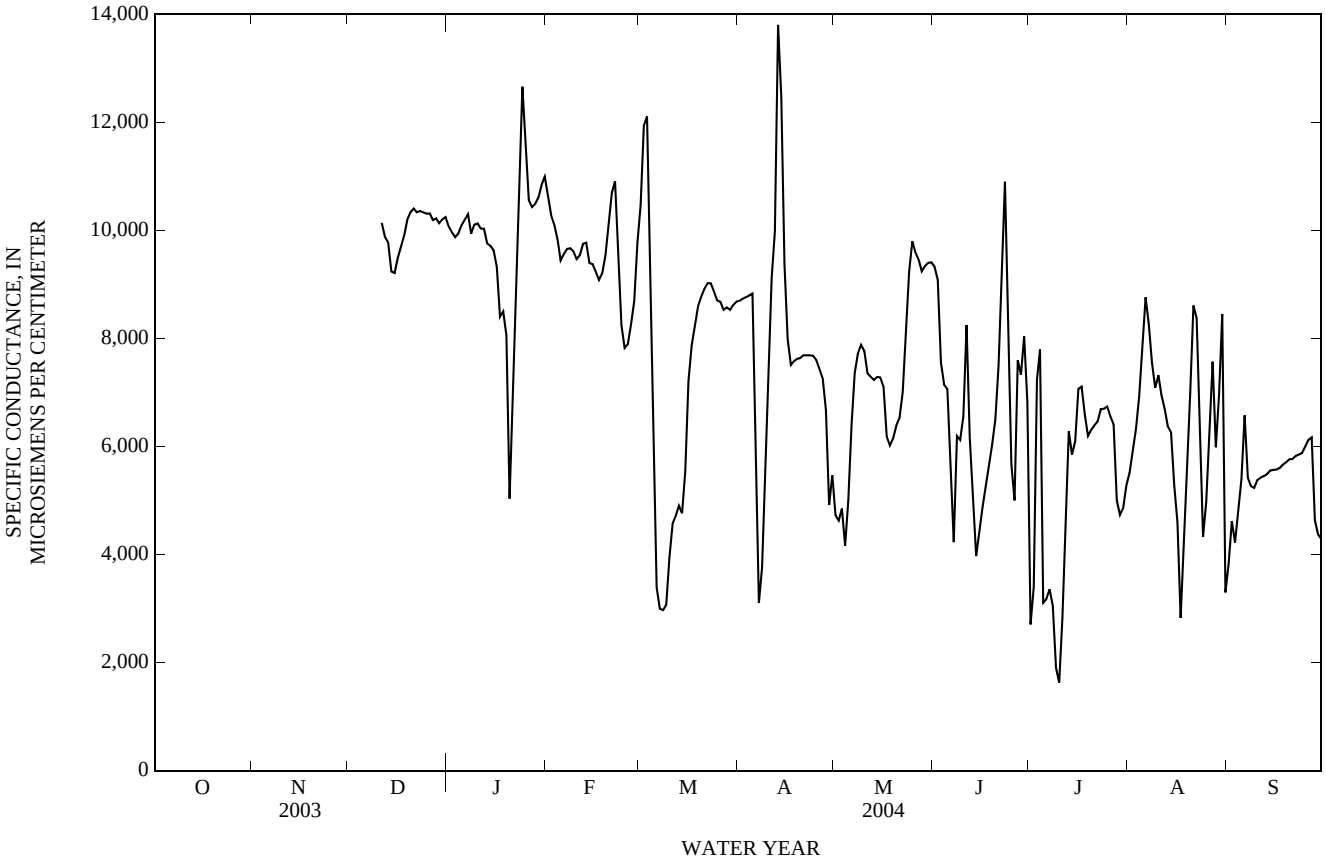
07308500 Red River near Burkburnett, TX—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11,000	10,300	10,700	11,400	9,540	10,500	---	---	e8,700	5,700	3,930	4,730
2	10,500	10,100	10,300	12,500	11,200	11,900	8,790	8,590	8,740	4,970	4,360	4,630
3	10,200	10,000	10,100	12,600	11,200	12,100	8,800	8,700	8,760	5,410	3,640	4,850
4	10,200	9,450	9,830	11,200	6,320	8,630	8,900	8,700	8,800	---	3,540	e4,160
5	9,520	9,390	9,440	6,320	4,360	5,700	8,910	8,800	8,830	---	---	e5,010
6	9,670	9,480	9,560	4,360	2,960	3,390	8,910	3,410	6,840	---	---	e6,390
7	9,770	9,540	9,660	3,030	2,970	3,000	3,410	2,920	3,110	7,890	---	e7,360
8	9,730	9,610	9,670	2,980	2,960	2,970	4,580	3,210	3,760	7,900	7,480	7,720
9	9,670	9,570	9,620	3,830	2,970	3,070	6,580	4,580	5,570	8,130	7,690	7,880
10	9,600	9,350	9,470	4,400	3,790	3,950	8,410	6,580	7,520	8,130	7,290	7,770
11	9,590	9,500	9,540	4,780	4,370	4,570	9,750	8,410	9,130	7,400	7,290	7,360
12	9,880	9,580	9,750	4,780	4,670	4,720	11,000	9,040	9,980	7,410	7,200	7,290
13	9,910	9,600	9,770	5,070	4,660	4,900	15,100	11,000	13,800	7,320	6,680	7,230
14	9,600	9,240	9,390	4,970	4,660	4,770	14,200	10,600	12,500	7,330	7,220	7,290
15	9,470	9,300	9,380	6,980	4,670	5,550	10,600	8,530	9,380	7,330	7,220	7,280
16	9,330	9,120	9,240	7,570	6,980	7,220	8,530	7,580	7,990	7,230	6,810	7,110
17	9,210	8,960	9,080	8,050	7,570	7,870	7,580	7,480	7,510	6,810	5,960	6,190
18	9,280	9,050	9,210	8,420	8,050	8,210	7,580	7,580	7,580	6,190	5,860	6,020
19	9,900	9,280	9,540	8,700	8,420	8,590	7,690	7,580	7,620	6,300	6,080	6,150
20	10,400	9,900	10,100	8,910	8,690	8,770	7,690	7,580	7,640	6,520	6,300	6,390
21	10,800	10,400	10,700	9,030	8,840	8,920	7,690	7,690	7,690	---	---	e6,530
22	11,000	10,400	10,900	9,070	8,930	9,020	7,690	7,690	7,690	---	---	e7,010
23	10,400	8,900	9,720	9,120	8,920	9,020	7,690	7,690	7,690	---	---	e8,250
24	8,940	7,490	8,250	9,020	8,710	8,870	7,790	7,580	7,680	---	---	e9,230
25	8,140	7,510	7,820	8,770	8,590	8,700	7,790	7,470	7,600	9,900	---	e9,800
26	8,200	7,600	7,890	8,750	8,580	8,680	7,580	7,180	7,430	9,690	9,480	9,590
27	8,660	7,900	8,260	8,620	8,470	8,530	7,620	6,860	7,260	9,570	9,260	9,460
28	9,110	8,560	8,690	8,620	8,520	8,570	8,060	5,450	6,670	9,340	9,150	9,240
29	10,700	9,110	9,780	8,560	8,510	8,530	5,670	4,430	4,920	9,430	9,230	9,340
30	---	---	---	8,670	8,560	8,620	6,240	4,430	5,470	9,520	9,320	9,400
31	---	---	---	---	---	e8,680	---	---	---	9,500	9,300	9,410
MONTH	11,000	7,490	9,500	---	---	7,310	---	---	7,800	---	---	7,290
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9,500	8,980	9,330	3,460	2,480	2,710	---	---	e5,520	4,150	3,480	3,830
2	9,280	7,970	9,090	4,260	2,980	3,400	---	---	e5,920	5,500	3,770	4,620
3	8,160	7,060	7,550	9,520	4,260	7,230	---	---	e6,330	5,100	3,950	4,220
4	7,650	6,550	7,140	9,420	3,780	7,800	---	---	e6,940	5,290	4,240	4,810
5	7,340	6,030	7,060	3,780	2,920	3,110	8,400	7,480	7,850	6,390	5,090	5,400
6	6,330	4,120	5,520	3,220	3,120	3,180	8,950	8,400	8,760	7,500	5,510	6,580
7	6,700	3,610	4,230	3,710	3,040	3,360	8,670	8,020	8,260	5,520	5,390	5,430
8	6,900	5,300	6,190	3,900	933	3,050	8,110	6,340	7,550	5,390	5,090	5,260
9	6,590	5,780	6,120	3,720	934	1,910	7,270	6,980	7,090	5,290	5,190	5,230
10	6,860	6,360	6,560	---	1,240	e1,630	7,440	7,250	7,320	5,490	5,290	5,380
11	11,500	6,860	8,250	---	---	e2,820	7,250	6,580	6,960	5,490	5,390	5,420
12	11,300	4,650	6,160	---	---	e4,650	7,230	6,290	6,700	5,490	5,390	5,450
13	6,430	3,930	5,040	---	---	e6,280	7,040	6,080	6,370	5,590	5,390	5,490
14	4,210	3,720	3,970	---	---	e5,850	6,450	6,170	6,260	5,590	5,490	5,560
15	4,690	4,210	4,400	6,620	5,850	6,100	6,540	4,240	5,280	5,590	5,490	5,570
16	5,070	4,690	4,880	7,200	6,620	7,070	5,380	3,360	4,600	5,590	5,490	5,570
17	5,440	5,070	5,250	---	---	e7,110	3,610	2,390	2,820	5,680	5,580	5,600
18	5,820	5,440	5,630	---	---	e6,590	5,070	3,610	4,670	5,680	5,580	5,670
19	6,200	5,820	6,040	---	5,850	e6,190	6,880	5,070	5,960	5,780	5,680	5,710
20	6,910	6,200	6,500	6,430	6,140	6,310	7,170	6,780	7,000	5,780	5,680	5,760
21	---	6,910	e7,500	6,430	6,140	6,390	9,330	6,980	8,610	5,780	5,680	5,770
22	---	---	e9,200	6,520	6,330	6,460	9,330	7,170	8,380	5,880	5,780	5,830
23	---	---	e10,900	6,720	6,520	6,690	7,860	4,730	6,190	5,880	5,780	5,850
24	10,400	5,600	9,040	6,720	6,520	6,700	4,820	3,880	4,330	---	---	e5,880
25	5,900	4,510	5,680	6,810	6,720	6,740	6,190	3,970	4,970	---	---	e6,000
26	7,860	3,420	5,000	6,720	6,430	6,560	6,780	6,190	6,500	---	---	e6,120
27	8,060	6,980	7,600	6,430	6,330	6,420	8,370	6,780	7,570	6,170	---	e6,170
28	7,570	7,080	7,330	6,330	3,560	5,000	8,460	3,490	5,990	6,270	4,330	4,640
29	8,550	7,180	8,040	5,080	3,940	4,730	9,060	3,960	6,960	4,430	4,330	4,370
30	8,940	3,460	6,830	5,180	4,610	4,860	8,970	7,980	8,450	4,430	2,460	4,290
31	---	---	---	---	---	e5,290	---	---	e3,300	---	---	---
MONTH	---	---	6,730	---	---	5,230	---	---	6,430	---	---	5,380

e Estimated

07308500 Red River near Burkburnett, TX—Continued



TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

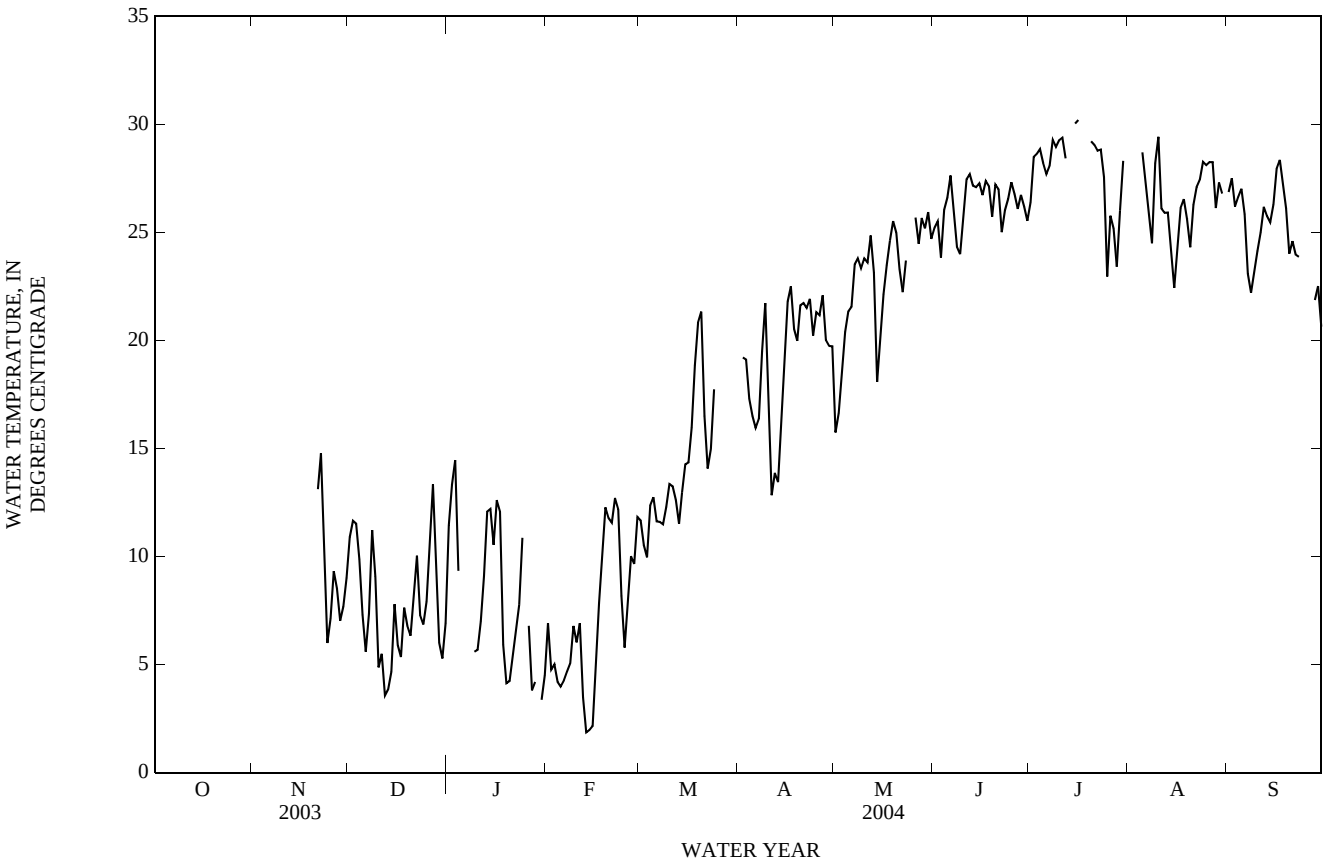
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	13.9	8.1	10.9	15.7	8.2	11.4
2	---	---	---	---	---	---	12.9	10.7	11.7	17.5	9.9	13.3
3	---	---	---	---	---	---	14.0	9.0	11.5	19.0	10.4	14.5
4	---	---	---	---	---	---	13.2	6.8	9.9	14.9	4.2	9.3
5	---	---	---	---	---	---	9.4	5.2	7.3	---	---	---
6	---	---	---	---	---	---	9.0	2.0	5.6	---	---	---
7	---	---	---	---	---	---	11.1	3.8	7.4	---	---	---
8	---	---	---	---	---	---	15.3	7.7	11.2	---	---	---
9	---	---	---	---	---	---	13.1	4.2	9.1	9.5	2.0	5.6
10	---	---	---	---	---	---	8.6	1.4	4.9	9.9	1.9	5.7
11	---	---	---	---	---	---	9.1	1.8	5.5	11.5	3.2	7.0
12	---	---	---	---	---	---	5.3	2.5	3.6	12.1	6.1	9.1
13	---	---	---	---	---	---	7.0	1.0	3.8	14.9	9.8	12.1
14	---	---	---	---	---	---	9.1	0.6	4.7	16.0	9.5	12.2
15	---	---	---	---	---	---	11.8	5.1	7.8	11.7	9.0	10.5
16	---	---	---	---	---	---	9.1	2.9	5.9	13.9	11.1	12.6
17	---	---	---	---	---	---	9.4	1.4	5.3	13.9	7.9	12.1
18	---	---	---	---	---	---	11.3	4.3	7.6	7.9	4.2	5.9
19	---	---	---	---	---	---	9.9	3.8	6.8	6.9	1.5	4.1
20	---	---	---	---	---	---	10.5	2.8	6.3	6.2	2.4	4.2
21	---	---	---	16.6	10.0	13.1	13.1	4.0	8.4	7.9	3.8	5.5
22	---	---	---	18.1	11.8	14.8	13.4	7.7	10.0	9.7	4.2	6.7
23	---	---	---	16.2	6.6	10.2	10.5	4.2	7.3	10.8	5.0	7.8
24	---	---	---	9.5	2.7	6.0	10.6	3.4	6.9	13.0	9.2	10.9
25	---	---	---	10.4	4.3	7.1	11.8	4.5	7.9	---	9.6	---
26	---	---	---	12.8	6.6	9.3	15.3	6.9	10.6	10.2	3.4	6.8
27	---	---	---	10.9	6.7	8.5	15.1	10.7	13.3	7.3	0.9	3.8
28	---	---	---	10.4	3.8	7.0	11.2	6.5	9.2	9.0	1.6	4.2
29	---	---	---	11.3	4.5	7.7	9.8	2.6	6.0	11.1	---	---
30	---	---	---	13.1	5.3	9.0	9.2	1.9	5.3	5.3	1.7	3.4
31	---	---	---	---	---	---	11.4	2.7	6.9	8.5	1.5	4.5
MONTH	---	---	---	---	---	---	15.3	0.6	7.7	---	---	---

07308500 Red River near Burkburnett, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.8	4.3	6.9	15.8	7.7	11.7	23.8	---	---	18.2	14.4	15.7
2	8.7	1.0	4.8	12.8	8.9	10.5	23.8	14.6	19.2	20.5	13.4	16.6
3	7.3	2.5	5.0	10.5	9.4	10	22.8	16.3	19.1	22.0	15.5	18.5
4	5.1	3.5	4.2	14.3	10.3	12.4	21.6	13.6	17.3	23.9	17.6	20.4
5	5.0	3.4	4.0	15.3	11.2	12.7	18.8	15.0	16.5	24.4	18.5	21.3
6	7.4	1.8	4.3	12.4	10.7	11.6	17.8	13.9	15.9	22.9	20.3	21.6
7	9.0	1.1	4.7	11.9	11.2	11.6	18.8	13.5	16.4	26.2	21.5	23.5
8	8.4	1.8	5.1	11.9	11.0	11.5	23.8	15.9	19.5	27.9	20.5	23.8
9	7.3	6.0	6.8	13.6	11.3	12.3	25.2	18.6	21.7	27.1	19.9	23.3
10	9.2	2.8	6.0	15.2	11.6	13.4	22.5	12.7	16.6	27.8	20.7	23.8
11	7.6	5.8	6.9	15.0	11.5	13.3	15.8	10.1	12.8	26.3	21.5	23.6
12	5.8	1.1	3.5	13.4	12.0	12.6	17.3	11.9	13.9	30.1	21.0	24.9
13	3.2	0.2	1.9	12.0	11.1	11.5	16.7	10.5	13.4	27.1	17.7	23.1
14	4.2	0.0	2.0	15.3	11.6	13.0	19.3	12.2	15.5	23.1	14.4	18.1
15	4.7	0.2	2.2	15.8	13.4	14.3	22.6	14.2	18.2	25.6	16.1	20.3
16	10.9	0.8	5.0	16.8	12.4	14.4	25.7	18.6	21.8	26.2	18.3	22.1
17	12.6	3.8	7.8	19.8	12.4	16.0	25.8	20.0	22.5	28.1	19.6	23.5
18	14.3	6.0	9.8	22.2	15.8	18.8	22.2	19.8	20.5	29.6	21.3	24.6
19	16.4	8.9	12.3	24.0	18.2	20.8	21.2	18.7	20.0	30.8	21.6	25.5
20	15.5	8.6	11.8	24.2	18.5	21.3	25.4	18.7	21.6	29.4	21.6	25.0
21	15.9	7.8	11.6	18.5	14.8	16.5	23.5	19.5	21.7	25.8	21.3	23.3
22	17.0	8.8	12.7	15.7	12.6	14.1	23.4	20.0	21.5	24.1	20.5	22.2
23	14.0	11.2	12.2	18.1	11.7	15.0	23.1	20.4	21.9	29.2	20.9	23.7
24	11.2	5.8	8.2	19.9	16.0	17.7	23.3	17.9	20.2	---	---	---
25	8.6	3.8	5.8	---	---	---	25.9	18.0	21.3	26.6	---	---
26	13.0	3.3	7.7	---	---	---	25.0	17.9	21.2	29.9	22.6	25.7
27	14.9	6.0	10.0	---	---	---	26.1	18.6	22.1	26.5	22.4	24.5
28	10.9	8.6	9.7	---	---	---	22.0	17.9	20.0	31.8	20.6	25.7
29	15.1	9.9	11.8	---	---	---	24.2	16.5	19.7	28.8	22.2	25.2
30	---	---	---	---	---	---	21.5	18.2	19.7	31.3	22.4	25.9
31	---	---	---	---	---	---	---	---	---	30.7	19.6	24.7
MONTH	17.0	0.0	7.1	---	---	---	26.1	---	---	---	---	---
		JUNE			JULY			AUGUST			SEPTEMBER	
1	30.7	20.4	25.2	28.9	24.3	26.4	---	---	---	30.1	23.8	26.9
2	32.2	21.2	25.5	31.5	26.1	28.5	---	---	---	30.7	24.9	27.5
3	29.2	19.9	23.8	31.0	25.8	28.7	---	---	---	29.9	23.1	26.2
4	30.2	22.2	26.0	30.3	27.4	28.9	31.6	---	---	30.9	23.2	26.6
5	31.8	22.7	26.6	30.0	26.8	28.2	33.8	24.9	28.7	30.3	24.2	27.0
6	31.2	25.1	27.6	30.4	24.9	27.7	31.9	24.2	27.4	28.2	23.4	25.8
7	29.1	23.8	26.1	31.0	25.2	28.1	29.6	23.4	25.9	25.9	20.4	23.1
8	26.0	23.3	24.3	32.6	26.6	29.3	27.0	22.6	24.5	26.9	18.1	22.2
9	25.6	22.8	24.0	30.4	27.6	29.0	34.8	23.3	28.2	28.4	18.3	23.2
10	29.5	22.9	25.8	32.1	26.6	29.3	35.1	25.1	29.4	28.9	19.9	24.1
11	31.7	24.0	27.5	30.7	28.8	29.4	28.9	22.9	26.1	30.1	21.0	25.0
12	29.8	26.0	27.7	29.0	27.9	28.4	31.5	21.6	25.9	31.1	22.4	26.2
13	30.0	24.4	27.2	---	28.5	---	30.4	22.6	25.9	30.3	22.3	25.8
14	28.4	25.9	27.1	34.4	---	---	26.8	21.8	24.1	29.5	22.5	25.5
15	28.4	26.5	27.3	34.8	26.4	30.0	25.4	19.9	22.4	31.0	22.7	26.3
16	28.8	25.0	26.7	34.5	26.4	30.2	27.5	21.8	24.4	32.8	24.4	27.9
17	29.1	25.5	27.4	---	---	---	30.8	22.3	26.1	33.1	24.8	28.4
18	28.6	25.5	27.1	---	---	---	31.1	22.6	26.5	30.9	24.5	27.3
19	28.7	24.3	25.7	35.0	---	---	28.1	23.8	25.6	30.0	23.4	26.1
20	31.9	24.0	27.2	33.8	25.4	29.2	25.8	22.6	24.3	28.6	20.5	24.0
21	29.7	25.3	27.0	33.9	25.4	29.1	31.3	22.1	26.3	29.1	21.4	24.6
22	27.0	23.4	25.0	34.0	24.9	28.8	30.8	23.9	27.1	27.8	21.0	24.0
23	29.3	23.0	26.0	33.6	25.4	28.8	30.6	24.5	27.4	27.4	21.5	23.9
24	29.9	23.5	26.6	30.7	25.4	27.6	31.9	25.0	28.3	---	21.9	---
25	29.3	25.3	27.3	26.0	21.3	23.0	30.8	25.9	28.1	---	---	---
26	27.8	25.6	26.8	31.9	21.2	25.8	32.6	24.6	28.3	---	---	---
27	29.3	23.5	26.1	26.8	23.3	25.2	32.7	24.6	28.3	28.7	---	---
28	29.6	24.6	26.7	24.9	21.8	23.4	28.8	23.6	26.1	24.8	20.5	21.9
29	28.5	24.7	26.2	29.5	23.6	26.0	32.2	23.4	27.3	27.2	19.2	22.5
30	27.1	24.1	25.5	34.1	23.6	28.3	29.8	23.7	26.8	23.2	19.5	20.6
31	---	---	---	---	25.0	---	29.2	---	---	---	---	---
MONTH	32.2	19.9	26.3	---	---	---	---	---	---	---	---	---

07308500 Red River near Burkburnett, TX—Continued



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07311600 North Wichita River near Paducah, TX

LOCATION.--Lat 33°57'02", long 100°03'52", Cottle County, Hydrologic Unit 11130204, at right downstream end of old abandoned county bridge, 4.0 mi downsteam from Cottonwood Creek, 7.0 mi downstream from Salt Creek, 10.0 mi upstream from Middle Fork, 14.0 mi southeast of Paducah, and 211.3 mi upstream from mouth of the Wichita River.

DRAINAGE AREA.--540 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1951-54 (miscellaneous low-flow measurements), July 1961 to Sept. 1982, Oct. 1994 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,530 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges and the period of July 3, to Sept. 23, which are poor. No known regulation. One small diversion for irrigation above station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	7.3	5.8	5.1	4.7	9.2	11	7.6	6.3	8.5	9.5	4.8
2	5.5	5.8	6.6	7.4	5.1	7.9	14	7.8	6.5	7.5	7.9	4.3
3	5.4	5.8	6.2	7.5	5.2	8.0	31	6.3	7.2	7.0	9.0	4.1
4	5.4	6.1	6.1	6.2	5.5	198	29	6.1	7.2	6.6	18	4.0
5	5.3	6.5	5.9	6.2	5.4	514	24	5.5	15	6.5	20	4.7
6	5.5	6.5	6.3	5.4	5.5	52	41	6.4	e522	6.1	10	3.7
7	5.8	8.9	6.9	5.8	5.6	21	94	6.7	e70	6.2	10	3.6
8	5.3	7.9	6.8	5.5	5.9	15	43	6.6	e36	6.4	14	4.9
9	5.7	7.5	6.1	7.6	5.5	12	24	7.1	14	6.4	e17	5.8
10	5.5	7.6	6.1	11	5.8	10	16	7.6	278	6.3	e16	5.8
11	5.5	7.7	6.0	6.0	6.1	9.1	16	8.1	31	6.3	16	5.9
12	5.5	7.2	5.9	5.4	6.0	9.6	17	5.7	13	6.2	14	5.9
13	5.7	6.7	6.0	5.4	6.3	10	18	4.7	e10	6.2	10	6.0
14	e5.5	7.6	6.3	5.7	6.9	10	18	5.4	e8.1	6.3	11	5.7
15	e5.8	8.1	6.0	6.2	7.0	8.2	13	8.5	7.4	6.4	11	5.8
16	e6.1	9.0	5.3	6.9	7.0	12	11	11	7.2	6.3	12	7.8
17	e5.8	9.4	5.3	6.3	6.9	8.8	9.0	5.8	6.0	6.2	6.7	6.9
18	4.8	9.4	5.2	5.7	7.3	7.9	10	5.3	6.4	6.7	5.7	6.1
19	6.1	7.6	5.3	5.6	7.4	8.2	11	5.8	6.5	7.2	7.3	6.2
20	6.7	7.3	7.1	5.6	6.0	7.0	e13	5.9	6.5	6.7	36	6.1
21	7.0	7.7	7.1	e5.4	6.1	6.8	e11	6.0	6.9	6.3	11	5.9
22	7.8	8.5	5.4	5.4	6.3	7.2	e7.7	5.9	7.8	6.3	5.7	5.9
23	7.2	7.2	5.6	5.5	7.1	7.2	e7.1	5.5	6.7	6.3	5.0	5.7
24	8.6	7.0	5.5	5.6	8.1	7.2	e8.6	5.7	6.0	6.5	4.9	5.9
25	8.0	6.8	5.7	5.4	10	6.6	e8.6	5.4	6.2	6.7	4.6	6.0
26	8.8	6.9	5.9	5.0	8.0	6.0	e8.3	7.7	6.1	7.3	5.8	6.1
27	8.4	6.3	5.6	5.4	7.1	6.3	e7.9	6.7	6.2	7.8	6.4	6.0
28	6.1	6.4	5.4	5.7	7.6	6.1	7.3	6.4	6.3	12	4.8	6.1
29	6.1	5.8	5.5	e6.1	12	6.3	7.0	6.3	12	e8.1	4.8	6.5
30	6.7	5.4	5.1	e5.5	---	6.9	6.8	5.7	23	7.3	5.4	7.4
31	7.3	---	5.0	5.0	---	9.4	---	5.8	---	8.7	5.1	---
TOTAL	194.0	217.9	183.0	186.5	193.4	1,013.9	543.3	201.0	1,151.5	215.3	324.6	169.6
MEAN	6.26	7.26	5.90	6.02	6.67	32.7	18.1	6.48	38.4	6.95	10.5	5.65
MAX	8.8	9.4	7.1	11	12	514	94	11	522	12	36	7.8
MIN	4.8	5.4	5.0	5.0	4.7	6.0	6.8	4.7	6.0	6.1	4.6	3.6
AC-FT	385	432	363	370	384	2,010	1,080	399	2,280	427	644	336

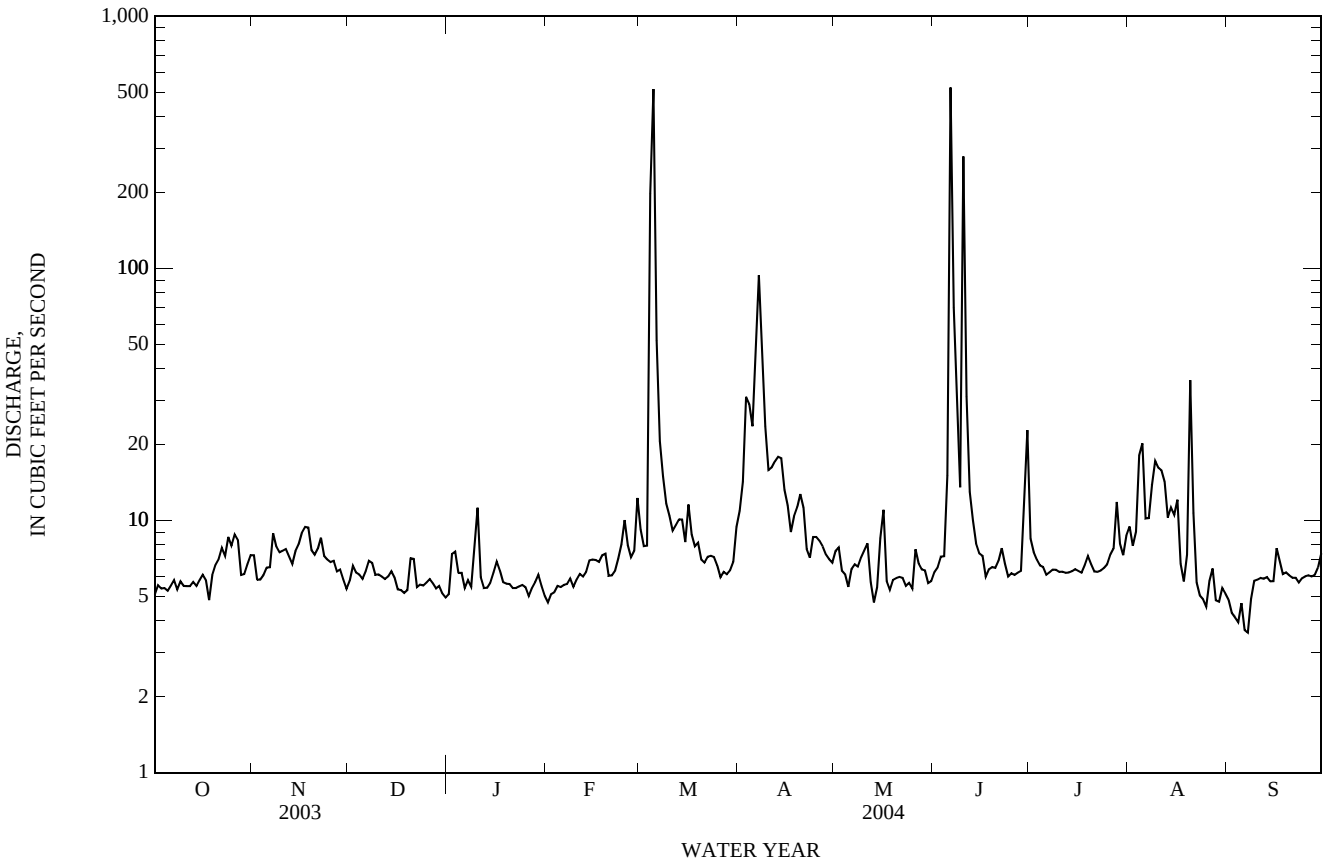
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004h, BY WATER YEAR (WY)

MEAN	17.9	13.3	11.5	10.7	11.1	15.2	25.2	39.2	60.7	14.5	32.4	30.3
MAX	62.4	40.5	24.8	19.9	19.7	49.7	265	186	452	80.4	239	141
(WY)	(1966)	(2002)	(1998)	(1996)	(1996)	(1998)	(1997)	(1982)	(1995)	(1975)	(1995)	(1974)
MIN	3.08	3.94	4.58	4.84	4.77	4.93	5.30	3.63	7.25	2.12	1.98	2.06
(WY)	(1964)	(1965)	(1965)	(1965)	(1965)	(1965)	(1964)	(1966)	(2001)	(1966)	(1964)	(1964)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004h	
ANNUAL TOTAL	3,075.1		4,594.0			
ANNUAL MEAN	8.42		12.6		23.6	
HIGHEST ANNUAL MEAN					75.5	1995
LOWEST ANNUAL MEAN					6.10	1964
HIGHEST DAILY MEAN	156	Apr 24	522	Jun 6	8,930	Jun 5, 1995
LOWEST DAILY MEAN	4.0	Aug 11	3.6	Sep 7	0.50	Sep 2, 1964
ANNUAL SEVEN-DAY MINIMUM	4.5	Aug 8	4.2	Sep 1	0.74	Aug 31, 1964
MAXIMUM PEAK FLOW			1,330	Mar 5	18,100	Jun 5, 1995
MAXIMUM PEAK STAGE			7.20	Mar 5	19.76	Jun 5, 1995
ANNUAL RUNOFF (AC-FT)	6,100		9,110		17,100	
10 PERCENT EXCEEDS	10		13		21	
50 PERCENT EXCEEDS	7.2		6.5		11	
90 PERCENT EXCEEDS	5.3		5.4		5.0	

h See PERIOD OF RECORD paragraph.
e Estimated

07311600 North Wichita River near Paducah, TX—Continued



07311600 North Wichita River near Paducah, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1994 to current year.
PESTICIDE DATA: Oct. 1996 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct. 1994 to current year.
WATER TEMPERATURE: Oct. 1994 to current year.

INSTRUMENTATION.--Water-quality monitor since Oct. 1994.

REMARKS.--Records fair. Interruptions in the record were caused by malfunctions of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include extimated discharge or specific conductance data. New regression equations were developed based on data from water years 1995 to 2004. The standard error of estimate for dissolved solids is 4%, chloride is 6%, sulfate is 9% and for hardness is 10%. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 32,200 microsiemens/cm, Sept. 1, 2003; minimum, 318 microsiemens/cm, May 27, 1999.
WATER TEMPERATURE: Maximum, 35.4°C, Aug. 10, 2001; minimum, -0.5°C, Feb. 25, 2003.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 31,600 microsiemens/cm, Apr 4; minimum, 1,080 microsiemens/cm, June 10.
WATER TEMPERATURE: Maximum, 34.2°C, July 15,16; minimum, 1.9°C, Feb. 14.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
OCT													
20...	1210	6.9	7.3	87	7.6	28,000	19.2	3,100	3,100	931d	199d	22.1d	43
NOV													
05...	1200	6.3	8.1	88	7.6	28,400	14.9	3,100	3,000	922d	192	22.2	43
DEC													
02...	1135	7.5	9.7	98	7.6	27,800	11.5	3,500	3,300	1030d	215d	22.6d	40
JAN													
29...	1155	6.1	10.1	95	7.5	27,300	8.4	3,100	3,000	949d	182d	19.4d	42
FEB													
20...	1220	5.6	9.2	93	7.7	27,400	11.7	3,500	3,400	1080d	194	22.2	36
MAR													
06...	1415	44	9.2	90	7.5	6,940	13.2	810	740	245	49.0	8.77	17
APR													
27...	1135	7.9	8.1	104	7.7	25,900	20.5	2,900	2,800	865d	190d	19.0d	39
MAY													
19...	1200	6.6	6.7	96	7.7	27,700	26.0	3,000	2,900	884d	196d	22.7d	43
JUN													
08...	1220	22	6.4	83	7.6	6,530	24.4	770	670	235d	44.2d	11.0d	17
JUL													
29...	1150	7.4	6.8	97	7.6	26,000	25.5	--	--	--	--	--	--
AUG													
17...	1205	6.6	7.2	102	7.8	28,900	25.5	3,100	3,000	916d	202d	26.5d	45
SEP													
08...	1145	5.6	6.7	88	7.8	27,300	21.7	3,200	3,100	943d	209dr	20.1dr	44

07311600 North Wichita River near Paducah, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium, water, fltrd, mg/L (00930)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicar-bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon-ate, wat flt incrm. titr., field, mg/L (00452)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)
OCT													
20...	5500d	88	106	.0	8410d	.7	2.8	2670d	17,800	<10	E.07n	.10	.30
NOV													
05...	5490d	109	131	.0	8830d	.7	4.1	2740d	18,300	22	.13	.13	.30
DEC													
02...	5350d	139	167	1	8610d	.7	7.6	2570d	17,900	<10	.15	.12	--
JAN													
29...	5380d	155	186	1	8290d	.7	8.8	2660d	17,600	14	.32	.18	.75
FEB													
20...	4890d	148	179	1	8440d	.7	6.7	2630d	17,400	17	.53	.18	.57
MAR													
06...	1120d	78	94	.0	1900d	.3	7.4	665d	4,040	172d	.93	.17	.57
APR													
27...	4910d	101	120	1	7920d	.7	1.1	2390d	16,400	23	.23	.10	.20
MAY													
19...	5400d	87	104	.0	8500d	.7	1.6	2630d	17,700	30	.49	.10	.24
JUN													
08...	1100d	95	114	.0	1710d	.4	10.3	622d	3,790	126d	.86	.13	.34
JUL													
29...	--	95	114	.0	--	--	--	--	--	--	.23	.07	--
AUG													
17...	5740d	79	94	.0	8770d	.7	1.0	2700d	18,400	23	.42	.10	--
SEP													
08...	5740dr	73	87	.0	8430d	.7	1.0	2670d	18,100	11	.34	.11	.18

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L (00660)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Cadmium water, fltrd, ug/L (01025)
OCT													
20...	.31	.010	--	--	<.02	<.04	<.04	--	E1.5nd	E5ndc	26d	29d	<.48d
NOV													
05...	.31	.011	--	--	<.02	<.04	<.04	.44	<2.4d	<2	27d	28d	<.48d
DEC													
02...	.57	E.006n	.02	--	<.02	<.04	<.04	.72	<2.4d	E4ndc	23d	24d	E.47nd
JAN													
29...	.76	.010	.15	--	<.02	<.04	<.04	1.1	<2.2d	<6d	23d	22d	<.44d
FEB													
20...	.59	.016	.36	--	E.01n	<.04	E.02n	1.1	E1.8nd	6d	22d	22d	<.40d
MAR													
06...	.59	.021	.76	.239	.08	.08	.23	1.5	2.3d	4	125d	161d	<.12d
APR													
27...	.21	.009	.13	--	<.02	<.04	<.04	.44	2.7d	<6d	46d	50d	<.44d
MAY													
19...	.25	.012	.39	--	<.02	<.04	<.04	.74	<2.4d	<6d	41d	40d	<.48d
JUN													
08...	.37	.025	.73	.083	.03	E.04n	.14	1.2	3.7d	5	170d	190d	<.12d
JUL													
29...	.22	E.007n	.16	--	<.02	<.04	<.04	.44	<2.2d	<2	41d	128d	<.44d
AUG													
17...	<.06	<.008	.32	--	<.02	<.04	<.04	--	<2.4d	<6d	44d	48d	<.48d
SEP													
08...	.19	.009	.22	--	<.02	E.02n	<.04	.52	<2.2d	3	42d	36d	<.44d

07311600 North Wichita River near Paducah, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Manga-nese, water, fltrd, ug/L (01056)	Manga-nese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover-able, ug/L (71900)
OCT													
20...	<.48d	<2.4d	18.6d	11.9d	36.6d	<128d	<90d	<.96d	<.72d	10.0d	10d	<.02	<.02
NOV													
05...	<.48d	E2.2nd	<2.4d	10.5d	38.6d	<6	E70nd	<.96d	<.72d	10.5d	11d	<.02	<.02
DEC													
02...	<.48d	<2.4d	<2.4d	11.2d	42.3d	<160d	<90d	<.96d	<.72d	8.3d	8d	<.02	<.02
JAN													
29...	<.44d	<2.4d	<2.4d	38.1d	48.8d	<160d	E100nd	<.88d	<.66d	59.5d	62d	<.02	<.02
FEB													
20...	<.40d	<2.4d	<2.4d	12.9d	19.4d	21	450d	<.80d	<.60d	163d	168d	<.02	<.02
MAR													
06...	<.16d	<.8	4.1	3.7d	9.2d	361d	4390d	.49d	3.20d	146d	220d	<.02	E.01n
APR													
27...	<.44d	<2.4d	2.5d	12.2d	21.0d	<160d	200d	<.88d	.72d	42.0d	56d	<.02	<.02
MAY													
19...	<.48d	<2.4d	<2.4d	16.0d	23.1d	E60nd	220d	E.94nd	E.40nd	49.5d	55d	<.02	<.02
JUN													
08...	<.12d	<.8	2.9	4.8d	9.1d	<32d	2,500	<.24d	2.17d	100d	170d	<.02	<.02
JUL													
29...	<.44d	<.8	<.8	19.3d	14.2d	<96d	E50nd	<.88d	E.64nd	23.1d	23d	E.01n	.02
AUG													
17...	<.48d	1.1	<2.4d	11.4d	27.7d	<96d	200d	E.77nd	<.72d	28.6d	33d	<.02	<.02
SEP													
08...	<.44d	<2.4d	<2.4d	33.9d	42.3d	<96d	480d	<.88d	<.66d	16.2d	20d	<.02	<.02

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha-Endo-sulfan, water, unfltrd ug/L (34361)	alpha-HCH, water, unfltrd ug/L (39337)	alpha-HCH-d6, surrog, Sch1608 water, unfltrd pct rcv (99778)	Aroclor 1016 + 1242, water, unfltrd ug/L (81648)
OCT													
20...	21.8d	37.5d	8.8d	8.7d	<2.4d	<1.92d	7.6d	E18nd	--	--	--	--	--
NOV													
05...	10.1d	47.5d	5	7	<2.4d	<1.92d	7.3d	E17nd	--	--	--	--	--
DEC													
02...	13.2d	53.0d	7	7	<2.4d	<1.92d	9.8d	28d	--	--	--	--	--
JAN													
29...	19.9d	43.6d	6c	7c	<2.2d	<1.76d	18.9d	E20nd	--	--	--	--	--
FEB													
20...	12.9d	27.6d	7	8	<2.0d	<1.60d	9.2d	<20d	--	--	--	--	--
MAR													
06...	4.63d	11.5d	3	4	<.6d	<.64d	3.6d	14d	--	--	--	--	--
APR													
27...	13.5d	42.5d	6	6	<2.2d	<1.76d	7.2d	E11nd	<.04	<.1	<.03	E100	<.1
MAY													
19...	11.3d	42.7d	5	6	<2.4d	<1.92d	9.8d	E12nd	--	--	--	--	--
JUN													
08...	3.96d	13.7d	2	2	<.6d	<.48d	3.2d	9d	<.04	<.1	<.03	E18.9	<.1
JUL													
29...	15.8d	13.3d	4	4	E1.6nd	20.4d	24.5d	<22d	--	--	--	--	--
AUG													
17...	25.0d	50.7d	4	4	<2.4d	<1.92d	9.7d	<24d	--	--	--	--	--
SEP													
08...	19.7d	46.0d	5	5	<2.2d	<1.76d	15.7d	E15nd	--	--	--	--	--

07311600 North Wichita River near Paducah, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Aroclor 1221, water, unfltrd ug/L (39488)	Aroclor 1232, water, unfltrd ug/L (39492)	Aroclor 1248, water, unfltrd ug/L (39500)	Aroclor 1254, water, unfltrd ug/L (39504)	Aroclor 1260, water, unfltrd ug/L (39508)	beta-Endosulfan, water, unfltrd ug/L (34356)	beta-HCH, water, unfltrd ug/L (39338)	Chlordane, technical, water, unfltrd ug/L (39350)	cis-Chlordane, water, unfltrd ug/L (39062)	delta-HCH, water, unfltrd ug/L (34259)	Dieldrin, water, unfltrd ug/L (39380)	Endosulfan sulfate water unfltrd ug/L (34351)	Endrin aldehyde, water, unfltrd ug/L (34366)
OCT													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
27...	<1	<.1	<.1	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2
MAY													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
08...	<1	<.1	<.1	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2
JUL													
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Endrin, water, unfltrd ug/L (39390)	Heptachlor epoxide water unfltrd ug/L (39420)	Heptachlor, water, unfltrd ug/L (39410)	Lindane water, unfltrd ug/L (39340)	p,p'-DDD, water, unfltrd ug/L (39310)	p,p'-DDE, water, unfltrd ug/L (39320)	p,p'-DDT, water, unfltrd ug/L (39300)	PCB 207, surrog, Sch1608 water, unfltrd pct rcv (99781)	Toxaphene, water, unfltrd ug/L (39400)	trans-Chlordane, water, unfltrd ug/L (39065)
OCT										
20...	--	--	--	--	--	--	--	--	--	--
NOV										
05...	--	--	--	--	--	--	--	--	--	--
DEC										
02...	--	--	--	--	--	--	--	--	--	--
JAN										
29...	--	--	--	--	--	--	--	--	--	--
FEB										
20...	--	--	--	--	--	--	--	--	--	--
MAR										
06...	--	--	--	--	--	--	--	--	--	--
APR										
27...	<.06	<.8	<.03	<.03	<.1	<.04	<.1	E109	<2	<.1
MAY										
19...	--	--	--	--	--	--	--	--	--	--
JUN										
08...	<.06	<.8	<.03	<.03	<.1	<.04	<.1	E17.3	<2	<.1
JUL										
29...	--	--	--	--	--	--	--	--	--	--
AUG										
17...	--	--	--	--	--	--	--	--	--	--
SEP										
08...	--	--	--	--	--	--	--	--	--	--

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

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL
r -- Value verified by rerun, same method

07311600 North Wichita River near Paducah, TX—Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 2003 TO SEPTEMBER 2004

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.	2003	194	28360	18240	9550	8700	4570	2700	1400	3100
NOV.	2003	217.9	27060	17480	10280	8300	4880	2600	1550	3100
DEC.	2003	183	26850	17350	8570	8200	4070	2600	1300	3100
JAN.	2004	186.5	26050	16880	8500	8000	4010	2600	1310	3000
FEB.	2004	193.4	26470	17130	8940	8100	4230	2600	1370	3100
MAR.	2004	1013.9	9260	6170	16890	2800	7590	1100	3050	1300
APR.	2004	543.3	18530	12180	17870	5600	8230	2000	3000	2400
MAY	2004	201	27260	17590	9550	8400	4540	2600	1440	3100
JUNE	2004	1151.5	6650	4480	13920	2000	6140	850	2650	980
JULY	2004	215.3	25250	16380	9520	7700	4480	2500	1480	3000
AUG.	2004	324.6	22660	14820	12990	6900	6030	2400	2120	2800
SEPT	2004	169.6	27470	17720	8110	8400	3860	2700	1210	3100
TOTAL		4594	**	**	134700	**	62630	**	21900	**
WTD.AVG.		13	16620	10860	**	5000	**	1800	**	2100

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	28,300	28,000	28,200	28,400	28,100	28,200	27,600	27,400	27,500	25,600	24,800	25,200
2	28,400	28,200	28,300	28,100	27,400	27,700	27,900	27,300	27,600	25,000	24,500	24,700
3	28,400	28,000	28,200	27,400	27,000	27,200	27,800	27,600	27,700	24,900	24,400	24,600
4	28,100	28,000	28,000	27,200	27,000	27,100	28,000	27,700	27,800	24,700	24,200	24,400
5	28,200	28,000	28,100	27,800	27,200	27,600	28,100	27,600	28,000	26,800	24,300	24,800
6	28,200	27,900	28,100	27,800	26,800	27,700	28,300	28,000	28,100	28,600	26,800	28,000
7	28,100	27,300	27,900	26,900	25,700	26,700	28,200	27,600	27,800	28,600	28,100	28,200
8	27,900	27,700	27,800	27,500	26,900	27,100	27,700	27,400	27,600	28,200	27,300	27,700
9	27,900	27,700	27,800	27,600	27,000	27,300	28,300	27,500	27,900	27,800	27,500	27,600
10	28,300	27,800	28,200	27,200	27,000	27,100	28,400	28,000	28,200	27,600	27,000	27,300
11	28,600	28,300	28,500	27,000	26,400	26,700	28,300	27,800	28,000	27,300	27,000	27,200
12	29,000	28,600	28,900	26,500	26,300	26,400	28,000	27,300	27,500	27,300	27,100	27,100
13	29,000	28,500	28,800	26,800	26,400	26,600	27,900	27,400	27,500	27,200	26,800	27,000
14	28,800	28,500	28,600	26,800	26,500	26,700	27,800	27,000	27,400	27,000	26,500	26,700
15	28,700	28,400	28,600	26,700	26,600	26,700	27,400	26,600	27,000	26,600	26,100	26,400
16	28,500	28,100	28,300	26,800	26,500	26,600	27,300	26,500	26,800	26,100	24,000	25,300
17	28,600	28,300	28,500	26,500	26,400	26,500	---	---	e26,600	25,100	23,800	24,700
18	28,700	28,500	28,600	26,900	26,400	26,700	26,800	26,300	26,500	26,000	22,500	24,600
19	28,700	28,300	28,500	27,100	26,900	27,000	26,500	26,400	26,400	---	---	e24,900
20	28,700	28,000	28,300	---	---	e26,900	26,800	26,000	26,300	---	---	e25,100
21	28,500	28,000	28,300	---	---	e26,700	26,600	26,200	26,300	---	---	e25,500
22	28,600	28,300	28,400	26,800	26,700	26,700	26,400	25,700	26,100	---	---	e26,000
23	28,600	28,200	28,400	27,300	26,800	27,100	26,200	25,100	25,700	26,200	24,700	25,800
24	28,500	28,200	28,300	27,600	27,300	27,500	26,100	24,600	25,300	26,300	26,200	26,300
25	29,000	28,300	28,700	27,700	27,300	27,500	26,100	25,100	25,600	26,700	25,900	26,400
26	29,000	28,700	28,800	27,400	27,100	27,200	26,400	25,800	26,100	26,800	23,500	25,300
27	28,900	28,300	28,500	27,500	27,300	27,400	26,300	25,300	26,000	26,200	23,300	24,400
28	28,600	28,200	28,400	27,700	27,400	27,500	26,300	25,200	25,900	---	---	e26,000
29	28,400	28,100	28,300	27,600	27,300	27,500	---	---	e25,200	---	---	e27,100
30	28,300	28,000	28,200	27,600	27,300	27,500	25,500	24,600	25,000	27,200	24,600	26,200
31	28,400	28,200	28,300	---	---	---	---	---	e25,400	26,800	25,900	26,600
MONTH	29,000	27,300	28,300	---	---	27,100	---	---	26,800	---	---	26,000

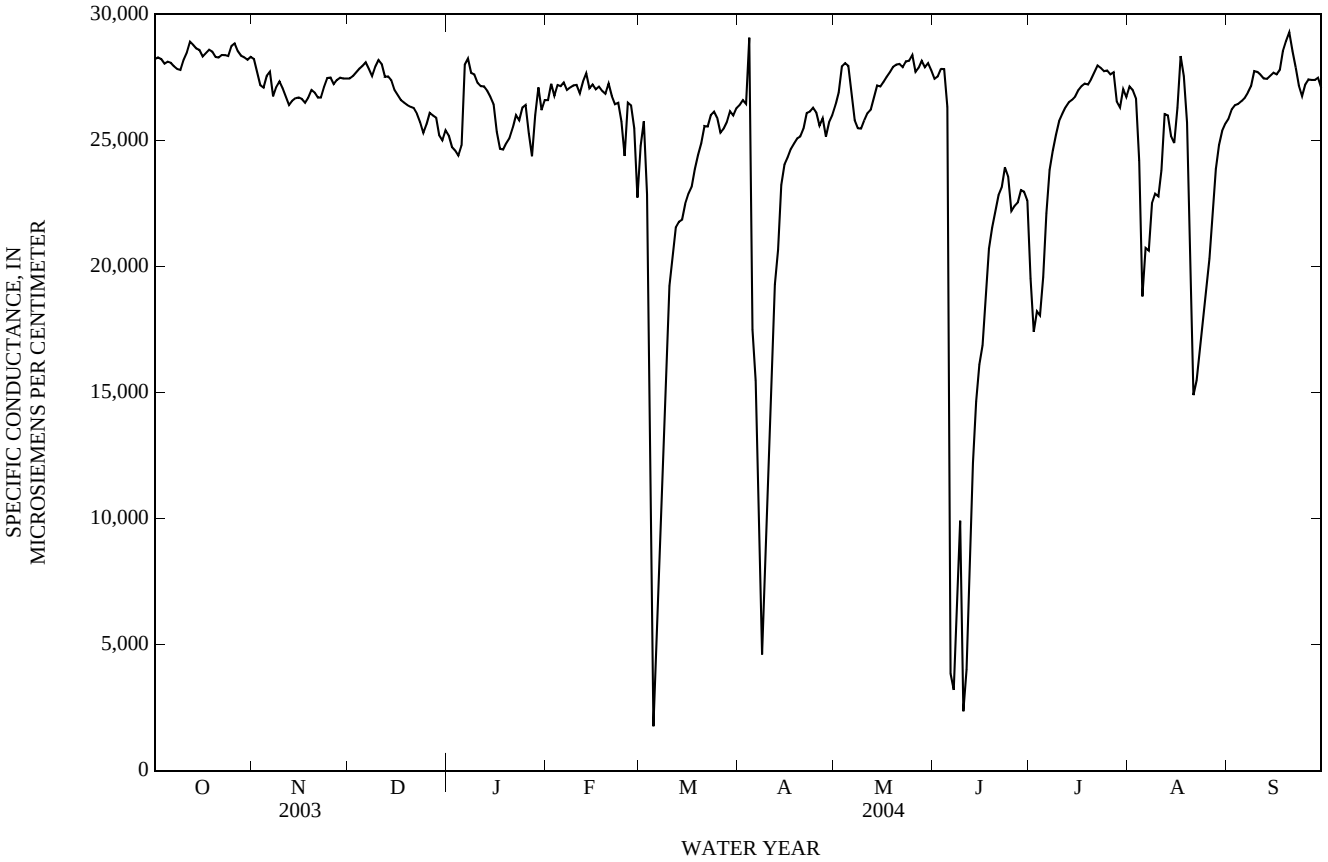
07311600 North Wichita River near Paducah, TX—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	27,400	25,600	26,600	26,100	21,600	24,800	26,700	26,000	26,400	26,600	26,100	26,400
2	27,700	26,500	27,200	26,600	23,700	25,800	26,900	26,300	26,600	27,200	26,500	26,900
3	27,400	26,100	26,800	25,500	21,300	22,900	27,900	26,000	26,500	28,400	27,200	27,900
4	27,400	26,900	27,200	21,600	3,660	13,400	31,600	22,800	29,100	28,500	27,600	28,100
5	27,400	26,800	27,200	---	1,100	e1,760	22,800	15,700	17,500	28,100	27,800	28,000
6	27,700	26,700	27,300	9,020	---	e6,590	16,800	14,300	15,500	27,900	26,100	26,900
7	27,300	26,500	27,000	13,200	9,020	11,200	22,200	2,700	10,500	26,200	25,300	25,800
8	27,400	26,800	27,100	16,100	13,200	14,700	6,540	2,890	4,600	25,600	25,400	25,500
9	27,400	27,000	27,200	18,200	16,100	17,200	10,300	6,540	8,440	25,600	25,400	25,500
10	27,500	27,000	27,200	20,200	18,100	19,200	13,900	10,300	12,200	26,100	25,500	25,800
11	27,300	26,600	26,900	20,800	20,200	20,400	17,800	13,900	15,900	26,200	26,000	26,100
12	27,600	26,900	27,300	21,900	20,800	21,600	19,800	17,800	19,300	26,500	26,100	26,200
13	27,800	26,900	27,700	22,000	21,500	21,800	22,200	19,800	20,700	27,100	26,400	26,700
14	27,700	26,600	27,100	22,700	18,200	21,900	24,000	22,200	23,200	27,300	27,000	27,200
15	27,400	26,900	27,200	22,900	22,200	22,500	24,300	23,800	24,000	27,300	26,900	27,100
16	27,300	26,600	27,000	23,200	22,300	22,900	24,700	24,100	24,300	27,500	27,200	27,300
17	27,500	26,100	27,100	23,600	22,800	23,200	25,000	24,300	24,700	27,700	27,400	27,500
18	27,400	26,600	27,000	24,300	23,600	23,900	25,100	24,700	24,900	28,000	27,600	27,700
19	27,300	26,600	26,800	24,600	24,300	24,400	25,200	24,800	25,100	28,100	27,700	27,900
20	27,600	26,600	27,300	25,500	24,400	24,900	25,400	25,000	25,200	28,200	27,800	28,000
21	27,400	25,300	26,800	25,900	25,400	25,600	25,800	25,100	25,500	28,200	27,700	28,000
22	27,100	24,300	26,400	26,100	25,200	25,600	26,500	25,800	26,100	28,100	27,600	27,900
23	26,700	25,600	26,500	26,300	25,600	26,000	26,300	25,800	26,100	28,300	27,900	28,100
24	26,500	23,100	25,700	26,300	25,700	26,100	26,500	26,100	26,300	28,300	27,900	28,200
25	26,100	21,200	24,400	26,300	25,500	25,900	26,600	24,100	26,100	28,500	28,200	28,400
26	26,800	25,700	26,500	25,500	25,200	25,300	26,000	25,200	25,600	28,600	27,300	27,700
27	26,800	25,300	26,400	25,700	25,300	25,500	26,200	25,600	25,900	28,300	27,500	27,900
28	26,500	25,000	25,500	25,900	25,500	25,700	26,000	24,500	25,200	28,500	27,700	28,200
29	25,200	19,600	22,700	26,400	25,900	26,200	26,000	25,100	25,700	28,400	27,600	27,900
30	---	---	---	26,400	25,600	26,000	26,200	25,800	26,000	28,500	27,600	28,100
31	---	---	---	26,600	25,900	26,300	---	---	---	27,900	27,500	27,800
MONTH	27,800	19,600	26,700	---	---	21,600	31,600	2,700	22,100	28,600	25,300	27,300
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27,800	27,000	27,400	20,800	17,900	19,500	27,300	27,000	27,100	26,000	25,800	25,900
2	27,800	27,400	27,500	17,900	17,200	17,400	27,200	26,900	27,000	26,400	25,900	26,200
3	28,000	27,500	27,800	18,400	17,900	18,200	26,900	26,400	26,700	26,600	26,200	26,400
4	28,000	27,100	27,800	18,400	17,900	18,100	26,500	9,820	24,200	26,600	26,300	26,400
5	27,100	22,900	26,300	20,800	18,400	19,600	21,300	15,100	18,800	26,700	26,400	26,600
6	26,900	---	e3,850	23,100	20,800	22,100	22,900	18,500	20,700	26,900	26,600	26,700
7	---	---	e3,200	24,300	23,100	23,800	23,400	18,500	20,600	27,200	26,600	26,900
8	8,420	---	e7,020	25,000	24,300	24,600	24,000	19,000	22,500	27,400	27,000	27,200
9	11,300	8,420	9,910	25,600	25,000	25,200	23,100	22,700	22,900	28,100	27,600	27,700
10	11,400	1,080	2,360	26,000	25,400	25,800	22,900	22,600	22,800	28,000	27,500	27,700
11	5,400	2,820	4,010	26,200	25,900	26,100	25,200	22,800	23,800	27,900	27,400	27,600
12	---	---	e7,750	26,400	26,200	26,300	26,200	25,200	26,000	27,600	27,400	27,500
13	---	---	e12,200	26,700	26,300	26,500	26,300	25,700	26,000	27,600	27,200	27,400
14	---	---	e14,600	26,700	26,500	26,600	25,800	24,800	25,200	27,700	27,400	27,600
15	---	---	e16,100	26,900	26,600	26,700	25,200	24,700	24,900	27,900	27,500	27,700
16	17,600	16,200	16,900	27,100	26,800	27,000	27,600	25,200	26,300	27,800	27,500	27,600
17	---	17,600	e18,600	27,300	27,000	27,200	28,700	27,600	28,300	28,400	27,400	27,800
18	21,200	---	e20,700	27,400	27,000	27,200	28,000	27,200	27,500	28,700	28,400	28,500
19	21,900	21,200	21,500	27,400	27,000	27,200	28,100	20,700	25,700	29,200	28,500	28,900
20	22,600	21,900	22,200	27,700	27,200	27,400	24,800	9,280	18,600	29,500	29,000	29,300
21	23,000	22,600	22,800	27,800	27,500	27,700	16,400	12,100	14,900	29,000	28,200	28,500
22	23,400	22,500	23,100	28,200	27,800	28,000	16,300	14,500	15,500	28,200	27,500	27,900
23	24,200	23,400	23,900	28,100	27,600	27,900	17,400	16,300	16,800	27,500	26,900	27,200
24	24,200	23,000	23,600	27,900	27,500	27,700	18,700	17,400	18,100	27,000	26,300	26,800
25	23,000	21,700	22,200	27,900	27,700	27,800	19,600	18,700	19,200	27,300	26,900	27,200
26	23,000	21,800	22,400	27,800	27,400	27,600	21,100	19,600	20,300	27,500	27,300	27,400
27	23,000	22,200	22,500	27,900	27,500	27,700	22,900	21,100	22,100	---	---	e27,400
28	23,600	22,200	23,000	27,900	25,200	26,500	24,500	22,900	23,900	27,500	27,300	27,400
29	23,500	22,400	23,000	26,800	25,900	26,300	25,100	24,500	24,800	27,700	27,300	27,500
30	24,400	20,600	22,600	27,300	26,800	27,000	25,600	25,100	25,400	27,600	23,300	27,100
31	---	---	---	27,000	26,400	26,700	25,800	25,600	25,700	---	---	---
MONTH	---	---	18,200	28,200	17,200	25,300	28,700	9,280	23,000	---	---	27,400

e Estimated

07311600 North Wichita River near Paducah, TX—Continued



TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

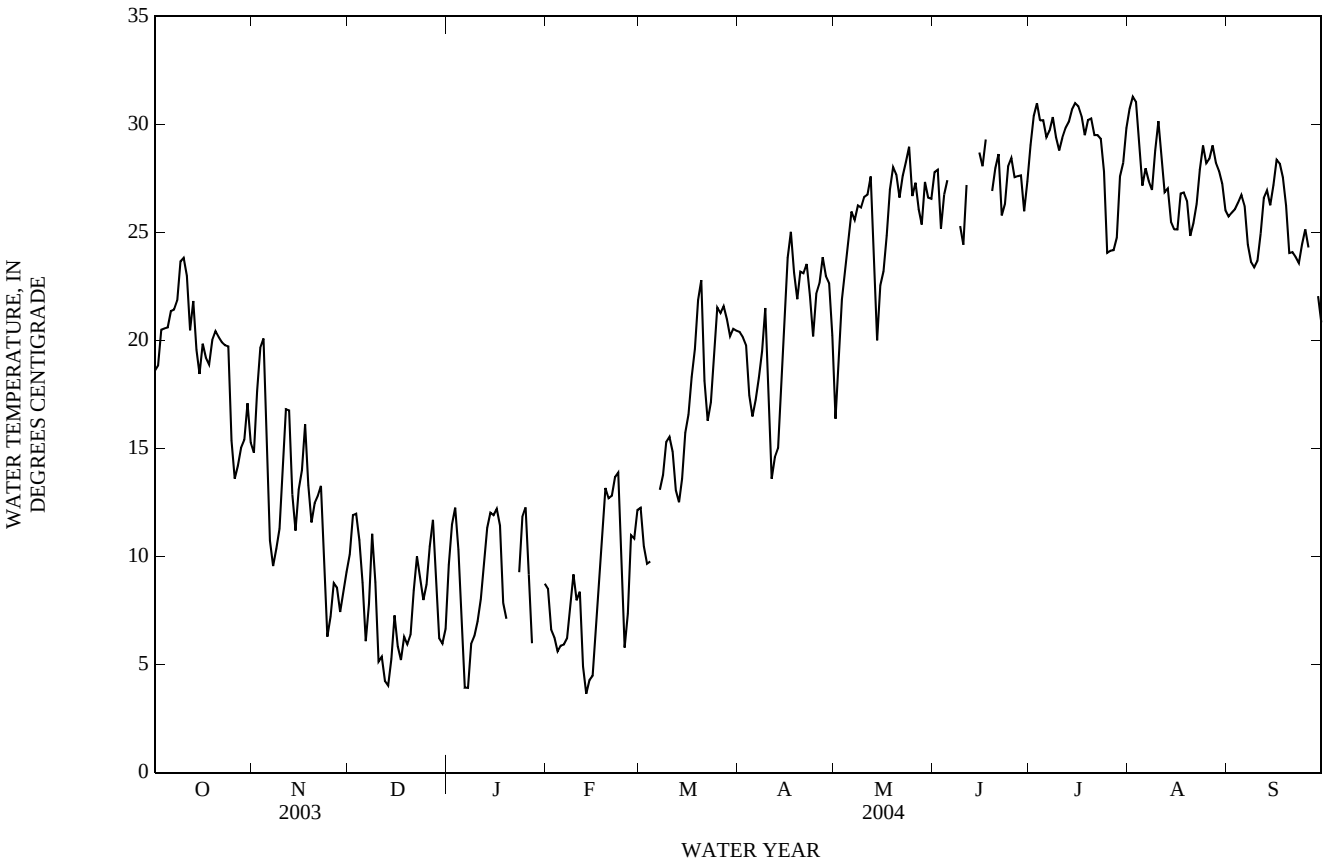
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	20.8	17.4	18.6	16.1	13.5	14.8	11.6	8.0	10.1	11.5	7.7	9.6
2	21.6	16.2	18.8	20.0	15.3	17.7	13.4	10.3	11.9	12.8	9.9	11.5
3	23.1	17.9	20.5	21.4	18.2	19.7	13.1	9.9	12.0	13.4	10.6	12.3
4	21.6	19.8	20.6	21.7	18.4	20.1	12.5	8.4	10.8	12.8	8.1	10.3
5	23.0	18.4	20.6	18.4	12.3	14.8	10.5	7.3	8.8	8.1	5.2	6.7
6	22.2	20.7	21.4	12.4	9.1	10.7	7.4	3.7	6.1	5.5	2.7	3.9
7	23.5	19.5	21.4	10.6	8.3	9.6	10.3	4.6	7.8	5.2	2.5	3.9
8	22.8	20.5	21.9	10.8	9.8	10.4	13.2	8.8	11.1	8.3	3.5	6.0
9	26.3	21.4	23.7	12.0	10.7	11.3	12.2	5.2	8.8	8.8	3.5	6.3
10	25.5	21.9	23.8	16.0	11.6	13.7	7.0	3.0	5.1	9.2	4.1	7.0
11	24.0	21.9	23.0	18.8	14.8	16.8	7.4	3.0	5.4	10.1	5.4	8.0
12	21.9	18.8	20.5	17.8	14.8	16.8	5.4	3.4	4.2	10.9	8.1	9.8
13	24.7	19.5	21.8	14.8	11.3	12.9	6.0	2.1	4.0	13.3	9.4	11.3
14	21.2	17.0	19.6	11.9	10.0	11.2	7.4	2.6	5.3	14.1	9.8	12.0
15	20.7	15.7	18.5	15.0	11.2	13.1	9.3	5.9	7.3	12.8	11.5	11.9
16	22.8	17.1	19.9	15.9	11.2	14.0	8.0	4.3	5.8	12.9	11.6	12.2
17	21.0	16.7	19.2	17.1	15.2	16.1	7.1	3.0	5.2	12.9	8.9	11.4
18	21.2	15.9	18.9	15.8	11.7	13.3	8.2	4.5	6.3	8.9	6.9	7.9
19	22.5	17.0	20.0	13.5	8.8	11.6	7.7	3.8	5.9	9.2	5.0	7.1
20	22.2	17.9	20.4	14.5	9.9	12.5	8.0	4.1	6.4	---	5.3	---
21	22.5	17.1	20.2	14.1	10.9	12.8	10.3	6.4	8.4	---	---	---
22	21.7	17.5	19.9	15.0	11.4	13.3	11.8	8.9	10.0	10.3	---	---
23	22.3	16.9	19.8	13.9	7.5	9.6	10.3	7.3	8.9	11.3	6.5	9.3
24	21.8	17.6	19.7	7.8	3.9	6.3	9.4	6.1	8.0	13.2	10.1	11.8
25	19.2	12.6	15.4	8.9	5.3	7.2	10.0	6.8	8.7	13.8	10.6	12.3
26	15.8	11.4	13.6	10.9	6.2	8.8	12.1	8.6	10.5	11.9	6.5	9.2
27	16.4	11.2	14.2	9.8	7.0	8.6	13.2	10.7	11.7	8.2	3.0	6.0
28	16.7	12.9	15.0	9.0	4.8	7.4	10.7	7.4	8.9	---	---	---
29	17.8	12.5	15.4	10.2	6.0	8.4	7.4	4.6	6.2	13.0	---	---
30	19.3	15.0	17.1	11.3	6.6	9.3	7.2	4.4	6.0	9.3	---	---
31	16.9	14.2	15.3	---	---	---	8.1	4.9	6.7	11.6	6.2	8.7
MONTH	26.3	11.2	19.3	21.7	3.9	12.4	13.4	2.1	7.8	---	---	---

07311600 North Wichita River near Paducah, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	10.6	6.3	8.5	15.1	8.6	12.3	23.8	16.5	20.4	19.0	13.9	16.4
2	9.6	3.4	6.6	13.2	9.8	10.5	21.4	18.8	20.2	24.0	13.6	18.9
3	7.3	4.5	6.3	10.3	9.1	9.7	22.5	17.8	19.8	26.3	17.5	21.9
4	6.0	5.2	5.6	10.2	9.2	9.8	19.2	16.1	17.5	27.3	19.4	23.4
5	7.2	5.1	5.9	---	---	---	17.4	15.5	16.5	28.9	20.8	24.7
6	8.5	3.4	5.9	14.9	---	---	19.5	15.6	17.2	30.0	22.2	26.0
7	9.0	2.9	6.2	15.3	10.6	13.1	19.6	16.9	18.3	28.3	23.2	25.6
8	10.8	4.3	7.8	17.2	10.4	13.8	23.4	15.8	19.5	30.0	23.1	26.2
9	10.4	7.7	9.2	18.2	12.2	15.3	24.9	18.0	21.5	29.6	23.1	26.2
10	9.8	5.6	8.0	18.3	12.1	15.5	22.8	13.8	17.2	30.4	23.4	26.6
11	9.0	7.1	8.4	16.4	12.6	14.9	15.4	11.4	13.6	29.6	24.1	26.8
12	7.1	3.7	4.9	14.6	12.2	13.1	17.5	11.9	14.6	31.8	24.1	27.6
13	4.5	3.1	3.6	13.9	11.3	12.5	19.2	10.9	15.0	27.6	19.1	24.6
14	7.2	1.9	4.3	14.3	13.0	13.6	22.6	14.3	18.6	24.6	15.8	20.0
15	5.5	3.2	4.5	19.3	12.9	15.7	25.1	17.1	21.4	26.8	18.4	22.6
16	10.4	4.1	6.9	19.1	13.4	16.6	27.6	19.8	23.8	25.3	20.9	23.2
17	12.2	5.3	8.9	21.6	14.7	18.3	27.9	21.9	25.0	29.0	20.9	24.9
18	14.0	7.4	11.0	22.4	16.0	19.6	24.5	22.3	23.1	31.3	23.6	27.0
19	15.6	10.9	13.2	25.2	18.6	21.9	23.4	20.6	21.9	32.2	24.7	28.0
20	15.0	10.2	12.7	26.0	20.3	22.8	25.9	20.1	23.2	31.0	24.9	27.7
21	15.3	9.8	12.8	20.7	16.2	18.1	26.4	19.2	23.1	29.9	24.0	26.6
22	16.3	10.4	13.7	18.4	14.1	16.3	27.4	19.6	23.5	32.0	24.2	27.6
23	15.4	12.9	13.9	18.8	14.8	17.1	24.3	19.4	22.1	32.3	24.8	28.3
24	12.9	5.9	9.4	22.3	16.9	19.1	24.2	16.7	20.2	32.8	25.6	29.0
25	7.3	4.8	5.8	24.9	18.8	21.5	26.4	18.1	22.2	29.0	25.2	26.7
26	11.4	3.1	7.4	22.2	20.0	21.3	26.2	18.7	22.7	31.4	23.5	27.3
27	14.5	7.0	11.0	24.0	19.3	21.6	27.7	19.9	23.9	28.4	23.6	26.1
28	12.8	10.3	10.8	23.4	18.0	21.0	25.6	20.6	23.0	29.9	21.0	25.4
29	14.8	9.5	12.2	23.2	16.5	20.2	27.6	18.6	22.7	30.9	24.7	27.3
30	---	---	---	23.6	17.0	20.5	23.4	16.8	20.2	30.6	23.0	26.6
31	---	---	---	23.5	16.9	20.5	---	---	---	30.5	22.7	26.6
MONTH	16.3	1.9	8.5	---	---	---	27.9	10.9	20.4	32.8	13.6	25.3
		JUNE			JULY			AUGUST			SEPTEMBER	
1	31.7	24.2	27.8	32.1	26.3	29.0	33.9	27.4	30.7	27.9	23.8	25.7
2	31.8	25.2	27.9	34.1	26.8	30.4	34.0	28.4	31.3	28.8	23.0	25.9
3	27.7	22.9	25.2	33.9	27.9	31.0	33.8	28.2	31.0	28.8	23.2	26.1
4	30.2	23.4	26.8	32.9	27.6	30.2	33.2	25.1	29.2	28.9	23.8	26.4
5	31.2	24.0	27.4	33.4	27.5	30.2	29.9	25.1	27.2	28.8	24.6	26.7
6	---	19.9	---	32.0	26.8	29.4	30.1	26.0	28.0	28.3	24.0	26.2
7	---	---	---	32.6	27.1	29.7	29.9	25.5	27.4	26.8	21.9	24.4
8	26.8	---	---	33.4	27.4	30.3	29.3	24.3	27.0	26.3	20.6	23.6
9	27.8	23.8	25.3	31.9	27.3	29.4	31.8	25.6	28.8	26.3	19.9	23.4
10	27.5	21.6	24.4	31.4	26.4	28.8	33.5	26.8	30.1	26.7	20.0	23.7
11	30.8	23.7	27.2	32.6	26.5	29.4	30.7	26.1	28.6	27.9	21.7	24.9
12	---	---	---	32.9	27.0	29.8	29.9	24.2	26.9	29.3	23.7	26.6
13	---	---	---	33.1	27.2	30.1	29.9	24.4	27.0	29.6	24.5	26.9
14	32.5	---	---	33.9	27.6	30.7	27.3	23.9	25.5	29.0	23.8	26.3
15	31.5	25.9	28.7	34.2	27.9	31.0	27.1	23.4	25.1	30.7	24.1	27.2
16	30.9	25.2	28.1	34.2	27.7	30.8	27.9	22.9	25.1	30.7	26.5	28.4
17	31.6	25.1	29.3	32.9	28.0	30.4	30.3	23.3	26.8	30.6	25.6	28.2
18	31.1	---	---	32.3	27.1	29.5	29.2	24.8	26.8	29.4	25.9	27.5
19	29.1	25.0	26.9	33.2	27.3	30.2	29.4	23.7	26.5	28.0	24.6	26.2
20	31.0	25.3	28.0	33.1	27.8	30.3	27.2	23.0	24.8	25.4	22.8	24.0
21	31.4	26.0	28.6	32.6	26.7	29.5	29.0	22.8	25.4	26.6	22.3	24.1
22	28.3	23.7	25.8	32.6	26.9	29.5	29.6	23.4	26.3	25.6	22.4	23.9
23	30.3	22.7	26.3	31.9	27.4	29.3	31.2	24.7	27.9	25.3	21.6	23.6
24	31.8	24.4	28.1	29.6	26.7	27.8	31.9	26.1	29.0	26.9	22.1	24.5
25	31.4	25.9	28.4	27.0	22.8	24.1	30.1	26.0	28.2	27.1	23.2	25.1
26	30.2	25.6	27.6	26.5	21.8	24.2	31.5	25.5	28.4	25.4	22.9	24.3
27	31.0	24.2	27.6	25.0	23.5	24.2	32.0	26.2	29.0	---	---	---
28	29.4	26.2	27.6	27.3	22.7	24.8	29.6	26.7	28.2	---	---	---
29	27.6	24.5	26.0	28.5	25.6	27.6	30.7	25.0	27.8	24.6	19.1	22.1
30	31.1	24.2	27.4	32.1	24.7	28.2	29.6	25.2	27.3	22.6	20.0	20.8
31	---	---	---	33.3	26.5	29.8	27.9	24.1	26.0	---	---	---
MONTH	---	---	---	34.2	21.8	29.0	34.0	22.8	27.7	---	---	---

07311600 North Wichita River near Paducah, TX—Continued



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07311630 Middle Wichita River near Guthrie, TX

LOCATION.--Lat 33°47'45", long 100°04'29", King County, Hydrologic Unit 11130204, on right bank 100 ft downstream from inflatable dam, 0.71 mi upstream from Forrer Creek, 1.0 mi downstream from ranch road crossing, 12.0 mi upstream from confluence with North Wichita River and 19.0 mi northeast of Guthrie.

DRAINAGE AREA.--50.3 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1994 to Sept. 1996 (daily mean discharges less than 30 ft^3/s), Oct. 1996 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,583.90 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No known regulation or diversions. Low flow is maintained by springs that enter river in the vicinity of gage.

EXTREMES FOR PERIOD OF DAILY MEAN DISCHARGES BELOW BASE.--Maximum gage height, 16.02 ft, Aug. 2, 1995; minimum daily discharge, 2.7 ft^3/s, Aug. 23, 1996.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.0	3.9	3.3	4.1	e3.6	2.7	4.8	3.9	5.2	4.2	5.4	7.1
2	3.8	3.9	3.8	3.9	e3.4	2.8	5.4	3.9	9.9	4.2	5.2	7.4
3	3.9	e3.9	3.8	3.9	e2.8	2.8	5.2	3.9	e3.7	4.0	4.9	7.6
4	4.0	e3.8	4.1	3.9	3.2	40	4.9	4.0	e1.9	3.9	4.6	8.5
5	3.9	4.0	4.1	3.9	3.4	16	4.9	e4.5	6.3	3.9	4.8	8.9
6	4.2	4.1	4.2	3.9	3.4	5.1	7.4	3.7	46	3.9	5.0	7.8
7	4.3	4.4	4.1	3.7	3.2	4.5	5.1	3.9	5.3	4.0	4.9	4.8
8	4.0	3.8	4.0	3.4	3.1	4.5	4.8	4.1	5.2	4.0	4.9	6.0
9	3.7	3.8	4.0	3.5	3.0	4.6	4.9	3.9	e4.2	3.8	4.7	5.4
10	3.6	3.8	14	3.4	3.0	4.5	4.5	3.5	e0.72	3.8	4.7	4.9
11	3.8	3.8	4.0	3.5	3.0	4.4	4.4	3.7	4.3	3.8	4.5	4.9
12	3.7	3.7	4.0	3.5	3.2	4.5	4.4	3.7	4.4	3.9	4.6	9.2
13	3.7	3.7	4.0	3.6	3.2	4.8	4.4	3.8	4.3	3.9	4.7	4.3
14	3.5	3.8	4.0	3.6	3.4	4.5	4.3	3.8	4.2	3.9	4.5	4.6
15	3.6	3.7	3.8	3.8	3.2	4.4	4.1	3.7	4.5	3.8	15	4.7
16	3.5	3.6	3.8	4.8	3.1	4.3	4.2	3.8	4.5	3.8	8.6	4.6
17	3.6	3.7	3.9	5.6	3.1	4.3	3.9	3.8	4.7	3.8	4.5	2.9
18	3.6	3.7	3.8	4.5	2.9	4.4	3.8	3.9	4.9	3.9	4.3	1.4
19	3.6	3.6	3.9	3.9	2.8	4.4	e8.2	4.0	5.4	4.0	4.1	4.2
20	3.6	3.6	3.9	3.9	2.8	4.4	e2.4	3.9	5.0	4.0	4.7	4.2
21	3.6	3.5	3.7	4.0	2.9	4.7	3.6	4.0	4.8	4.0	4.3	4.4
22	3.6	3.5	3.6	4.0	2.9	e2.8	3.8	3.9	4.9	4.1	4.2	4.7
23	3.7	3.5	e2.8	4.0	3.0	e2.3	4.0	4.2	4.5	4.3	4.3	3.8
24	3.6	3.5	e0.98	3.8	3.6	4.2	4.1	4.4	4.5	4.6	4.4	3.8
25	3.6	3.5	3.4	3.7	3.6	4.3	4.0	4.6	4.5	4.7	4.5	4.0
26	3.6	e6.1	3.4	3.8	3.1	4.3	4.1	4.7	4.6	5.0	4.5	4.0
27	3.7	3.2	3.4	3.9	3.0	4.3	3.9	4.9	4.4	5.4	4.5	3.9
28	3.6	3.1	3.3	3.8	2.9	4.4	3.8	4.9	4.4	9.2	5.2	4.1
29	3.5	3.1	3.3	3.7	4.9	e4.5	3.9	4.8	5.5	4.8	4.6	4.3
30	3.5	3.1	3.3	3.7	---	e4.5	4.0	4.6	e6.7	4.4	5.2	5.8
31	3.7	---	3.7	3.9	---	4.7	---	4.9	---	5.3	6.7	---
TOTAL	113.3	112.4	123.38	120.6	92.7	176.9	135.2	127.3	183.42	134.3	161.0	156.2
MEAN	3.65	3.75	3.98	3.89	3.20	5.71	4.51	4.11	6.11	4.33	5.19	5.21
MAX	4.3	6.1	14	5.6	4.9	40	8.2	4.9	46	9.2	15	9.2
MIN	2.0	3.1	0.98	3.4	2.8	2.3	2.4	3.5	0.72	3.8	4.1	1.4
AC-FT	225	223	245	239	184	351	268	252	364	266	319	310

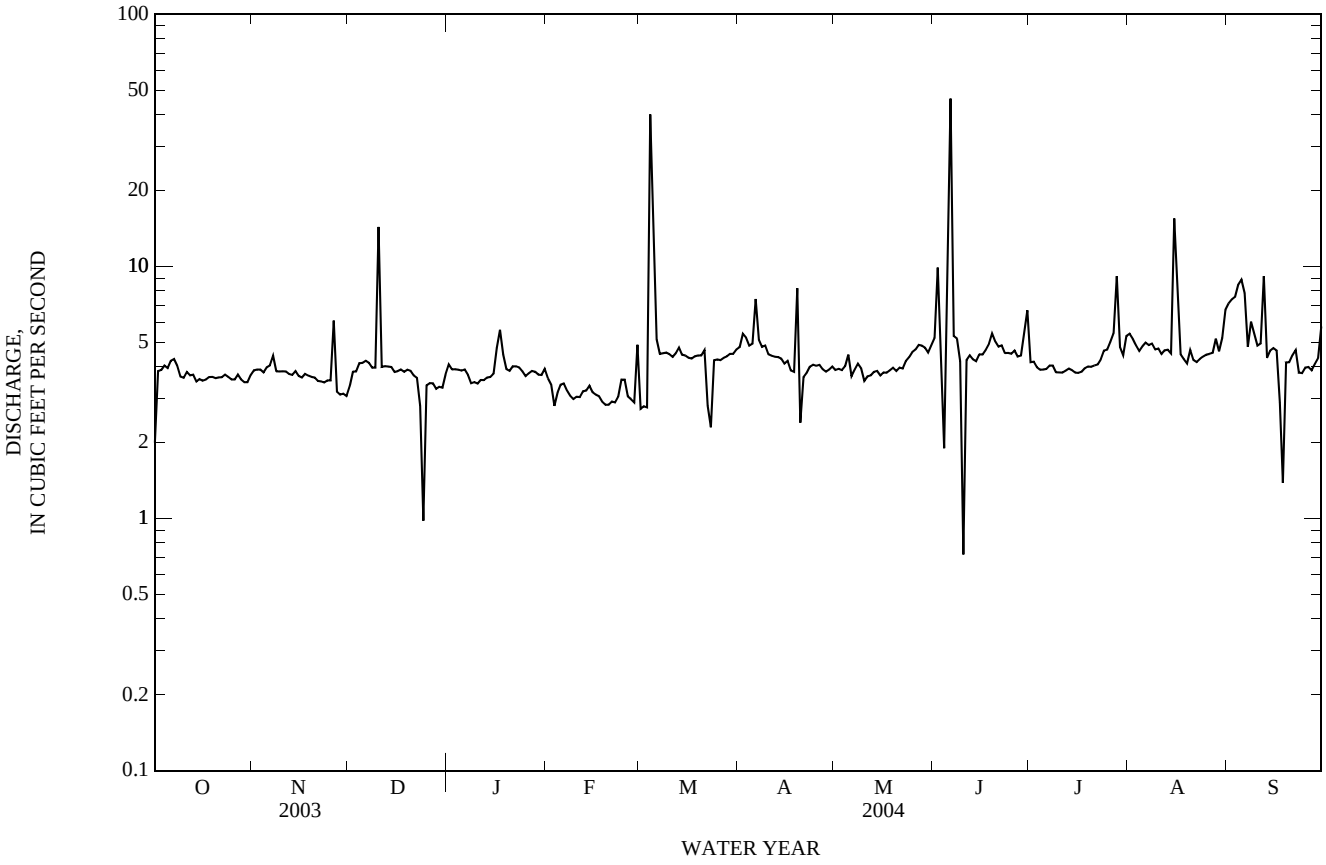
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2004, BY WATER YEAR (WY)

MEAN	5.99	6.36	5.97	5.98	5.59	8.16	6.19	6.11	5.88	5.27	5.35	5.06
MAX	9.37	10.1	8.22	7.54	7.58	24.1	7.77	11.5	7.59	8.25	8.39	6.45
(WY)	(2001)	(2001)	(1998)	(2001)	(1997)	(2000)	(1999)	(1999)	(1997)	(1999)	(2001)	(1997)
MIN	3.65	3.75	3.98	3.89	3.20	4.40	4.51	4.11	4.31	3.66	2.59	3.39
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2004)	(2004)	(1998)	(2003)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1997 - 2004	
ANNUAL TOTAL	1,662.98		1,636.70			
ANNUAL MEAN	4.56		4.47		6.00	
HIGHEST ANNUAL MEAN					7.75	2000
LOWEST ANNUAL MEAN					4.47	2004
HIGHEST DAILY MEAN	20	Sep 11	46	Jun 6	514	Mar 23, 2000
LOWEST DAILY MEAN	0.98	Dec 24	0.72	Jun 10	0.72	Jun 10, 2004
ANNUAL SEVEN-DAY MINIMUM	2.9	Dec 23	2.9	Feb 17	1.9	Aug 13, 2002
MAXIMUM PEAK FLOW			386	Aug 15	5,630	Aug 2, 1995
MAXIMUM PEAK STAGE			10.97	Aug 15	16.02	Aug 2, 1995
ANNUAL RUNOFF (AC-FT)	3,300		3,250		4,340	
10 PERCENT EXCEEDS	5.9		5.2		7.6	
50 PERCENT EXCEEDS	4.3		4.0		5.2	
90 PERCENT EXCEEDS	3.4		3.2		3.8	

e Estimated

07311630 Middle Wichita River near Guthrie, TX—Continued



07311630 Middle Wichita River near Guthrie, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1993 to current year.
PESTICIDE DATA: Oct. 1996 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct. 1994 to current year.
TEMPERATURE: Oct. 1994 to current year.

INSTRUMENTATION.--Water-quality monitor since Oct. 1994.

REMARKS.--Records good. Interruption in record was caused by malfunctions of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. New regression equations were developed based on data from water years 1995 to 2004. The standard error of estimate for dissolved solids is 2%, chloride is 3%, sulfate is 3% and for hardness is 5%. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 18,900 microsiemens/cm, May 26, 1996; minimum, 210 microsiemens/cm, May 10, 1999.
TEMPERATURE: Maximum, 36.4°C, July 1, 2003; minimum, 0.0°C, Dec. 22, 1999.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 15,800 microsiemens/cm, Feb. 2, minimum, 1,180 microsiemens/cm, Mar 4.
WATER TEMPERATURE: Maximum, 34.5°C, June 7, Aug 29; Minimum, 1.1°C, Dec 13, Dec 17.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
OCT													
06...	1150	4.3	8.8	103	7.8	13,000	21.1	2,600	2,500	806d	148d	13.3d	18
NOV													
04...	1125	3.9	8.8	102	7.9	13,400	21.1	2,600	2,400	791d	143	13.7	19
DEC													
01...	1135	2.7	11.3	100	7.9	13,700	8.7	2,900	2,700	876d	165d	12.6d	17
JAN													
08...	1150	3.2	12.5	101	7.9	14,000	4.3	2,800	2,600	853d	153d	12.0d	18
FEB													
02...	1130	3.2	11.9	102	7.7	13,900	6.8	2,700	2,500	833d	151d	13.7d	19
MAR													
15...	1130	4.6	10.4	110	7.9	13,500	15.8	2,800	2,600	849d	163d	13.1d	20
APR													
01...	1100	5.0	9.1	103	7.7	14,400	18.7	2,900	2,700	880d	166d	15.3d	20
MAY													
03...	1135	4.1	8.4	99	7.7	14,500	18.7	2,700	2,500	817d	155d	13.0d	20
JUN													
17...	1125	4.5	7.8	112	7.8	14,200	28.4	2,700	2,600	830d	155d	12.5d	19
JUL													
30...	1130	4.0	6.9	96	7.7	13,000	27.3	2,500	2,400	777dc	145dc	13.3dc	19
AUG													
23...	1055	4.1	8.5	116	7.6	14,700	25.0	2,800	2,700	862d	158d	13.7d	21
SEP													
13...	1150	3.9	9.7	134	7.7	14,800	26.0	2,900	2,700	875d	165d	14.8d	20

07311630 Middle Wichita River near Guthrie, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium, water, fltrd, mg/L (00930)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
OCT													
06...	2170d	139	3270d	.6	9.6	2230d	8,720	21	.23	--o	--	--o	--o
NOV													
04...	2150d	135	3440d	.6	9.8	2320d	8,960	16	.25	.09	.21	.22	.009
DEC													
01...	2110d	165	3540d	.6	12.6	2320d	9,140	<10	.15	.13	.57	.58	.009
JAN													
08...	2220d	169	3750d	.6	13.9	2390d	9,500	<10	.12	.12	--	.65	E.005n
FEB													
02...	2310d	169	3650d	.6	11.8	2350d	9,420	<10	.20	.12	--	.47	E.007n
MAR													
15...	2400d	186	3570d	.6	11.9	2420d	9,540	17	.18	.13	.49	.49	.008
APR													
01...	2480d	159	3820d	.6	10.8	2500d	9,970	10	.21	.12	--	.35	E.007n
MAY													
03...	2410d	157	3800d	.6	10.8	2310d	9,610	<10	.15	.11	.37	.38	.011
JUN													
17...	2320d	107	3750d	.6	7.2	2290d	9,440	13	.25	.05	--	<.06	E.004n
JUL													
30...	2170dc	118	3410d	.5	8.5	2130d	8,730	<10	.45	.10	--	E.04n	E.007n
AUG													
23...	2580d	124	3760d	.6	6.1	2350d	9,810	25	.43	.11	--	<.06	<.008
SEP													
13...	2440d	120	3770d	.6	8.3	2390d	9,730	24	.43	.19	--	<.06	<.008

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)
OCT													
06...	--	--o	--r	<.04	--	1.6d	E6ndc	18d	22d	<.24d	<.24d	<1.6d	<.8
NOV													
04...	.16	<.02	<.04	<.04	.47	E.6nd	<2	19d	22d	<.24d	<.24d	<1.6d	<1.6d
DEC													
01...	.02	<.02	<.04	<.04	.73	<1.2d	<4dc	16d	18d	<.24d	<.24d	<1.6d	<1.6d
JAN													
08...	--	<.02	<.04	<.04	.76	1.8d	<4d	17d	17d	<.24d	<.24d	<1.6d	<1.6d
FEB													
02...	.08	<.02	<.04	<.04	.67	E.7nd	<4d	18d	18d	<.24d	<.24d	<1.6d	<1.6d
MAR													
15...	.06	<.02	<.04	<.04	.68	1.5d	<4d	21d	25d	<.24d	<.24d	<1.6d	<1.6d
APR													
01...	.09	<.02	<.04	<.04	.56	E.7nd	<4d	21d	22d	<.24d	<.24d	<1.6d	<1.6d
MAY													
03...	.04	<.02	<.04	<.04	.54	E.2n	<4d	18d	19d	.04	<.24d	<1.6d	<1.6d
JUN													
17...	.20	<.02	<.04	<.04	--	1.8d	<4d	26	26d	E.03n	<.28d	<.8	<1.6d
JUL													
30...	.35	<.02	<.04	<.04	--	1.2d	<2	35d	36d	<.24d	<.24d	<.8	<.8
AUG													
23...	.32	<.02	<.04	<.04	--	1.4d	<4d	24d	26d	<.24d	<.24d	<.8	<1.6d
SEP													
13...	.24	<.02	<.04	E.02n	--	E.9nd	<4d	22d	21d	<.24d	<.24d	<1.6d	1.7d

07311630 Middle Wichita River near Guthrie, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover -able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)
OCT													
06...	5.7d	29.0d	<64d	300d	<.48d	E.23nd	10.3d	15d	<.02	<.02	14.6d	31.9d	12.2d
NOV													
04...	9.4d	30.1d	8	220d	<.48d	E.30nd	10.4d	14d	<.02	<.02	8.13d	30.5d	10
DEC													
01...	8.6d	34.2d	<64d	70d	<.48d	<.36d	3.5d	4d	<.02	<.02	9.53d	34.2d	14
JAN													
08...	10.4d	39.6d	<96d	E60nd	<.48d	<.36d	4.5d	4d	<.02	<.02	16.8d	27.8d	10
FEB													
02...	9.7d	20.7d	<64d	E80nd	<.48d	<.36d	7.5d	8d	<.02	<.02	11.2d	17.7d	11
MAR													
15...	10.9d	20.7d	<64d	260d	.92d	<.36d	17.1d	20d	<.02	<.02	11.7d	20.3d	10
APR													
01...	10.1d	17.9d	<64d	150d	<.48d	<.36d	13.5d	14d	<.02	<.02	9.50d	16.5d	10
MAY													
03...	11.7	17.4d	<64d	150d	.09	E.22nd	7.9	9d	<.02	<.02	20.0	19.1d	10
JUN													
17...	9.3	22.7d	<96d	190	<.08	<.42d	23.3	32d	<.02	<.02	14.9d	18.7d	8
JUL													
30...	11.2d	20.1d	<64d	130d	<.48d	<.36d	23.2d	21d	<.02	<.02	12.8d	34.1d	8
AUG													
23...	7.8d	24.7d	<64d	500d	E.25nd	E.22nd	30.7d	29d	<.02	<.02	22.1d	39.0d	8
SEP													
13...	28.7d	34.7d	<64d	320d	<.48d	E.29nd	14.3d	17d	<.02	<.02	7.43d	24.5d	10

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Selenium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha-Endosulfan, water, unfltrd ug/L (34361)	alpha-HCH, water, unfltrd ug/L (39337)	alpha-HCH-d6, surrog, Sch1608 water, unfltrd pct rcv (99778)	Aroclor 1016 + 1242, water, unfltrd ug/L (81648)	Aroclor 1221, water, unfltrd ug/L (39488)	Aroclor 1232, water, unfltrd ug/L (39492)	Aroclor 1248, water, unfltrd ug/L (39500)
OCT													
06...	12.0d	<1.2d	<.96d	6.2d	14d	--	--	--	--	--	--	--	--
NOV													
04...	10	<1.2d	<.96d	5.8d	14d	--	--	--	--	--	--	--	--
DEC													
01...	11	<1.2d	<.96d	7.0d	21d	--	--	--	--	--	--	--	--
JAN													
08...	10	<1.2d	<.96d	6.6d	17d	--	--	--	--	--	--	--	--
FEB													
02...	11	E.8nd	<.96d	<3.6d	E9nd	--	--	--	--	--	--	--	--
MAR													
15...	11	<1.2d	<.96d	9.2d	<12d	--	--	--	--	--	--	--	--
APR													
01...	11	<1.2d	<.96d	6.7d	<12d	<.04	<.1	<.03	E118	<.1	<1	<.1	<.1
MAY													
03...	11	<.2	<.96d	5.9	E6nd	--	--	--	--	--	--	--	--
JUN													
17...	8	<1.2d	<1.12d	4.2	E14nd	<.04	<.1	<.03	E67.3	<.1	<1	<.1	<.1
JUL													
30...	9	<1.2d	<.96d	7.5d	E8nd	--	--	--	--	--	--	--	--
AUG													
23...	9	<1.2d	<.96d	8.1d	E9nd	--	--	--	--	--	--	--	--
SEP													
13...	10	<1.2d	<.96d	11.0d	12d	--	--	--	--	--	--	--	--

07311630 Middle Wichita River near Guthrie, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Aroclor 1254, water, unfltrd ug/L (39504)	Aroclor 1260, water, unfltrd ug/L (39508)	beta-Endo-sulfan, water, unfltrd ug/L (34356)	beta-HCH, water, unfltrd ug/L (39338)	Chlor-dane, tech-nical, water, unfltrd ug/L (39350)	cis-Chlor-dane, water, unfltrd ug/L (39062)	delta-HCH, water, unfltrd ug/L (34259)	Diel-drin, water, unfltrd ug/L (39380)	Endo-sulfan sulfate water unfltrd ug/L (34351)	Endrin alde-hyde, water, unfltrd ug/L (34366)	Endrin, water, unfltrd ug/L (39390)	Hepta-chlor epoxide water unfltrd ug/L (39420)	Hepta-chlor, water, unfltrd ug/L (39410)
OCT													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
01...	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8	<.03
MAY													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
17...	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8	<.03
JUL													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Lindane water, unfltrd ug/L (39340)	p,p'-DDD, water, unfltrd ug/L (39310)	p,p'-DDE, water, unfltrd ug/L (39320)	p,p'-DDT, water, unfltrd ug/L (39300)	PCB 207, surrog, Sch1608 water, unfltrd pct rcv (99781)	Toxa-phene, water, unfltrd ug/L (39400)	trans-Chlor-dane, water, unfltrd ug/L (39065)
OCT							
06...	--	--	--	--	--	--	--
NOV							
04...	--	--	--	--	--	--	--
DEC							
01...	--	--	--	--	--	--	--
JAN							
08...	--	--	--	--	--	--	--
FEB							
02...	--	--	--	--	--	--	--
MAR							
15...	--	--	--	--	--	--	--
APR							
01...	<.03	<.1	<.04	<.1	E144	<2	<.1
MAY							
03...	--	--	--	--	--	--	--
JUN							
17...	<.03	<.1	<.04	<.1	E81.2	<2	<.1
JUL							
30...	--	--	--	--	--	--	--
AUG							
23...	--	--	--	--	--	--	--
SEP							
13...	--	--	--	--	--	--	--

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

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

Null value qualifier codes used in this table:
o -- Insufficient amount of water
r -- Sample ruined in preparation

07311630 Middle Wichita River near Guthrie, TX—Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 2003 TO SEPTEMBER 2004

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.	2003	113.3	12880	8760	2680	3300	1000	2300	709	2600
NOV.	2003	112.4	13060	8850	2680	3300	1010	2300	704	2600
DEC.	2003	123.38	12820	8730	2910	3300	1090	2300	771	2600
JAN.	2004	120.6	13570	9090	2960	3500	1130	2300	754	2600
FEB.	2004	92.7	11410	7970	1990	2900	715	2200	562	2400
MAR.	2004	176.9	9590	6800	3250	2400	1140	2000	947	2100
APR.	2004	135.2	10650	7540	2750	2600	965	2200	801	2300
MAY	2004	127.3	11800	8200	2820	3000	1020	2300	785	2500
JUNE	2004	183.42	10410	7290	3610	2600	1290	2100	1020	2200
JULY	2004	134.3	12380	8500	3080	3100	1130	2300	835	2500
AUG.	2004	161	13450	9020	3920	3400	1500	2300	1000	2600
SEPT	2004	156.2	14200	9390	3960	3700	1550	2300	976	2700
TOTAL		1636.7	**	**	36620	**	13530	**	9870	**
WTD.AVG.		4.5	12100	8290	**	3100	**	2200	**	2500

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	13,000	12,600	12,900	13,500	13,400	13,500	14,400	13,500	13,800	---	---	e13,900
2	13,000	12,900	13,000	13,500	13,400	13,500	13,500	13,200	13,300	---	---	e14,400
3	13,000	13,000	13,000	---	---	e13,400	13,200	13,000	13,100	---	---	e14,700
4	13,000	13,000	13,000	13,600	13,100	13,200	13,100	12,900	13,000	---	---	e14,800
5	13,100	13,000	13,100	13,100	13,000	13,100	13,100	12,000	12,700	---	---	e14,700
6	13,200	12,400	12,900	13,200	13,000	13,100	12,800	12,000	12,400	---	---	e14,300
7	12,400	12,200	12,300	13,100	12,600	12,900	12,800	12,000	12,400	---	---	e14,200
8	12,300	12,000	12,200	12,700	12,400	12,600	13,200	12,000	12,800	---	---	e14,000
9	12,200	12,100	12,200	12,900	12,700	12,700	13,200	12,200	12,700	14,000	13,600	13,700
10	12,300	12,200	12,200	12,900	12,800	12,800	13,100	12,000	12,500	13,700	13,500	13,600
11	12,400	12,300	12,300	12,900	12,800	12,900	12,700	11,900	12,400	13,600	13,500	13,500
12	12,500	12,400	12,500	12,900	12,900	12,900	12,500	12,200	12,400	13,600	13,500	13,500
13	12,600	12,500	12,500	13,000	12,900	13,000	12,600	12,100	12,300	13,600	13,400	13,500
14	12,800	12,600	12,600	13,000	12,900	13,000	12,600	12,100	12,400	13,500	13,300	13,400
15	12,900	12,700	12,800	12,900	12,800	12,900	12,800	12,400	12,500	13,500	13,400	13,400
16	12,900	12,800	12,800	13,000	12,800	12,900	12,500	12,100	12,400	13,500	12,500	12,900
17	12,900	12,800	12,900	13,100	12,900	13,000	12,600	11,900	12,200	12,800	11,700	12,400
18	13,000	12,800	12,900	13,100	12,900	13,000	12,700	12,200	12,400	12,000	11,100	11,500
19	13,000	12,800	12,900	13,000	12,900	13,000	12,600	12,000	12,300	12,700	11,400	12,200
20	13,000	12,900	12,900	13,000	13,000	13,000	12,800	12,100	12,400	13,100	12,500	12,900
21	13,000	12,900	13,000	13,100	13,000	13,100	13,000	12,400	12,700	13,200	12,800	13,100
22	13,000	12,900	13,000	13,200	13,100	13,200	13,000	12,800	12,900	13,400	13,100	13,300
23	13,100	12,900	13,000	13,100	13,000	13,100	13,200	12,500	12,800	13,700	13,300	13,500
24	13,100	13,000	13,100	13,000	12,700	12,900	13,700	13,100	13,400	13,900	13,600	13,700
25	13,200	13,100	13,200	12,800	12,600	12,700	13,500	13,200	13,400	14,100	13,800	14,000
26	13,400	13,200	13,300	12,800	11,900	12,500	13,800	13,400	13,600	---	---	e14,000
27	13,400	13,300	13,300	13,700	12,500	13,200	14,000	13,800	13,900	---	---	e13,700
28	13,500	13,300	13,400	13,800	13,100	13,600	---	---	e14,000	---	---	e13,500
29	13,500	13,300	13,400	14,000	13,200	13,700	---	---	e13,600	---	---	e13,800
30	13,500	13,400	13,500	14,100	13,800	14,000	---	---	e13,500	---	---	e13,800
31	13,600	13,400	13,500	---	---	---	---	---	e13,600	---	---	e13,900
MONTH	13,600	12,000	12,900	---	---	13,100	---	---	12,900	---	---	13,600

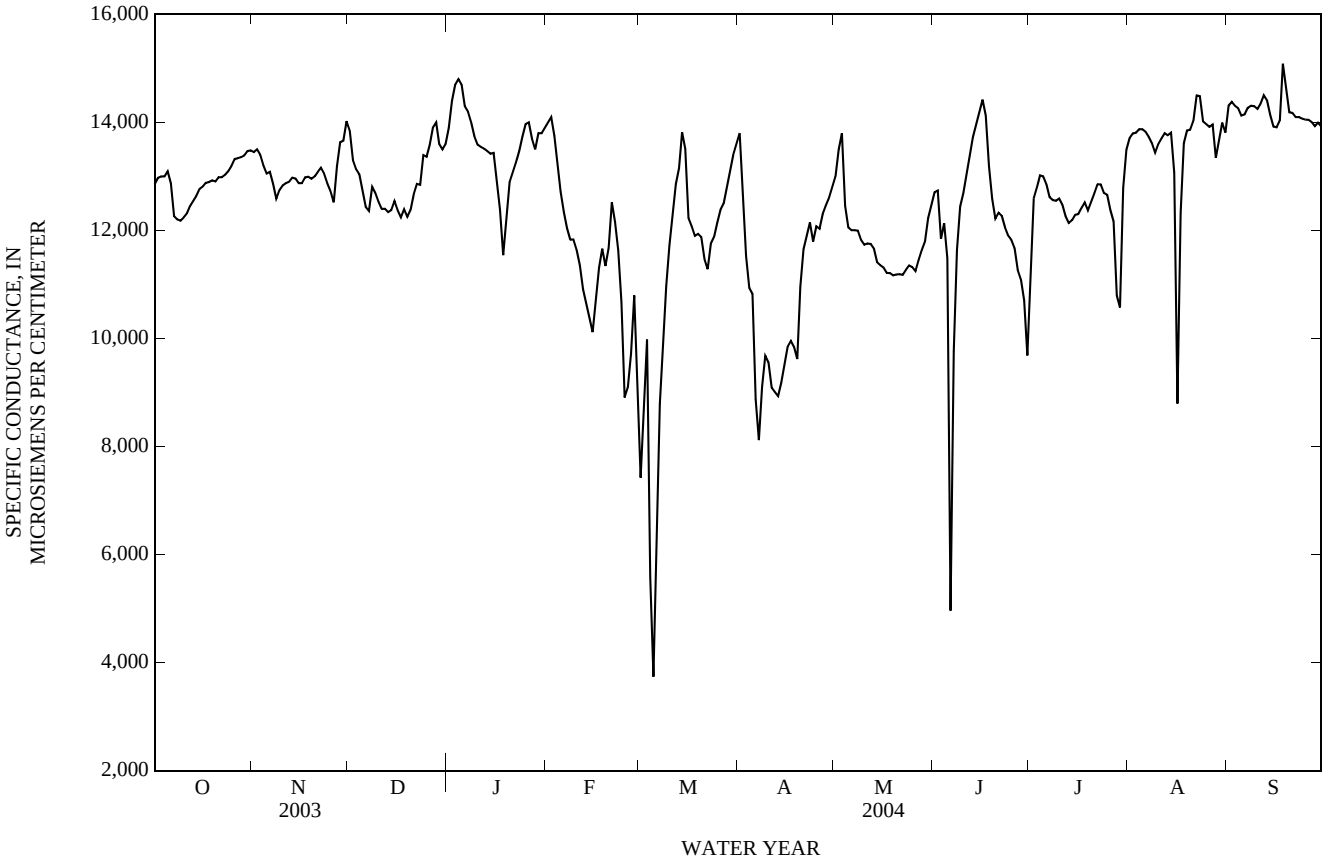
07311630 Middle Wichita River near Guthrie, TX—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	e14,000	8,460	6,020	7,420	---	---	e13,800	---	---	e13,000
2	---	---	e14,100	9,400	7,800	8,780	13,300	12,100	12,600	---	---	e13,500
3	14,400	13,100	13,700	10,500	9,400	9,980	12,100	11,000	11,500	---	---	e13,800
4	13,600	13,000	13,200	10,100	1,180	5,580	11,000	10,900	10,900	12,700	12,300	12,500
5	13,000	12,400	12,700	5,170	2,280	3,740	10,900	10,700	10,800	12,300	11,500	12,100
6	13,000	12,100	12,300	7,990	5,170	6,550	10,700	6,100	8,870	12,100	12,000	12,000
7	12,400	11,800	12,000	9,490	7,990	8,790	9,020	6,100	8,120	12,100	12,000	12,000
8	12,000	11,700	11,800	10,600	9,490	9,990	9,580	8,380	9,110	12,100	11,900	12,000
9	11,900	11,700	11,800	11,400	10,600	11,000	9,810	9,480	9,680	11,900	11,800	11,800
10	11,800	11,500	11,600	12,100	11,400	11,700	9,750	9,360	9,560	11,800	11,700	11,700
11	11,600	11,100	11,400	12,600	12,100	12,300	9,380	8,950	9,090	11,800	11,700	11,800
12	11,200	10,700	10,900	13,200	12,500	12,900	9,180	8,880	9,010	11,800	11,700	11,800
13	10,800	10,500	10,700	13,400	13,000	13,200	9,100	8,780	8,930	11,800	11,600	11,700
14	10,800	9,980	10,400	14,200	13,400	13,800	9,390	8,960	9,180	11,600	11,200	11,400
15	10,400	9,890	10,100	14,500	12,400	13,500	9,780	9,280	9,500	11,400	11,300	11,400
16	11,000	10,400	10,700	12,500	12,000	12,200	10,000	9,700	9,850	11,400	11,300	11,300
17	11,600	11,000	11,300	12,200	11,900	12,100	10,200	9,840	9,960	11,300	11,100	11,200
18	12,000	11,400	11,700	12,100	11,700	11,900	9,960	9,710	9,840	11,800	11,100	11,200
19	11,800	11,100	11,300	12,200	11,800	11,900	10,400	8,800	9,620	11,200	11,100	11,200
20	12,300	11,200	11,700	12,100	11,600	11,900	11,500	10,400	11,000	11,300	11,100	11,200
21	12,700	12,300	12,500	11,800	11,200	11,500	11,900	11,500	11,700	11,300	11,100	11,200
22	12,800	11,700	12,200	11,700	11,000	11,300	12,200	11,700	11,900	11,300	11,100	11,200
23	11,800	11,400	11,600	12,200	11,400	11,800	12,300	11,900	12,100	11,500	11,200	11,300
24	11,500	9,780	10,700	12,000	11,700	11,900	11,900	11,700	11,800	11,500	11,300	11,400
25	9,780	8,660	8,910	12,300	12,000	12,100	12,300	11,900	12,100	11,400	11,300	11,300
26	9,310	8,750	9,090	12,500	12,300	12,400	12,100	12,000	12,000	11,300	11,200	11,200
27	10,300	9,310	9,720	---	---	e12,500	12,500	12,100	12,300	11,600	11,300	11,500
28	11,900	10,300	10,800	---	---	e12,800	12,600	12,300	12,500	11,700	11,400	11,600
29	12,200	7,800	9,200	---	---	e13,100	12,700	12,500	12,600	12,000	11,700	11,800
30	---	---	---	---	---	e13,400	---	---	e12,800	12,400	12,000	12,200
31	---	---	---	---	---	e13,600	---	---	---	12,700	12,400	12,500
MONTH	---	---	11,500	---	---	11,100	---	---	10,800	---	---	11,800
	JUNE			JULY			AUGUST			SEPTEMBER		
1	12,800	12,600	12,700	12,300	10,500	11,300	13,800	13,600	13,700	14,400	14,100	14,300
2	13,000	11,900	12,700	12,800	12,300	12,600	13,800	13,700	13,800	14,600	14,100	14,400
3	12,000	11,700	11,800	12,900	12,600	12,800	13,900	13,800	13,800	14,600	13,900	14,300
4	12,300	11,900	12,100	13,200	12,900	13,000	13,900	13,800	13,900	14,500	13,900	14,300
5	12,200	10,700	11,500	13,200	12,800	13,000	13,900	13,800	13,900	14,400	13,900	14,100
6	10,700	3,110	4,960	13,000	12,700	12,900	13,900	13,700	13,800	14,300	13,900	14,100
7	10,900	8,060	9,760	12,900	12,500	12,600	13,800	13,700	13,700	14,400	14,100	14,300
8	12,200	10,900	11,600	12,800	12,300	12,600	13,700	13,500	13,600	14,500	14,200	14,300
9	12,600	12,200	12,400	12,800	12,300	12,600	13,500	13,300	13,400	14,400	14,100	14,300
10	13,000	12,400	12,700	12,800	12,400	12,600	13,700	13,500	13,600	14,400	14,000	14,200
11	13,100	12,900	13,000	12,700	12,300	12,500	13,800	13,700	13,700	14,600	13,900	14,300
12	13,600	13,100	13,400	12,500	12,100	12,300	13,800	13,800	13,800	14,600	14,400	14,500
13	13,900	13,600	13,700	12,400	11,900	12,100	13,800	13,700	13,800	14,700	14,100	14,400
14	14,000	13,800	14,000	12,400	12,000	12,200	13,900	13,800	13,800	14,300	14,000	14,100
15	14,300	14,000	14,200	12,400	12,000	12,300	13,900	10,700	13,100	14,100	13,800	13,900
16	14,500	14,300	14,400	12,500	12,100	12,300	11,200	5,180	8,790	14,200	13,800	13,900
17	14,600	13,400	14,100	12,600	12,200	12,400	13,500	11,200	12,300	14,600	13,800	14,000
18	13,500	13,000	13,200	12,700	12,300	12,500	13,800	13,300	13,600	15,500	14,600	15,100
19	13,000	12,300	12,600	12,700	12,100	12,400	14,100	13,500	13,900	15,300	14,200	14,600
20	12,400	12,000	12,200	12,700	12,300	12,500	14,300	13,600	13,900	14,300	14,100	14,200
21	12,400	12,200	12,300	12,800	12,500	12,700	14,400	13,800	14,000	14,400	14,100	14,200
22	12,400	12,100	12,300	13,000	12,700	12,900	14,700	14,300	14,500	14,100	14,100	14,100
23	12,200	12,000	12,100	13,000	12,700	12,900	14,900	14,000	14,500	14,100	14,100	14,100
24	12,100	11,900	11,900	12,900	12,400	12,700	14,200	13,800	14,000	14,100	14,000	14,100
25	12,000	11,700	11,800	12,700	12,600	12,700	14,100	13,800	14,000	14,100	14,000	14,000
26	11,900	11,500	11,700	12,700	12,100	12,400	14,000	13,700	13,900	14,100	14,000	14,000
27	11,500	11,100	11,300	12,300	12,000	12,200	14,100	13,800	14,000	14,100	13,900	14,000
28	11,200	10,900	11,100	12,500	8,630	10,800	14,100	12,800	13,300	14,000	13,900	13,900
29	11,100	9,160	10,700	11,300	10,100	10,600	14,200	13,000	13,700	14,000	13,900	14,000
30	10,600	8,850	9,680	13,400	11,300	12,800	14,200	13,800	14,000	14,100	12,400	13,900
31	---	---	---	13,600	13,400	13,500	14,100	13,300	13,800	---	---	---
MONTH	14,600	3,110	12,100	13,600	8,630	12,400	14,900	5,180	13,600	15,500	12,400	14,200

e Estimated

07311630 Middle Wichita River near Guthrie, TX—Continued



TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

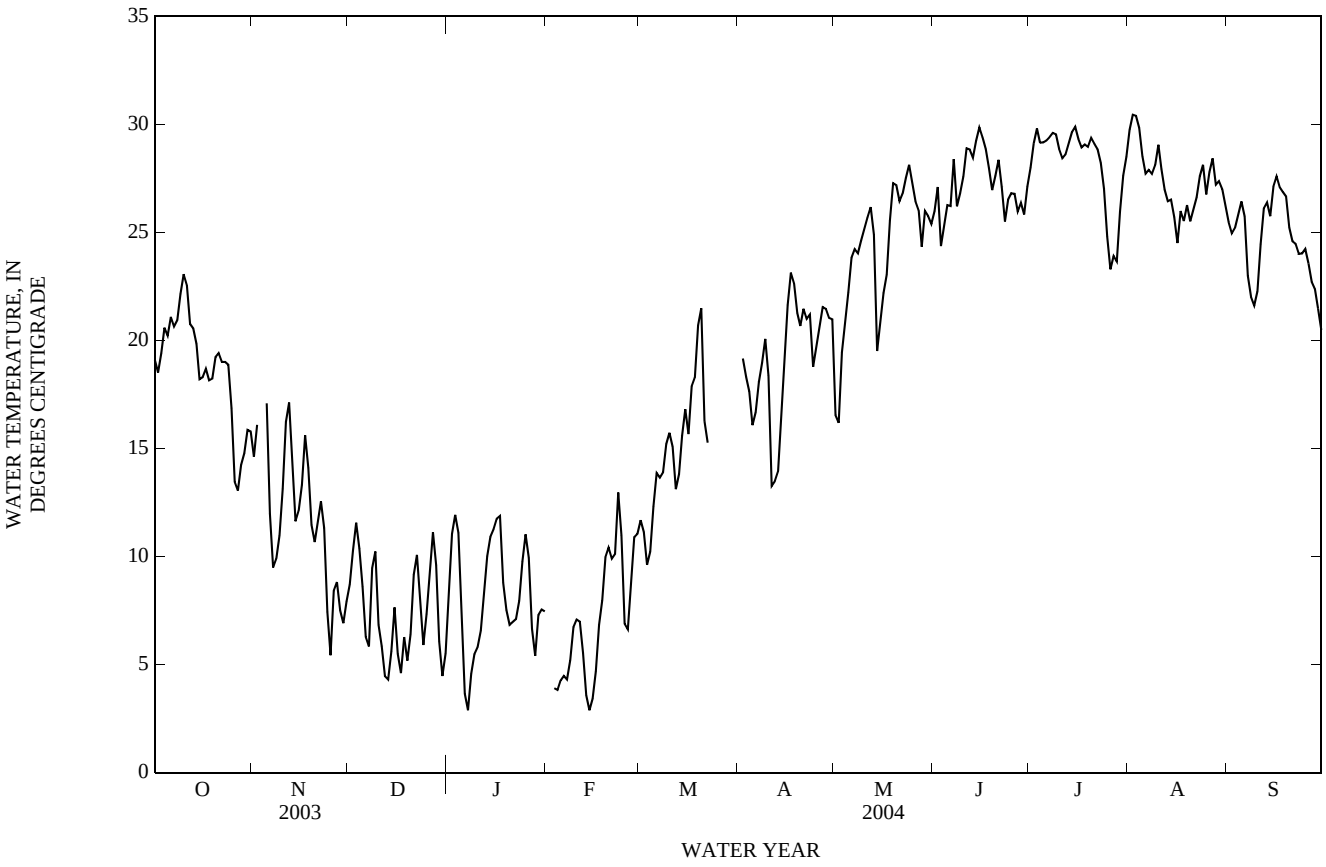
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	21.5	17.1	19.1	15.4	14.0	14.6	9.9	7.6	8.7	10.0	6.1	8.3
2	19.5	17.4	18.5	18.1	14.7	16.1	11.2	8.7	10.3	12.1	10.0	11.0
3	20.9	18.4	19.4	---	---	---	12.5	10.8	11.6	13.2	10.8	11.9
4	20.8	20.3	20.6	21.6	---	---	11.9	9.1	10.4	12.1	9.7	11.1
5	21.1	19.5	20.2	19.2	14.3	17.1	9.7	7.4	8.6	9.7	5.4	7.5
6	21.4	20.5	21.1	14.3	10.0	12.0	7.4	5.0	6.3	5.4	2.6	3.7
7	21.9	19.9	20.6	10.0	9.0	9.5	7.5	4.1	5.8	4.0	1.8	2.9
8	21.6	20.4	20.9	10.5	9.1	9.9	11.0	7.2	9.5	6.2	3.1	4.6
9	24.1	20.8	22.2	11.5	10.4	11.0	11.9	8.1	10.2	7.1	4.4	5.5
10	24.4	22.5	23.1	14.8	11.4	13.1	8.5	4.2	6.8	7.3	4.5	5.8
11	23.2	21.6	22.6	17.2	14.8	16.2	10.5	2.5	5.8	8.0	5.0	6.6
12	21.6	19.9	20.8	17.7	15.9	17.1	5.2	3.6	4.5	9.4	7.1	8.5
13	22.2	19.3	20.6	15.9	12.6	14.5	8.6	1.1	4.3	11.0	9.1	10.0
14	20.9	18.7	19.8	12.6	11.1	11.6	10.2	1.8	5.6	12.7	10.0	10.9
15	19.6	17.1	18.2	13.7	10.9	12.1	10.5	5.7	7.7	11.5	10.9	11.3
16	20.0	17.0	18.3	15.1	12.1	13.3	9.1	2.9	5.5	12.2	11.2	11.7
17	19.8	17.9	18.7	16.1	14.4	15.6	9.6	1.1	4.6	12.5	10.4	11.9
18	19.8	16.7	18.2	15.6	12.5	14.1	10.6	4.1	6.3	10.6	7.0	8.8
19	20.3	16.9	18.2	13.2	10.0	11.5	9.8	1.8	5.2	8.7	6.4	7.5
20	20.7	18.0	19.2	11.9	9.6	10.7	11.0	3.1	6.4	7.9	6.1	6.8
21	21.2	18.2	19.4	12.6	10.6	11.6	13.6	6.2	9.2	8.3	5.4	7.0
22	19.8	18.3	19.0	13.6	11.5	12.6	13.3	8.5	10.1	8.2	6.0	7.1
23	20.8	17.8	19.0	12.6	9.6	11.3	11.9	5.5	8.2	9.3	6.7	7.9
24	20.1	17.9	18.9	9.6	5.4	7.4	10.8	2.2	5.9	10.6	8.3	9.8
25	18.8	14.8	16.9	6.4	4.3	5.4	8.6	6.2	7.3	11.9	10.2	11.0
26	14.8	12.6	13.5	13.1	5.4	8.4	10.8	7.8	9.4	10.7	7.9	9.9
27	14.5	11.8	13.1	9.9	8.1	8.8	11.9	10.2	11.1	7.9	5.1	6.7
28	15.5	13.4	14.2	8.8	6.6	7.5	10.5	7.6	9.6	7.0	3.8	5.4
29	16.5	13.4	14.8	8.2	5.7	6.9	7.6	4.4	6.1	8.9	5.5	7.3
30	17.1	14.7	15.9	9.5	6.5	7.9	5.8	3.0	4.5	9.3	6.4	7.6
31	16.4	14.9	15.8	---	---	---	7.0	3.9	5.5	9.0	6.1	7.5
MONTH	24.4	11.8	18.7	---	---	---	13.6	1.1	7.5	13.2	1.8	8.2

07311630 Middle Wichita River near Guthrie, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	14.3	9.7	11.7	---	---	---	18.4	15.0	16.6
2	---	---	---	11.9	10.0	11.1	19.9	18.2	19.2	18.6	14.0	16.2
3	4.6	2.6	3.9	10.0	9.4	9.6	19.3	17.5	18.3	21.6	17.6	19.4
4	4.3	2.7	3.8	11.1	9.5	10.2	18.4	16.4	17.6	22.8	19.5	20.9
5	5.0	3.8	4.3	16.8	9.1	12.3	16.5	15.7	16.1	25.1	20.5	22.2
6	6.7	2.0	4.5	19.4	9.2	13.9	18.4	15.2	16.7	25.9	21.0	23.8
7	5.8	3.1	4.3	17.8	10.2	13.7	19.0	16.8	18.1	25.3	23.3	24.2
8	6.9	3.6	5.2	20.0	9.2	13.9	20.4	17.8	19.0	25.9	22.8	24.0
9	7.6	5.7	6.7	21.0	11.0	15.2	21.5	18.7	20.1	26.3	23.6	24.6
10	8.0	6.1	7.1	21.6	10.8	15.7	21.1	14.9	18.4	27.1	23.9	25.2
11	7.5	6.6	7.0	18.1	12.0	15.1	14.9	12.4	13.3	27.3	24.8	25.7
12	6.8	4.6	5.5	14.0	12.6	13.1	14.9	12.4	13.5	28.1	24.7	26.2
13	4.6	2.9	3.6	16.3	12.2	13.8	15.9	12.5	13.9	26.5	21.2	24.9
14	4.2	1.8	2.9	16.3	15.0	15.6	18.2	14.8	16.4	21.2	18.8	19.5
15	4.4	2.3	3.4	22.0	14.3	16.8	20.7	17.3	19.0	23.5	19.1	20.8
16	6.4	3.0	4.7	21.1	11.0	15.7	23.3	20.0	21.6	23.0	21.6	22.2
17	8.1	5.4	6.8	24.4	13.1	17.9	24.6	22.1	23.1	25.3	21.4	23.0
18	9.7	6.6	8.0	24.8	13.0	18.3	23.1	21.3	22.6	28.1	22.1	25.6
19	11.4	8.6	10	27.2	16.1	20.7	24.2	19.1	21.3	29.5	25.9	27.3
20	11.5	9.7	10.4	28.1	17.2	21.5	22.5	17.5	20.7	28.7	26.2	27.2
21	11.2	8.9	9.9	20.2	13.4	16.3	22.8	20.6	21.5	27.9	25.5	26.5
22	12.9	8.4	10.1	20.7	12.2	15.3	22.4	20.1	21.0	28.9	25.3	26.8
23	13.5	12.4	13.0	---	12.3	---	22.4	19.6	21.2	29.6	26.2	27.5
24	12.6	8.7	11.0	---	---	---	19.7	18.0	18.8	30.0	26.7	28.1
25	8.7	5.5	6.9	---	---	---	23.0	18.3	19.7	28.1	25.9	27.2
26	8.7	4.7	6.6	---	---	---	21.6	19.4	20.6	28.4	24.8	26.4
27	11.3	6.7	9.0	---	---	---	23.3	20.4	21.5	26.6	24.3	26.0
28	11.2	10.1	10.9	---	---	---	22.8	20.2	21.5	27.2	22.6	24.3
29	12.3	9.5	11.1	---	---	---	23.2	19.8	21.0	27.9	24.9	26.0
30	---	---	---	---	---	---	22.4	18.4	21.0	27.4	24.8	25.8
31	---	---	---	---	---	---	---	---	---	27.1	24.0	25.4
MONTH	---	---	---	---	---	---	---	---	---	30.0	14.0	24.2
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.1	24.3	26.0	29.9	26.6	28.0	31.6	28.3	29.8	30.7	22.1	25.5
2	30.1	23.2	27.1	31.2	27.4	29.1	32.0	29.3	30.4	30.9	20.4	25.0
3	29.4	21.4	24.4	31.4	28.4	29.8	31.9	29.3	30.4	31.2	20.8	25.2
4	28.5	21.8	25.3	30.5	28.3	29.2	31.6	29.0	29.8	31.1	22.0	25.8
5	28.3	24.4	26.3	31.1	27.7	29.2	29.2	28.0	28.5	31.2	23.1	26.4
6	33.2	20.8	26.2	30.8	28.3	29.3	28.4	27.1	27.7	31.0	22.4	25.7
7	34.5	24.3	28.4	31.0	28.3	29.4	29.5	26.9	27.9	29.2	18.4	23.0
8	29.8	23.6	26.2	31.3	28.2	29.6	28.3	27.2	27.7	28.9	16.9	22.0
9	31.2	24.3	26.8	30.9	28.6	29.5	29.5	26.7	28.1	28.8	16.1	21.6
10	34.0	23.4	27.6	30.1	28.0	28.9	30.4	28.1	29.1	29.3	16.6	22.3
11	30.7	27.7	28.9	30.0	27.1	28.4	28.8	27.0	27.9	30.6	19.5	24.5
12	30.4	27.6	28.8	30.5	27.3	28.6	28.5	25.9	27.0	31.2	22.2	26.1
13	30.4	27.1	28.5	30.9	27.8	29.1	27.5	25.4	26.4	32.2	23.1	26.4
14	31.4	27.8	29.3	31.5	28.3	29.6	27.0	26.1	26.5	31.7	21.6	25.8
15	31.2	29.0	29.9	31.8	28.6	29.9	27.3	24.0	25.7	33.7	22.7	27.1
16	30.9	28.4	29.4	30.8	28.2	29.3	29.8	21.3	24.5	31.8	24.6	27.6
17	30.5	27.9	28.9	29.9	28.2	28.9	32.8	20.9	26.0	31.1	23.3	27.1
18	29.5	27.1	28.0	30.4	28.4	29.1	30.8	22.1	25.5	29.2	24.5	26.9
19	27.7	26.5	27.0	30.9	27.4	29.0	31.6	22.9	26.3	27.6	25.8	26.7
20	29.0	26.6	27.6	31.1	28.2	29.4	29.0	22.6	25.5	26.1	24.5	25.2
21	29.6	27.5	28.4	31.0	27.8	29.1	32.5	22.1	26.1	26.0	23.5	24.6
22	28.8	25.7	27.1	30.4	27.8	28.8	33.1	22.1	26.6	25.3	23.6	24.5
23	26.8	24.3	25.5	29.1	27.6	28.2	33.7	23.3	27.6	25.0	23.1	24.0
24	28.1	24.9	26.5	27.6	26.4	27.0	34.3	24.0	28.1	25.0	23.1	24.0
25	27.6	25.6	26.8	26.4	23.3	24.8	32.1	23.4	26.8	25.2	23.5	24.2
26	27.2	25.9	26.8	24.4	22.2	23.3	34.0	23.6	27.8	24.4	22.9	23.6
27	27.4	24.9	26.0	24.1	23.5	23.9	34.1	24.2	28.4	23.5	22.0	22.7
28	27.0	25.2	26.4	24.9	22.8	23.6	31.0	24.9	27.2	23.4	21.7	22.4
29	26.4	25.1	25.8	27.6	24.7	26.0	34.5	23.0	27.4	23.1	20.1	21.5
30	30.9	24.9	27.1	29.6	26.1	27.6	31.8	23.0	27.0	21.2	19.7	20.5
31	---	---	---	30.4	27.0	28.5	31.0	22.8	26.2	---	---	---
MONTH	34.5	20.8	27.2	31.8	22.2	28.2	34.5	20.9	27.4	33.7	16.1	24.6

07311630 Middle Wichita River near Guthrie, TX—Continued



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07311700 North Wichita River near Truscott, TX

LOCATION.--Lat 33°49'14", long 99°47'10", Knox County, Hydrologic Unit 11130204, 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 mouth.

DRAINAGE AREA.--937 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,351.78 ft above NGVD of 1929. Prior to Jan. 2, 1960, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good. No known regulation. There is one small diversion for irrigation upstream from station.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	6.6	8.3	8.9	7.7	31	4.3	8.7	2.4	42	15	9.0
2	7.0	7.1	8.8	8.9	8.0	27	4.9	8.7	2.3	26	13	8.2
3	6.7	7.1	8.6	8.9	7.6	22	6.2	9.6	5.0	16	11	7.3
4	6.6	7.0	8.2	8.3	8.5	360	7.7	8.6	6.9	13	9.7	6.6
5	6.5	8.0	8.5	8.1	12	1,050	18	6.6	88	11	10	7.7
6	7.5	7.8	9.1	8.3	11	293	23	5.8	1,180	9.2	37	10
7	7.5	12	10	9.0	11	90	53	6.3	733	7.8	23	5.5
8	171	12	9.2	8.9	9.6	43	65	5.8	148	7.3	31	4.6
9	19	12	9.1	9.0	8.7	27	33	4.5	79	7.0	17	3.7
10	12	11	8.9	9.0	8.7	e20	18	4.7	129	6.1	28	2.9
11	11	9.6	8.9	9.1	10	e18	13	e5.0	186	5.4	17	3.1
12	9.9	8.7	11	9.1	10	e17	8.8	e6.2	95	4.9	12	4.2
13	9.4	8.2	11	9.8	11	e16	7.6	e8.0	50	4.5	11	4.3
14	8.3	8.7	10	9.5	12	e14	6.7	8.3	35	4.4	10	4.6
15	8.0	9.2	10	9.4	13	e13	6.1	7.5	27	3.8	45	4.3
16	7.9	9.1	9.0	19	12	10	5.7	7.2	23	3.3	77	4.0
17	7.4	8.8	8.8	31	9.5	8.6	5.4	7.7	19	3.0	23	3.7
18	7.6	8.4	8.8	28	7.3	6.5	5.0	7.0	18	3.2	22	4.8
19	7.5	8.4	8.8	23	6.2	6.3	5.6	6.1	46	3.5	19	7.1
20	7.3	7.9	8.9	17	5.6	6.0	6.7	5.2	22	3.9	48	4.8
21	7.3	7.5	9.0	13	5.9	4.9	8.7	4.6	17	3.9	53	3.5
22	7.1	7.8	9.0	11	5.6	4.4	5.0	3.6	27	3.4	37	2.0
23	7.0	8.2	8.7	11	7.6	4.6	5.2	3.2	23	3.7	18	1.6
24	6.9	8.1	9.0	10	15	4.9	7.1	3.2	19	28	12	3.3
25	6.7	8.5	9.0	10	27	4.2	7.7	3.4	23	17	8.8	4.5
26	6.5	8.3	8.1	9.3	23	4.8	9.2	5.1	13	10	7.4	7.5
27	6.5	8.4	7.3	8.6	18	4.7	10	4.5	12	8.3	6.3	5.9
28	6.3	8.8	8.0	8.4	15	4.5	8.8	6.5	12	133	7.6	5.1
29	6.4	8.5	8.1	8.4	50	4.4	7.0	6.8	34	105	15	4.9
30	6.6	8.2	8.2	7.8	---	4.2	7.2	5.2	34	35	11	17
31	6.7	---	8.2	7.8	---	4.1	---	3.6	---	21	8.8	---
TOTAL	408.8	259.9	276.5	357.5	356.5	2,128.1	379.6	187.2	3,108.6	553.6	663.6	165.7
MEAN	13.2	8.66	8.92	11.5	12.3	68.6	12.7	6.04	104	17.9	21.4	5.52
MAX	171	12	11	31	50	1,050	65	9.6	1,180	133	77	17
MIN	6.3	6.6	7.3	7.8	5.6	4.1	4.3	3.2	2.3	3.0	6.3	1.6
AC-FT	811	516	548	709	707	4,220	753	371	6,170	1,100	1,320	329

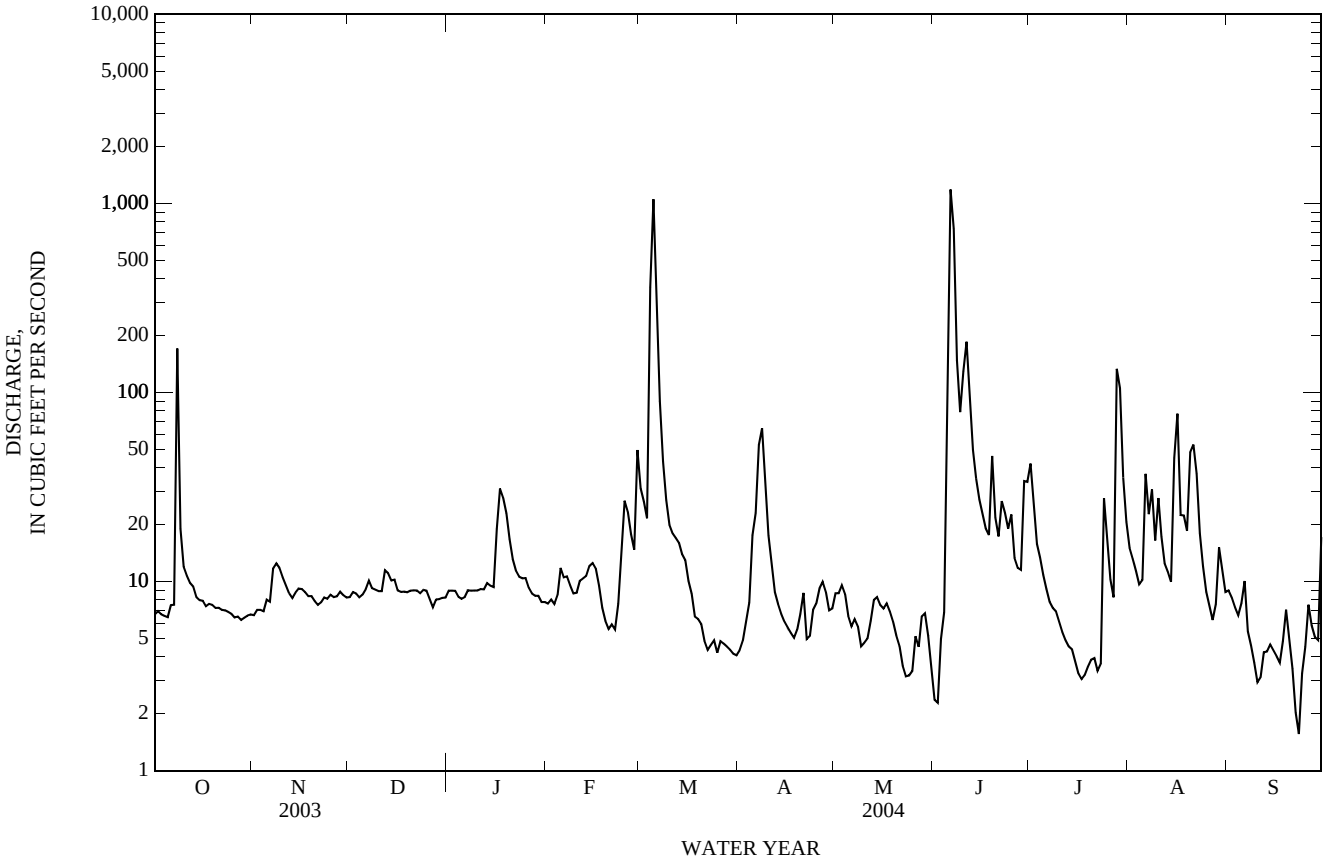
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004, BY WATER YEAR (WY)

MEAN	95.4	33.4	27.5	24.3	28.3	37.7	49.5	107	144	45.4	74.9	93.1
MAX	1,170	109	120	68.5	149	162	340	771	737	317	1,266	818
(WY)	(1984)	(2001)	(1992)	(1992)	(1992)	(2000)	(1997)	(1987)	(1995)	(1975)	(1966)	(1965)
MIN	3.90	8.66	8.92	8.23	6.16	5.49	7.61	6.04	9.34	0.72	1.17	3.51
(WY)	(1964)	(2004)	(2004)	(1965)	(1965)	(1965)	(1964)	(2004)	(2001)	(1964)	(1964)	(1968)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004	
ANNUAL TOTAL	6,370.5		8,845.6			
ANNUAL MEAN	17.5		24.2		63.1	
HIGHEST ANNUAL MEAN					193	1966
LOWEST ANNUAL MEAN					17.2	1983
HIGHEST DAILY MEAN	588	Jun 6	1,180	Jun 6	19,400	Sep 19, 1965
LOWEST DAILY MEAN	1.5	Aug 4	1.6	Sep 23	0.02	Aug 22, 1974
ANNUAL SEVEN-DAY MINIMUM	1.7	Aug 3	3.5	Jul 16	0.13	Jul 30, 1965
MAXIMUM PEAK FLOW			1,780	Jun 6	28,900	Sep 19, 1965
MAXIMUM PEAK STAGE			14.00	Jun 6	21.96	Sep 19, 1965
ANNUAL RUNOFF (AC-FT)	12,640		17,550		45,680	
10 PERCENT EXCEEDS	21		29		64	
50 PERCENT EXCEEDS	11		8.6		19	
90 PERCENT EXCEEDS	2.9		4.5		7.3	

e Estimated

07311700 North Wichita River near Truscott, TX—Continued



07311700 North Wichita River near Truscott, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Feb. 1954 to Mar. 1959, July 1968 to Dec. 1989, Sept. 1990 to June 1992, Oct. 1994 to current year.
BIOCHEMICAL DATA: Sept. 1990 to current year.
PESTICIDE DATA: Sept. 1996 to current year.
SEDIMENT DATA: Apr. 1978 to Dec. 1989.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1968 to Dec. 1989, Sept. 1990 to June 1992, Oct. 1994 to current year.
WATER TEMPERATURE: July 1968 to Dec. 1989 (local observer), Sept. 1990 to June 1992, Oct. 1994 to current year.

INSTRUMENTATION.--Water-quality monitor July 1968 to Dec. 1989, Sept. 1990 to June 1992, Oct. 1994 to current year.

REMARKS.--Records fair. Interruptions in the record were caused by malfunctions of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. New regression equations were developed based on data from water years 1995 to 2004. The standard error of estimate for dissolved solids is 6%, chloride is 12%, sulfate is 10% and for hardness is 10%. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 35,800 microsiemens/cm, Oct. 9, 1982; minimum, 400 microsiemens/cm, June 7, 8, 1985.
WATER TEMPERATURE: Maximum, 39.0°C, Aug. 21, 23, 1969, Aug. 22, 1973; minimum, -0.9°C, Feb. 25, 2003.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 26,700 microsiemens/cm, Sept. 27; minimum, 1,090 microsiemens/cm, Mar. 6.
WATER TEMPERATURE: Maximum, 36.4°C, July 19; minimum, -0.7°C, Jan. 6.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
OCT													
10...	1100	13	7.7	90	7.8	6,640	21.8	1,100	1,100	334d	68.3d	11.0d	14
NOV													
10...	1120	11	9.5	97	7.8	23,100	13.4	3,200	3,200	946d	211d	20.4d	34
DEC													
04...	1125	9.2	10.3	98	7.9	23,300	9.5	3,400	3,300	995d	230d	20.0d	32
JAN													
14...	1130	9.8	10.1	98	7.9	22,800	10.5	3,100	3,000	918dr	201d	17.9d	33
FEB													
09...	1120	8.9	10.1	92	7.9	22,800	7.8	3,100	3,000	895d	206d	20.2d	34
MAR													
08...	1245	43	10.3	98	7.9	5,080	13.1	880	800	262	54.7	8.89	11
APR													
06...	1130	26	8.8	96	7.8	19,900	15.8	2,700	2,600	787d	182d	15.0d	32
MAY													
12...	1150	6.8	6.6	99	7.8	24,600	28.8	3,400	3,400	979d	238d	22.3d	34
JUN													
07...	1200	483	6.3	81	7.8	1,790	24.2	330	270	103c	17.1c	6.12c	5
JUL													
20...	1115	4.0	6.2	95	7.9	21,600	31.4	3,300	3,300	970d	222d	23.0d	31
AUG													
26...	1150	7.8	6.3	94	7.9	22,100	30.0	3,000	3,000	914d	185d	26.1d	33
SEP													
14...	1140	4.0	6.8	99	7.8	21,400	28.0	3,200	3,100	932d	210d	18.7d	31

07311700 North Wichita River near Truscott, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium, water, fltrd, mg/L (00930)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
OCT													
10...	1050d	60	1670d	.3	4.4	880d	4,060	82d	.46	<.04	.30	.32	.023
NOV													
10...	4440d	68	6660d	.5	.6r	2480d	14,800	42	E.09n	.10	--	<.06	<.008
DEC													
04...	4290d	93	6950d	.5	.8	2610d	15,200	11	<.10	.12	--	<.06	<.008
JAN													
14...	4280dr	123	6760d	.6	1.7	2460dr	14,700	15	.24	.09	--	E.05n	E.004n
FEB													
09...	4300d	115	6750d	.5	1.6	2590d	14,800	15	.18	.08	--	<.06	E.004n
MAR													
08...	752d	79	1240d	.3	5.9	700d	3,070	228d	.76	.10	.36	.38	.014
APR													
06...	3850d	88	5980d	.5	1.0	2350d	13,200	78d	.19	.08	--	<.06	<.008
MAY													
12...	4590d	58	7310d	.6	.8	2820d	16,000	26	.31	.08	--	<.06	<.008
JUN													
07...	195c	53	290dc	.3	6.4	289dc	940	804d	3.5	<.04	.36	.39	.023
JUL													
20...	4120d	52	6590d	.5	2.7	2830d	14,800	47	E.08n	.08	--	<.06	<.008
AUG													
26...	4230d	52	6420d	.5	1.5	2530d	14,300	33	.30	.07	--	<.06	<.008
SEP													
14...	3980d	46	6430d	.5	1.0	2830d	14,400	<10	.33	.22	--	<.06	<.008

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)
OCT													
10...	--	<.02	<.04	.07	.78	4.0d	E2n	169d	199d	<.12d	<.12d	<.8	2.3
NOV													
10...	--	<.02	<.04	<.04	--	3.3d	<2	42d	47d	<.40d	<.40d	<2.4d	<2.4d
DEC													
04...	--	<.02	<.04	<.04	--	<2.0d	<6dc	29d	33d	<.40d	<.40d	<2.4d	3.4d
JAN													
14...	.15	<.02	<.04	<.04	--	E1.9nd	<6d	30d	31d	<.40d	<.40d	<2.4d	<2.4d
FEB													
09...	.10	<.02	<.04	<.04	--	E1.2nd	<6d	28d	26d	<.40d	<.40d	<2.4d	<2.4d
MAR													
08...	.66	E.01n	<.04	.19	1.1	2.2d	5	168dr	221d	<.12d	<.12d	<.8	4.9
APR													
06...	.11	<.02	<.04	E.03n	--	<1.6d	4d	51d	71d	<.32d	<.32d	<1.6d	<1.6d
MAY													
12...	.23	<.02	<.04	<.04	--	2.3d	<6d	55d	54d	<.40d	<.40d	<.8	<2.4d
JUN													
07...	--	<.02	<.04	1.53	3.8	2.6	17r	54	491	<.04	.30	<.8	38.9d
JUL													
20...	--	<.02	<.04	.05	--	4.4d	7d	87d	140d	.63d	<.36d	<2.4d	28.0d
AUG													
26...	.22	<.02	<.04	E.03n	--	4.4d	E5nd	82d	85d	<.36d	<.36d	<2.4d	<2.4d
SEP													
14...	.11	<.02	<.04	<.04	--	3.6d	E5nd	77d	69d	<.36d	<.36d	<2.4d	<2.4d

07311700 North Wichita River near Truscott, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen- ium, water, fltrd, ug/L (01145)
OCT													
10...	10.5d	12.8d	<32d	1770d	<.24d	.88d	5.7d	53d	<.02	<.02	10.2d	15.7d	4.1d
NOV													
10...	7.0d	34.6d	<96d	700d	<.80d	<.60d	6.7d	23d	<.02	7.44	11.3d	34.6d	3
DEC													
04...	11.4d	42.9d	<96d	200d	<.80d	<.60d	9.0d	13d	<.02	<.02	12.7d	46.5d	7
JAN													
14...	12.6d	49.5d	<128d	150d	<.80d	<.60d	13.6d	16d	<.02	<.02	21.3d	38.0d	6
FEB													
09...	9.7d	16.4d	<96d	250d	<.80d	<.60d	12.3d	14d	<.02	<.02	8.64d	30.8d	6
MAR													
08...	6.8dc	9.0d	<19d	4460d	.56d	2.60d	8.9dc	108d	<.02	<.02	4.12dc	12.8d	2
APR													
06...	12.8d	13.2d	<64d	580d	E.41nd	<.48d	7.5d	24d	<.02	<.02	10.3d	21.6d	3
MAY													
12...	18.8d	21.0d	<96d	140d	<.80d	<.60d	11.5d	22d	<.02	<.02	10.8d	27.4d	2
JUN													
07...	6.8	34.7	<6	30400d	.15	24.7r	1.7	943	<.02	.03	3.23	58.1	1
JUL													
20...	16.1d	50.0d	<96d	5440d	<.72d	2.93d	23.3d	209d	<.02	<.02	18.6d	58.5d	<1
AUG													
26...	10.5d	37.9d	<128d	700d	<.72d	<.54d	7.3d	22d	<.02	<.02	16.8d	33.9d	2
SEP													
14...	40.0d	42.9d	<160d	170d	<.72d	<.54d	10.8d	13d	<.02	<.02	17.6d	34.5d	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Selen- ium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha- Endo- sulfan, water, unfltrd ug/L (34361)	alpha- HCH, water, unfltrd ug/L (39337)	alpha- HCH-d6, surrog, Sch1608 water, unfltrd pct rcv (99778)	Aroclor 1016 + 1242, water, unfltrd ug/L (81648)	Aroclor 1221, water, unfltrd ug/L (39488)	Aroclor 1232, water, unfltrd ug/L (39492)	Aroclor 1248, water, unfltrd ug/L (39500)
OCT													
10...	2.4d	<.6d	<.48d	3.0d	11d	--	--	--	--	--	--	--	--
NOV													
10...	4	<2.0d	<1.60d	E5.4nd	E16nd	--	--	--	--	--	--	--	--
DEC													
04...	5	<2.0d	<1.60d	9.7d	24d	--	--	--	--	--	--	--	--
JAN													
14...	7	<2.0d	<1.60d	8.0d	21d	--	--	--	--	--	--	--	--
FEB													
09...	6	<2.0d	<1.60d	8.2d	E19nd	--	--	--	--	--	--	--	--
MAR													
08...	2	<.6d	<.48d	11.1d	17d	--	--	--	--	--	--	--	--
APR													
06...	3	<1.6d	<1.28d	5.5d	<16d	<.04	<.1	<.03	E85.3	<.1	<1	<.1	<.1
MAY													
12...	2	<2.0d	<1.60d	10.0d	<20d	--	--	--	--	--	--	--	--
JUN													
07...	2	<.2	E.10n	4.1	91	<.04	<.1	<.03	E16.1	<.1	<1	<.1	<.1
JUL													
20...	<1	<1.8d	<1.44d	8.1d	37d	--	--	--	--	--	--	--	--
AUG													
26...	2	<1.8d	<1.44d	6.1d	E16nd	--	--	--	--	--	--	--	--
SEP													
14...	<1	<1.8d	<1.44d	15.5d	E14nd	--	--	--	--	--	--	--	--

07311700 North Wichita River near Truscott, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Aroclor 1254, water, unfltrd ug/L (39504)	Aroclor 1260, water, unfltrd ug/L (39508)	beta-Endo-sulfan, water, unfltrd ug/L (34356)	beta-HCH, water, unfltrd ug/L (39338)	Chlor-dane, tech-nical, water, unfltrd ug/L (39350)	cis-Chlor-dane, water, unfltrd ug/L (39062)	delta-HCH, water, unfltrd ug/L (34259)	Diel-drin, water, unfltrd ug/L (39380)	Endo-sulfan sulfate water unfltrd ug/L (34351)	Endrin alde-hyde, water, unfltrd ug/L (34366)	Endrin, water, unfltrd ug/L (39390)	Hepta-chlor epoxide water unfltrd ug/L (39420)	Hepta-chlor, water, unfltrd ug/L (39410)
OCT													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
06...	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8	<.03
MAY													
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
07...	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8	<.03
JUL													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
14...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Lindane water, unfltrd ug/L (39340)	p,p'-DDD, water, unfltrd ug/L (39310)	p,p'-DDE, water, unfltrd ug/L (39320)	p,p'-DDT, water, unfltrd ug/L (39300)	PCB 207, surrog, Sch1608 water, unfltrd pct rcv (99781)	Toxa-phene, water, unfltrd ug/L (39400)	trans-Chlor-dane, water, unfltrd ug/L (39065)
OCT							
10...	--	--	--	--	--	--	--
NOV							
10...	--	--	--	--	--	--	--
DEC							
04...	--	--	--	--	--	--	--
JAN							
14...	--	--	--	--	--	--	--
FEB							
09...	--	--	--	--	--	--	--
MAR							
08...	--	--	--	--	--	--	--
APR							
06...	<.03	<.1	<.04	<.1	E91.9	<2	<.1
MAY							
12...	--	--	--	--	--	--	--
JUN							
07...	<.03	<.1	<.04	<.1	E17.8	<2	<.1
JUL							
20...	--	--	--	--	--	--	--
AUG							
26...	--	--	--	--	--	--	--
SEP							
14...	--	--	--	--	--	--	--

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

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL
r -- Value verified by rerun, same method

07311700 North Wichita River near Truscott, TX—Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 2003 TO SEPTEMBER 2004

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.	2003	408.8	9990	6730	7430	2800	3090	1500	1650	1700
NOV.	2003	259.9	22520	15140	10630	6700	4730	2900	2040	3300
DEC.	2003	276.5	23330	15690	11710	7000	5240	3000	2230	3400
JAN.	2004	357.5	21410	14400	13900	6400	6150	2800	2710	3200
FEB.	2004	356.5	20130	13550	13040	5900	5720	2700	2590	3100
MAR.	2004	2128.1	5650	3810	21910	1600	8940	870	5020	990
APR.	2004	379.6	16750	11270	11560	4800	4970	2300	2400	2700
MAY	2004	187.2	24710	16610	8390	7500	3790	3100	1560	3500
JUNE	2004	3108.6	4090	2760	23150	1100	9150	670	5610	760
JULY	2004	553.6	12350	8320	12430	3500	5240	1800	2690	2000
AUG.	2004	663.6	11610	7820	14010	3300	5880	1700	3060	1900
SEPT	2004	165.7	21040	14150	6330	6300	2800	2800	1240	3100
TOTAL		8845.6	**	**	154500	**	65690	**	32810	**
WTD.AVG.		24	9600	6470	**	2800	**	1400	**	1600

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	22,100	21,600	21,900	---	---	e16,100	24,400	22,500	23,900	24,200	22,700	23,800
2	22,200	21,500	21,800	---	---	e17,200	24,400	22,900	24,000	24,000	22,300	23,600
3	21,700	21,300	21,500	---	---	e18,300	24,400	23,000	24,000	23,900	22,500	23,400
4	21,600	21,300	21,500	---	---	e18,900	24,400	22,900	23,600	24,200	22,700	23,700
5	21,600	21,000	21,300	---	---	e20,000	23,500	22,100	23,100	24,600	23,600	24,300
6	22,100	21,400	21,700	---	---	e20,700	23,700	23,200	23,400	24,900	24,600	24,700
7	22,200	21,900	22,100	---	---	e21,800	23,500	22,000	23,100	24,900	21,800	24,500
8	22,500	2,980	7,210	---	---	e22,500	23,100	21,100	22,800	24,700	23,600	24,300
9	---	3,480	e4,300	---	---	e23,000	23,400	21,400	23,000	24,600	23,500	24,300
10	7,040	---	e5,500	23,400	---	e23,100	23,600	22,500	23,300	24,700	23,700	24,300
11	6,740	4,700	5,390	23,100	22,500	22,700	23,400	22,300	23,100	24,500	22,900	23,800
12	6,830	5,200	5,790	23,100	22,600	22,800	23,500	22,400	23,100	24,400	22,700	24,100
13	7,750	6,830	7,430	23,400	23,100	23,300	23,700	22,900	23,400	24,200	23,000	23,900
14	7,850	7,640	7,730	23,400	23,000	23,200	23,500	21,900	23,100	24,300	22,600	23,400
15	8,560	7,850	8,230	23,000	22,600	22,800	22,300	20,200	21,500	22,800	20,800	22,600
16	9,360	8,550	8,910	23,100	22,800	22,900	23,200	21,000	22,600	22,400	8,720	20,400
17	10,200	9,360	9,820	22,900	22,800	22,900	23,500	21,800	23,000	20,200	12,800	18,900
18	10,400	10,200	10,300	23,300	22,900	23,100	23,500	21,900	23,000	19,200	16,900	17,400
19	10,500	10,400	10,500	23,700	23,200	23,500	23,500	21,900	23,000	19,400	17,300	18,400
20	10,900	10,500	10,700	23,700	23,300	23,500	23,700	22,700	23,300	19,400	18,900	19,100
21	11,300	10,900	11,100	23,600	23,400	23,500	23,400	22,500	23,100	20,400	18,800	19,700
22	11,600	11,300	11,400	23,700	23,400	23,500	23,300	21,700	23,000	21,000	20,400	20,800
23	11,800	11,600	11,700	24,300	21,800	23,700	23,500	22,400	23,300	21,300	20,100	20,800
24	12,000	11,700	11,900	24,500	23,700	24,300	23,800	22,600	23,500	20,500	18,300	19,900
25	---	---	e12,400	24,300	24,000	24,200	23,700	22,200	23,400	21,500	20,100	20,900
26	---	---	e12,700	24,200	22,200	23,900	23,700	22,200	23,400	22,100	20,500	21,500
27	---	---	e12,800	24,500	22,200	23,900	23,500	22,000	23,200	22,700	21,400	22,300
28	---	---	e13,300	24,800	22,300	24,300	24,100	23,500	23,700	23,000	21,900	22,500
29	---	---	e14,700	24,600	22,300	24,200	25,300	23,100	24,500	22,900	22,400	22,700
30	---	---	e15,300	24,600	22,700	24,200	25,900	24,000	25,300	22,400	21,200	22,100
31	---	---	e15,400	---	---	---	24,900	22,600	24,300	22,100	21,500	21,900
MONTH	---	---	12,800	---	---	22,400	25,900	20,200	23,400	24,900	8,720	22,200

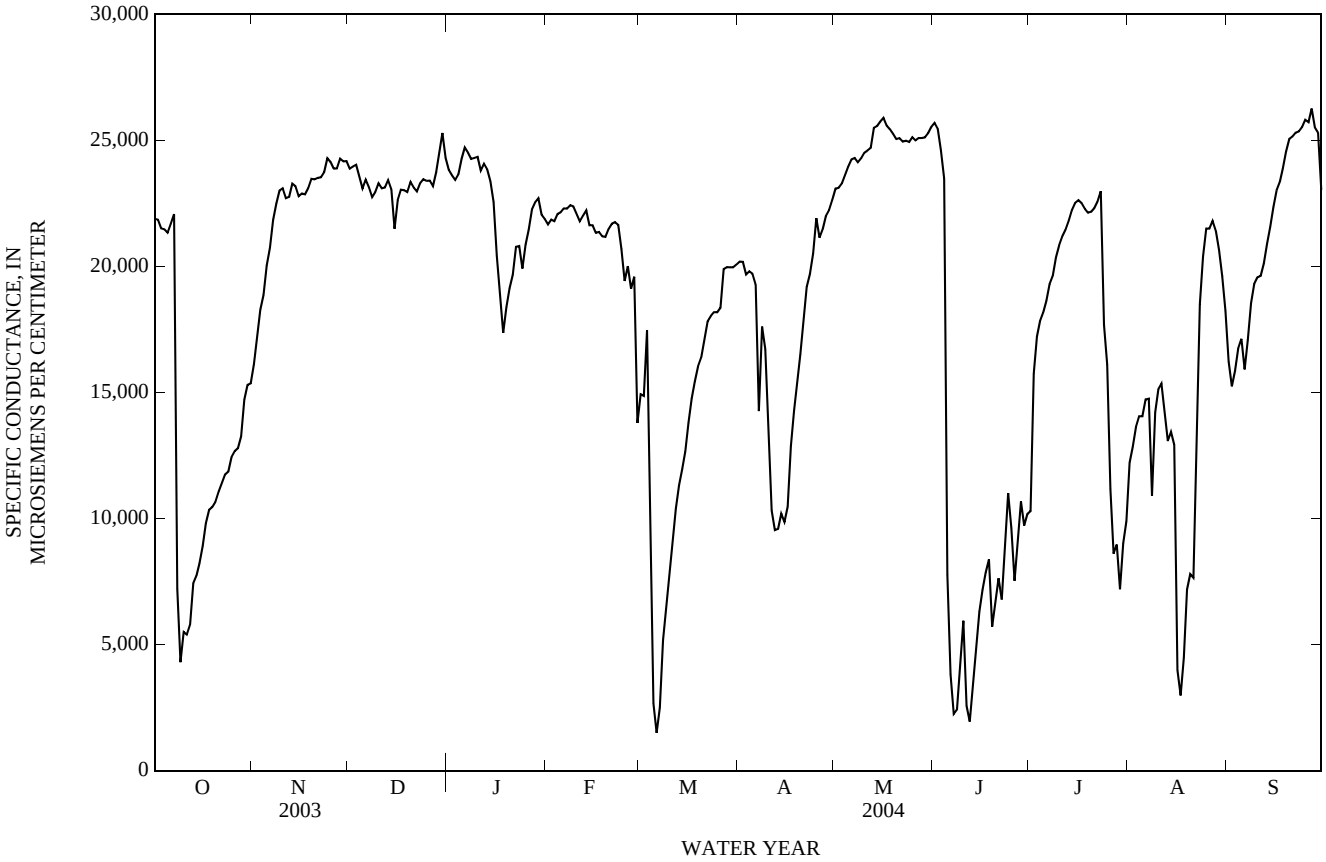
07311700 North Wichita River near Truscott, TX—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	21,900	21,200	21,700	16,100	10,800	14,900	20,400	20,000	20,200	23,200	23,000	23,100
2	22,100	21,100	21,900	16,600	13,600	14,900	20,600	19,900	20,200	23,500	22,900	23,100
3	22,000	21,200	21,800	18,100	16,600	17,500	19,900	19,500	19,700	23,500	23,100	23,300
4	22,300	21,700	22,100	18,200	2,380	12,200	19,900	19,700	19,800	23,900	23,400	23,600
5	22,400	21,300	22,100	4,070	1,190	2,670	20,000	19,200	19,700	24,300	23,600	24,000
6	22,500	21,900	22,300	---	1,100	e1,500	20,100	18,300	19,300	24,400	23,900	24,200
7	22,600	21,000	22,300	---	---	e2,500	19,000	9,760	14,300	24,500	24,100	24,300
8	22,900	21,800	22,400	5,800	---	e5,180	22,200	12,900	17,600	24,400	23,600	24,100
9	23,000	20,900	22,400	7,400	5,800	6,630	17,800	15,500	16,700	24,600	23,900	24,300
10	22,300	21,800	22,100	8,590	7,400	8,030	17,200	10,600	13,200	24,700	24,200	24,500
11	22,100	21,100	21,800	---	---	e9,290	10,600	10,000	10,300	---	---	e24,600
12	22,200	21,900	22,000	---	---	e10,400	10,000	9,140	9,540	---	---	e24,700
13	22,400	22,000	22,200	---	---	e11,300	9,870	9,340	9,590	---	---	e25,500
14	22,100	20,900	21,600	---	---	e11,900	10,400	9,770	10,200	25,800	25,200	25,600
15	21,900	21,300	21,600	---	---	e12,700	10,800	8,500	9,870	26,000	25,500	25,800
16	21,600	20,300	21,300	14,200	13,300	13,800	12,600	9,260	10,500	26,200	25,600	25,900
17	21,600	21,200	21,400	15,200	14,200	14,800	13,600	12,300	12,900	26,000	25,200	25,600
18	21,500	20,400	21,200	15,800	15,200	15,400	14,900	13,600	14,300	25,800	24,800	25,400
19	21,400	20,900	21,200	16,300	15,800	16,000	15,900	14,900	15,400	25,600	24,900	25,300
20	21,600	21,300	21,500	16,700	16,100	16,400	17,200	15,900	16,500	25,300	24,700	25,100
21	21,800	21,500	21,700	17,500	16,700	17,100	18,700	17,200	18,000	25,300	24,800	25,100
22	21,900	21,100	21,800	18,000	17,500	17,800	19,800	18,700	19,200	25,200	24,600	25,000
23	21,800	21,400	21,600	18,200	17,900	18,000	19,900	19,300	19,700	25,200	24,800	25,000
24	21,500	19,300	20,700	18,300	18,100	18,200	21,500	19,700	20,500	25,100	24,600	24,900
25	20,000	19,000	19,400	18,300	17,700	18,200	22,300	21,200	21,900	25,300	24,900	25,100
26	20,400	19,600	20,000	19,100	17,000	18,400	21,500	20,900	21,100	25,200	24,600	25,000
27	19,600	17,600	19,100	20,500	19,100	19,900	21,700	21,200	21,500	25,300	25,000	25,100
28	20,000	18,500	19,600	20,500	19,600	20,000	22,200	21,600	22,000	25,500	24,800	25,100
29	20,000	7,130	13,800	20,200	19,800	20,000	22,500	21,600	22,200	25,300	24,900	25,100
30	---	---	---	20,200	19,800	20,000	23,000	22,300	22,600	25,500	24,900	25,300
31	---	---	---	20,200	19,900	20,100	---	---	---	25,900	25,300	25,500
MONTH	23,000	7,130	21,200	---	---	13,700	23,000	8,500	17,000	---	---	24,800
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26,000	25,300	25,700	13,200	8,310	10,300	12,600	11,800	12,200	17,300	15,500	16,200
2	25,900	24,200	25,500	17,000	13,200	15,800	13,300	12,600	12,900	15,500	15,000	15,200
3	25,100	24,100	24,600	17,500	17,000	17,200	13,900	13,300	13,600	16,300	15,400	15,900
4	24,100	15,400	23,500	18,100	17,500	17,800	14,200	13,900	14,100	17,200	16,300	16,700
5	15,400	1,120	7,770	18,300	18,000	18,200	14,200	14,000	14,100	17,800	12,800	17,100
6	8,490	1,620	3,820	18,900	18,200	18,600	15,100	14,100	14,700	17,400	13,300	15,900
7	4,620	1,320	2,240	19,400	18,900	19,300	15,400	14,400	14,800	18,200	15,600	17,100
8	3,210	1,820	2,420	20,000	19,400	19,600	16,000	1,770	10,900	19,000	18,200	18,500
9	4,910	3,210	4,090	20,600	20,000	20,400	15,100	12,200	14,200	19,500	19,000	19,300
10	8,470	4,910	5,940	21,100	20,600	20,800	15,800	14,300	15,100	19,700	19,300	19,600
11	7,090	1,610	2,570	21,400	21,000	21,200	15,600	15,000	15,400	19,800	19,400	19,600
12	2,610	1,610	1,950	21,600	21,400	21,500	15,000	13,200	14,200	20,700	19,700	20,100
13	4,200	2,610	3,370	22,100	21,600	21,800	13,200	12,900	13,100	21,300	20,700	20,900
14	5,700	4,200	4,960	22,500	22,100	22,200	13,700	13,100	13,400	21,900	21,300	21,600
15	6,780	5,700	6,300	22,700	22,400	22,500	14,100	8,820	12,900	22,800	21,900	22,400
16	7,570	6,780	7,180	22,800	22,400	22,600	8,820	2,850	3,980	23,200	22,800	23,000
17	8,150	7,560	7,870	22,700	22,300	22,500	3,640	2,850	2,980	23,600	23,200	23,400
18	8,640	8,150	8,380	22,600	22,000	22,300	5,620	3,640	4,480	24,300	23,600	23,900
19	8,740	2,490	5,710	22,400	21,900	22,100	8,800	5,620	7,190	24,900	24,300	24,600
20	7,460	6,270	6,740	22,400	21,900	22,200	8,900	5,710	7,800	25,200	24,900	25,100
21	8,040	7,450	7,630	22,700	22,000	22,300	9,370	5,520	7,650	25,400	24,900	25,200
22	8,140	1,690	6,790	22,900	22,300	22,600	---	---	e12,000	25,500	25,100	25,300
23	9,910	7,740	8,840	23,800	22,700	23,000	---	---	e18,500	25,600	25,100	25,400
24	12,100	9,910	11,000	24,600	8,520	17,700	---	---	e20,400	25,900	25,300	25,500
25	12,000	2,080	9,620	19,700	6,180	16,100	---	---	e21,500	26,000	25,500	25,800
26	9,400	4,280	7,530	17,100	5,790	11,200	---	---	e21,500	26,200	24,600	25,700
27	10,200	7,630	9,270	14,900	5,790	8,610	21,900	21,500	21,800	26,700	24,900	26,300
28	11,100	10,200	10,700	18,100	2,910	8,960	21,900	20,900	21,400	26,300	25,100	25,500
29	11,300	6,150	9,730	8,790	4,200	7,200	21,300	19,900	20,700	25,500	25,100	25,300
30	10,900	8,250	10,200	10,300	8,300	9,010	19,900	19,100	19,600	25,800	3,040	23,000
31	---	---	---	11,800	6,550	9,890	19,100	17,300	18,200	---	---	---
MONTH	26,000	1,120	9,060	24,600	2,910	17,900	---	---	14,000	26,700	3,040	21,600

e Estimated

07311700 North Wichita River near Truscott, TX—Continued



TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

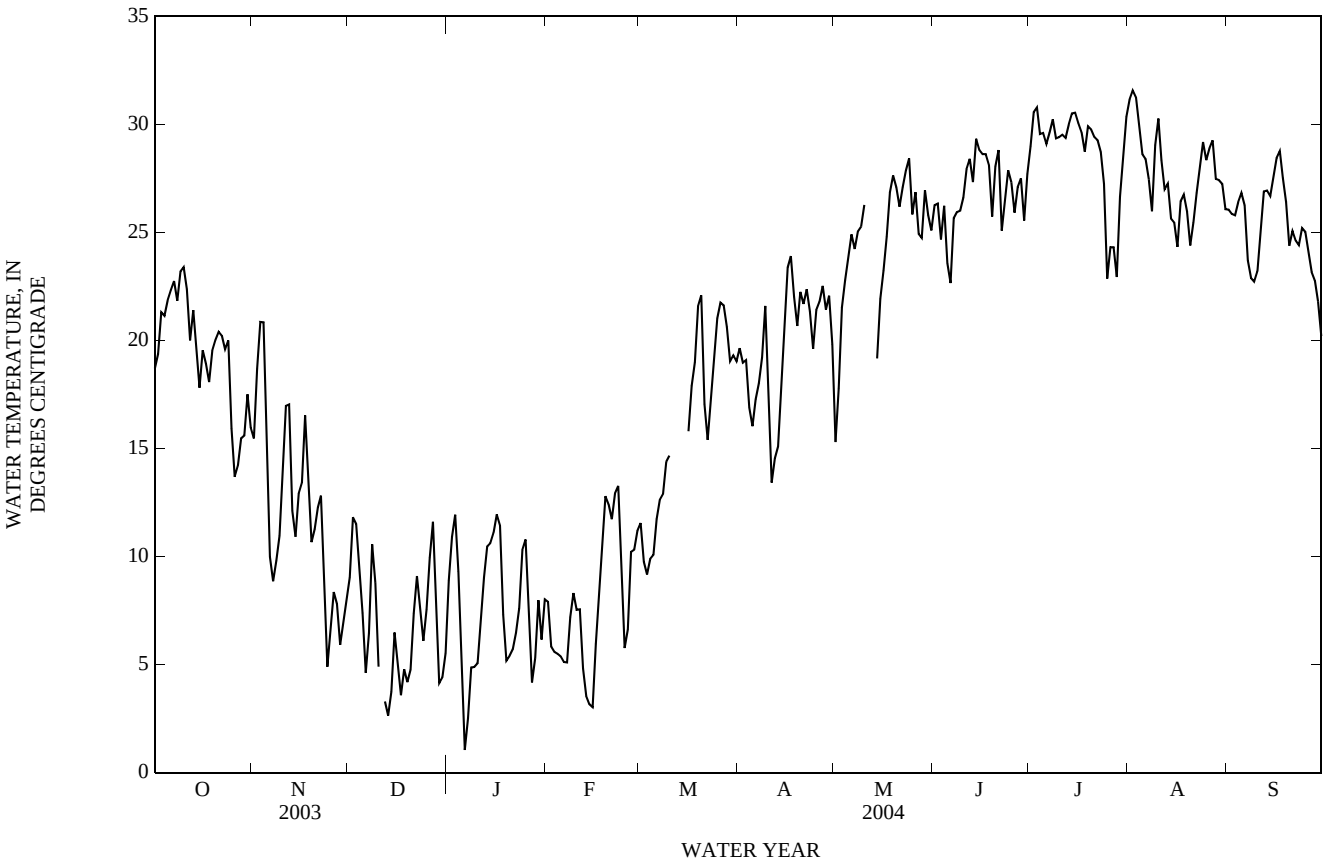
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	21.2	17.2	18.7	17.2	14.2	15.5	11.5	6.8	9.0	11.8	6.1	8.9
2	23.7	15.8	19.4	21.2	16.0	18.7	14.2	9.3	11.8	13.5	8.7	10.9
3	25.3	17.7	21.3	22.6	19.6	20.9	13.5	9.5	11.5	14.5	9.4	11.9
4	22.3	20.1	21.1	22.9	18.5	20.8	11.5	7.0	9.3	12.4	6.2	9.3
5	26.2	18.9	21.9	18.5	11.5	15.1	9.3	5.1	7.4	6.2	2.1	4.4
6	24.4	21.2	22.3	11.5	9.1	10	6.4	2.4	4.6	2.8	-0.7	1.0
7	26.5	19.6	22.7	9.7	7.6	8.9	9.3	3.6	6.5	5.1	0.3	2.5
8	23.4	20.2	21.8	10.3	9.2	9.8	13.4	7.9	10.6	7.5	2.9	4.9
9	25.8	21.2	23.2	11.7	10.2	11.0	11.9	5.0	8.8	7.5	2.5	4.9
10	26.3	21.8	23.4	16.2	11.5	13.6	7.0	3.0	4.9	7.6	2.5	5.1
11	23.8	20.8	22.4	19.1	15.0	17.0	6.8	---	---	9.6	4.0	6.8
12	22.0	18.5	20.0	19.1	14.4	17.0	4.1	2.3	3.3	10.8	7.3	9.0
13	25.3	18.8	21.4	14.4	10.4	12.1	4.8	0.5	2.6	12.9	8.3	10.5
14	22.0	16.8	19.4	12.3	9.8	10.9	6.4	0.9	3.7	13.1	8.0	10.6
15	21.0	14.4	17.8	15.3	11.2	12.9	8.9	4.9	6.5	11.8	10.5	11.1
16	23.3	16.6	19.6	16.0	10.4	13.4	7.0	3.3	5.0	13.9	11.2	11.9
17	21.5	16.5	18.9	17.9	15.1	16.5	6.2	1.1	3.6	13.6	8.8	11.4
18	21.3	14.7	18.1	15.8	10.5	13.2	7.3	2.9	4.8	8.8	5.9	7.3
19	22.9	16.3	19.5	13.4	7.9	10.7	6.7	2.0	4.2	7.0	3.0	5.2
20	22.6	17.3	20.0	14.1	8.5	11.3	7.4	2.2	4.8	7.1	3.6	5.4
21	23.2	17.4	20.4	14.6	10.3	12.3	10.3	4.6	7.4	8.0	3.6	5.7
22	22.7	17.8	20.2	15.1	10.4	12.8	11.1	7.9	9.1	9.0	4.0	6.5
23	22.5	16.4	19.6	13.3	5.5	8.9	9.6	5.9	7.5	10.2	5.0	7.6
24	22.8	17.3	20.0	7.2	2.6	4.9	8.4	3.7	6.1	12.0	8.7	10.3
25	19.9	13.4	15.9	9.0	4.2	6.5	9.9	5.3	7.5	12.6	8.9	10.8
26	16.2	11.8	13.7	11.6	5.7	8.4	12.7	7.4	10	9.9	4.4	7.6
27	17.3	11.1	14.2	10.1	5.8	7.8	13.2	9.8	11.6	6.6	1.6	4.2
28	18.0	13.3	15.5	8.3	3.4	5.9	9.8	4.8	7.9	8.4	2.2	5.3
29	18.5	12.3	15.6	9.8	4.7	7.0	6.3	2.0	4.1	11.2	6.0	8.0
30	20.0	15.3	17.5	10.9	5.6	8.1	7.2	2.2	4.4	8.1	4.0	6.2
31	17.6	15.0	16.0	---	---	---	8.1	3.0	5.5	10.9	5.7	8.0
MONTH	26.5	11.1	19.4	22.9	2.6	12.1	14.2	---	---	14.5	-0.7	7.5

07311700 North Wichita River near Truscott, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.3	5.7	7.9	14.6	8.0	11.6	23.6	15.2	19.6	18.3	13.1	15.3
2	8.3	3.0	5.8	12.9	8.8	9.8	21.4	17.4	19.0	23.3	11.9	17.8
3	6.7	4.1	5.6	9.7	8.7	9.2	22.1	16.4	19.1	26.2	16.7	21.5
4	5.7	5.3	5.5	10.3	9.6	9.9	18.1	15.2	16.9	27.4	18.4	22.8
5	6.1	4.9	5.4	11.2	9.1	10.1	17.2	15.0	16.0	28.8	19.0	23.8
6	7.5	2.8	5.1	13.9	9.7	11.7	20.7	14.8	17.3	30.0	20.7	24.9
7	7.8	2.4	5.1	14.2	10.7	12.6	20.2	15.7	18.0	27.2	21.7	24.2
8	10.0	4.5	7.2	16.1	9.4	12.9	23.1	15.7	19.2	30.1	21.6	25.0
9	9.2	7.6	8.3	17.4	11.2	14.4	25.3	18.0	21.6	30.3	21.7	25.3
10	9.4	5.2	7.5	18.0	10.8	14.7	22.8	12.7	16.6	31.4	22.5	26.3
11	8.1	6.2	7.6	---	11.9	---	16.9	10.2	13.4	---	---	---
12	6.4	3.2	4.8	---	---	---	17.9	11.7	14.6	32.9	---	---
13	4.4	2.8	3.5	---	---	---	19.4	10.5	15.1	---	---	---
14	5.4	1.1	3.2	---	---	---	22.2	12.8	17.7	25.0	14.5	19.2
15	3.8	2.1	3.0	---	---	---	25.0	15.8	20.5	27.5	16.9	21.9
16	9.8	3.0	6.0	18.8	12.3	15.8	27.8	18.9	23.4	27.3	20.1	23.2
17	11.2	4.5	7.9	21.6	13.6	17.9	27.8	20.4	23.9	30.4	20.3	24.8
18	13.8	6.4	10.1	22.4	14.8	19.0	23.6	20.7	22.0	32.5	22.9	26.9
19	16.5	10.3	12.8	25.3	17.8	21.6	22.6	19.5	20.7	33.3	23.4	27.6
20	15.2	9.7	12.4	25.5	19.4	22.1	26.1	18.8	22.2	32.2	23.4	27.1
21	14.4	8.9	11.7	19.7	15.2	17.1	25.6	17.4	21.7	31.2	23.0	26.2
22	16.2	9.8	12.9	18.4	13.0	15.4	27.1	17.6	22.4	32.8	22.8	27.1
23	14.6	12.1	13.3	19.6	13.8	17.0	23.8	18.7	21.3	33.6	23.5	27.9
24	12.1	6.1	9.1	22.2	16.5	18.9	23.8	16.1	19.6	34.3	24.1	28.4
25	7.3	4.8	5.8	25.1	18.0	21.0	26.2	16.8	21.4	28.7	24.1	25.8
26	10.5	2.6	6.6	24.3	19.5	21.8	25.8	17.6	21.8	32.7	22.9	26.9
27	14.0	6.3	10.2	25.0	19.3	21.6	26.9	17.8	22.5	27.0	22.0	24.9
28	11.2	9.9	10.3	23.6	17.5	20.6	24.4	19.3	21.4	30.2	19.5	24.7
29	13.2	9.0	11.2	22.7	15.1	19.0	27.8	17.4	22.1	32.4	23.8	27.0
30	---	---	---	22.8	15.4	19.3	22.9	15.6	19.8	30.7	21.2	25.8
31	---	---	---	22.9	15.0	19.0	---	---	---	30.6	19.8	25.1
MONTH	16.5	1.1	7.8	---	---	---	27.8	10.2	19.7	---	---	---
		JUNE			JULY			AUGUST			SEPTEMBER	
1	31.2	21.8	26.3	32.7	25.4	29.0	35.5	27.0	31.2	29.3	23.1	26.1
2	31.5	22.5	26.3	34.9	26.3	30.6	35.9	27.5	31.6	30.0	22.1	25.9
3	28.6	22.5	24.7	34.8	26.7	30.8	35.6	27.2	31.3	29.9	22.3	25.8
4	31.2	21.2	26.2	32.5	26.5	29.6	35.0	27.0	29.9	30.7	22.9	26.4
5	29.0	15.6	23.6	34.5	26.4	29.6	31.7	26.4	28.6	30.6	23.5	26.8
6	27.3	20.1	22.7	33.8	25.3	29.1	32.1	25.6	28.4	29.5	23.5	26.3
7	28.0	23.9	25.7	34.0	26.0	29.6	30.4	25.1	27.5	27.7	19.9	23.7
8	27.1	24.7	25.9	35.2	26.4	30.2	28.3	21.1	26.0	27.9	18.3	22.9
9	28.6	24.2	26.0	34.8	26.7	29.3	33.4	24.8	29.0	28.4	17.5	22.7
10	30.9	23.7	26.6	34.6	25.4	29.4	34.2	26.4	30.3	29.0	17.8	23.2
11	30.8	25.3	27.9	35.1	25.7	29.5	31.0	25.2	28.3	30.4	20.5	25.2
12	32.2	25.3	28.4	34.7	25.3	29.4	31.2	23.4	27.0	31.7	22.9	26.9
13	31.3	23.3	27.3	35.4	25.7	30.0	31.7	23.6	27.3	31.6	23.5	26.9
14	33.7	25.2	29.3	36.1	25.8	30.5	28.4	23.5	25.6	31.4	23.1	26.7
15	31.8	25.8	28.8	36.3	25.8	30.5	30.0	22.8	25.5	33.0	23.7	27.6
16	32.4	25.0	28.6	36.1	25.4	30.1	27.4	21.9	24.3	33.0	25.6	28.5
17	32.8	25.1	28.6	34.6	26.3	29.6	30.2	22.3	26.4	33.6	25.1	28.8
18	32.4	25.4	28.1	34.4	25.4	28.7	30.6	23.6	26.7	31.0	25.2	27.5
19	29.1	22.0	25.7	36.4	24.7	29.9	29.1	23.9	26.0	29.9	23.9	26.4
20	31.8	24.7	28.1	35.6	25.8	29.8	26.1	22.2	24.4	26.7	22.0	24.4
21	32.3	25.4	28.8	35.6	25.0	29.4	28.9	22.4	25.5	30.2	22.4	25.1
22	28.2	19.8	25.1	35.2	24.9	29.3	30.8	23.3	26.8	28.8	22.1	24.6
23	30.4	22.4	26.4	35.1	25.5	28.7	32.3	24.0	27.9	28.8	21.4	24.4
24	32.2	23.4	27.9	30.1	25.8	27.2	33.5	25.2	29.2	30.4	22.2	25.2
25	31.9	21.9	27.3	25.9	21.7	22.9	31.4	25.0	28.3	29.2	22.0	25.0
26	29.6	23.7	25.9	29.5	20.5	24.3	33.5	25.0	28.9	26.6	21.9	24.1
27	31.9	22.9	27.1	25.4	23.6	24.3	34.1	25.5	29.3	26.3	20.5	23.2
28	30.8	25.8	27.5	25.5	20.9	22.9	30.7	25.6	27.5	26.4	20.8	22.8
29	27.6	23.4	25.6	30.9	23.8	26.7	31.4	23.8	27.4	26.5	17.8	21.8
30	32.4	23.9	27.7	33.2	23.8	28.4	30.9	23.9	27.2	22.0	19.3	20.2
31	---	---	---	34.6	26.2	30.4	29.7	23.2	26.1	---	---	---
MONTH	33.7	15.6	26.8	36.4	20.5	28.7	35.9	21.1	27.7	33.6	17.5	25.2

07311700 North Wichita River near Truscott, TX—Continued



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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 mouth.

DRAINAGE AREA.--223 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1984 to Sept. 1985, May 1987 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,590.0 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--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 flowmeter in pipeline. No flow at times.

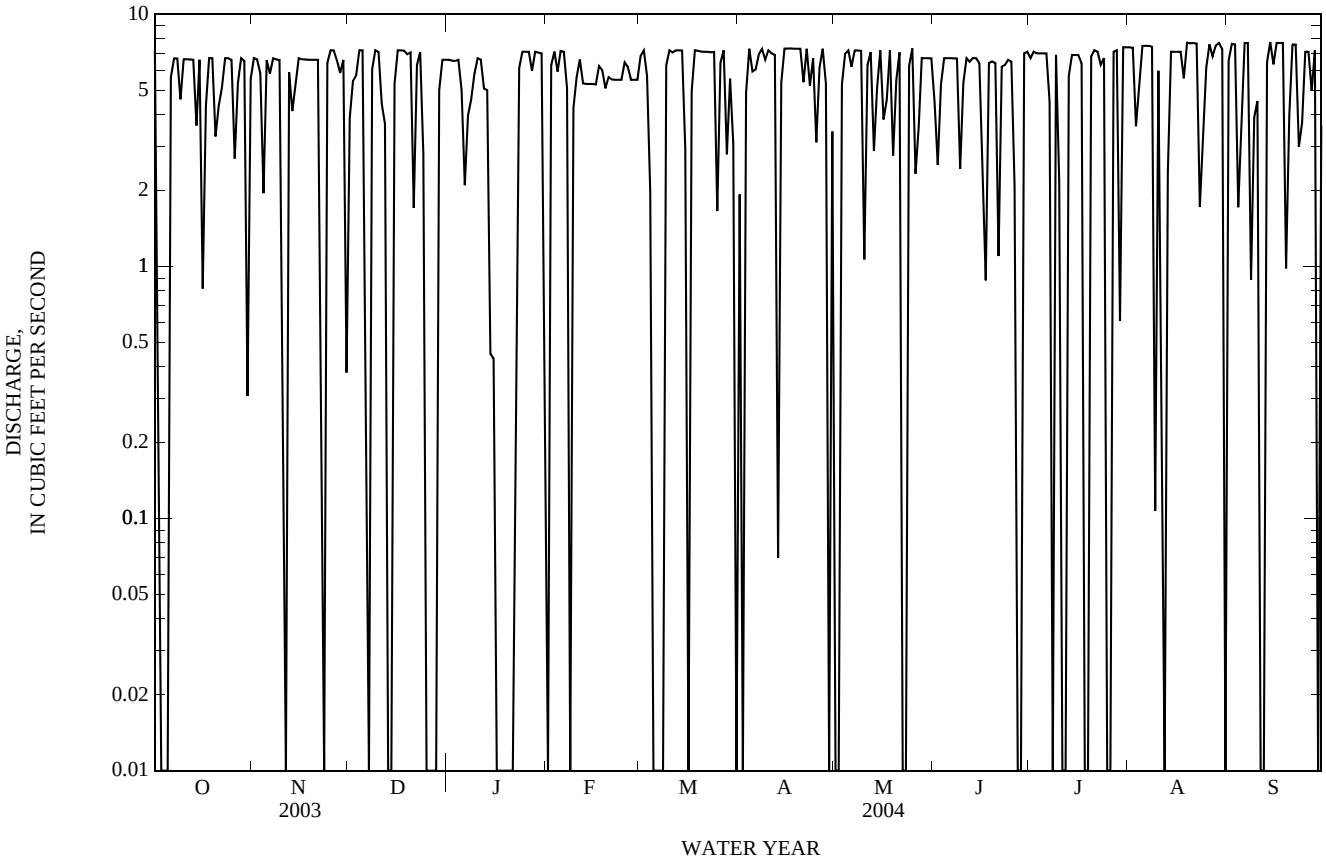
COOPERATION.--Pipeline flowmeter data furnished by the U.S. Army Corps of Engineers, Tulsa District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	6.7	3.9	6.6	0.00	6.8	1.9	0.00	4.5	e6.7	7.4	6.6
2	1.1	6.6	5.4	6.6	6.3	7.2	0.00	0.00	2.5	e7.1	7.4	7.6
3	0.00	5.8	5.7	6.5	7.1	5.7	4.9	5.3	5.3	e7.0	3.6	7.6
4	0.00	2.0	7.2	6.6	5.9	2.0	7.3	7.0	6.7	e7.0	5.1	1.7
5	0.00	6.6	7.2	e5.0	7.2	0.00	5.9	7.2	6.7	e7.0	7.5	4.2
6	5.6	5.8	1.8	e2.1	7.1	0.00	6.0	6.2	6.7	e7.0	7.5	7.7
7	6.7	6.7	0.00	4.0	5.1	0.00	6.9	7.2	6.7	e4.5	7.5	7.7
8	6.7	6.6	6.1	e4.6	0.00	0.00	7.3	7.2	6.7	e0.00	7.4	0.89
9	4.6	6.6	7.2	e5.8	4.3	6.3	6.6	7.2	2.4	e6.9	0.11	3.9
10	6.6	0.53	7.1	6.7	5.6	7.2	7.2	1.1	5.3	e2.2	6.0	4.5
11	6.6	0.00	4.4	6.6	6.6	7.1	e7.0	6.3	6.7	e0.00	0.22	0.00
12	6.6	5.9	3.7	5.1	5.3	7.2	e6.9	7.1	6.5	e0.00	0.00	0.00
13	6.6	4.1	0.00	e5.0	5.3	7.2	e0.07	2.9	6.7	e5.7	2.4	6.5
14	3.6	5.2	0.00	e0.45	5.3	7.2	5.3	5.1	6.7	e6.9	7.1	7.8
15	6.6	6.7	5.3	0.43	5.3	2.9	7.3	7.2	6.4	e6.9	7.1	6.3
16	0.82	6.6	7.2	0.00	5.3	0.00	7.3	3.8	2.0	e6.9	7.1	7.7
17	4.3	6.6	7.2	0.00	6.2	4.9	7.3	4.6	e0.88	e6.4	7.1	7.7
18	6.7	6.6	7.2	0.00	6.0	7.2	7.3	7.2	e6.4	e0.00	5.6	7.7
19	6.7	6.6	7.0	0.00	5.1	7.2	7.3	2.8	e6.5	e0.00	7.7	0.98
20	3.3	6.6	7.1	0.00	5.6	7.1	7.3	5.5	e6.4	e6.8	7.7	4.0
21	4.3	6.6	1.7	0.00	5.5	7.1	5.4	7.1	e1.1	e7.2	7.7	7.6
22	5.1	1.4	6.3	0.31	5.5	7.1	7.3	0.00	e6.2	e7.1	7.7	7.6
23	6.7	0.00	7.1	6.1	5.5	7.1	5.2	0.00	e6.3	e6.3	1.7	3.0
24	6.7	6.4	2.8	7.1	5.5	7.1	6.7	6.2	e6.6	e6.7	3.1	3.7
25	6.6	7.2	0.00	7.1	6.4	1.7	3.1	7.3	e6.5	e0.00	6.1	7.1
26	2.7	7.2	e0.00	7.1	6.2	6.4	6.1	2.3	e2.1	e0.00	7.6	7.1
27	5.3	6.6	e0.00	6.0	5.5	7.2	7.3	3.6	e0.00	e7.1	6.8	5.0
28	6.7	5.9	e0.00	7.1	5.5	2.8	5.3	6.7	e0.00	e7.2	7.5	7.2
29	6.5	6.6	e5.0	7.1	5.5	5.6	0.00	6.7	e7.0	e0.61	7.7	0.00
30	0.31	0.38	6.6	7.0	---	3.1	3.4	6.7	e7.1	7.4	7.3	3.6
31	5.6	---	6.6	0.78	---	0.00	---	6.7	---	7.4	0.00	---
TOTAL	146.83	157.11	136.80	127.77	155.70	148.40	166.87	154.20	151.58	152.01	174.73	152.97
MEAN	4.74	5.24	4.41	4.12	5.37	4.79	5.56	4.97	5.05	4.90	5.64	5.10
MAX	7.2	7.2	7.2	7.1	7.2	7.2	7.3	7.3	7.1	7.4	7.7	7.8
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	291	312	271	253	309	294	331	306	301	302	347	303

e Estimated

07311782 South Wichita River at low-flow dam near Guthrie, TX—Continued



07311782 South Wichita River at low-flow dam near Guthrie, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1984 to current year.
PESTICIDE DATA: Sept. 1996 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct. 1984 to current year. Oct. 1986 to Apr. 1987, published as "South Wichita River at low-flow dam near Guthrie" (station 07311783).
WATER TEMPERATURE: Oct. 1984 to current year. Oct. 1986 to Apr. 1987, published as "South Wichita River at low-flow dam near Guthrie" (station 07311783).

INSTRUMENTATION.--Water-quality monitor since Oct. 1984.

REMARKS.--Records good. Interruptions in the record were caused by malfunctions of the instrument or when the pumps were not running. Temperature and specific-conductance values for days of zero flow through the pipeline are published if water is present behind the low-flow dam. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. New regression equations were developed based on data from water years 1995 to 2004. The standard error of estimate for dissolved solids is 6%, chloride is 8%, sulfate is 6% and for hardness is 5%. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request. Samples for chemical analyses are collected 0.5 mi upstream from the collection pool. No flow through the pipeline for many days.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 55,800 microsiemens/cm, Aug. 13, 2003; minimum, 200 microsiemens/cm, July 3, 1986.
WATER TEMPERATURE: Maximum, 36.0°C, July 5, 11-13, 21, 1996; minimum, 0.0°C, Dec. 23, 1989, Dec. 22, 1990.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 53,300 microsiemens/cm, July 27; minimum, 2,180 microsiemens/cm, Mar 5.
WATER TEMPERATURE: Maximum, 33.9°C, July 15; minimum, 5.0°C, Dec. 14.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
OCT													
14...	1245	.01	8.3	107	7.7	50,100	18.4	4,900	4,700	1360d	354d	58.4d	82
NOV													
20...	1335	6.6	10.7	128	7.7	60,400	12.2	5,200	5,100	1470d	365d	56.5d	89
DEC													
08...	1230	7.2	9.8	116	7.8	56,300	12.2	4,900	4,700	1370d	348d	48.8d	80
JAN													
20...	1340	.01	11.6	121	7.8	50,000	8.6	4,600	4,500	1300d	324d	41.6d	73
FEB													
23...	1205	5.5	5.5	69	7.6	58,900	14.4	4,800	4,700	1370d	342d	57.6d	84
MAR													
17...	1315	7.2	13.1	169	8.0	47,600	18.6	4,300	4,200	1220d	314d	43.2d	69
APR													
21...	1150	7.3	9.3	127	7.8	53,700	19.6	4,200	4,100	1210d	290d	49.2d	76
MAY													
17...	1120	7.2	7.3	112	7.7	57,800	22.0	4,800	4,700	1380d	325d	59.4d	81
JUN													
21...	1205	1.1	5.2	87	7.5	56,500	27.7	4,700	4,600	1340d	318d	48.0d	80
JUL													
06...	1205	7.0	4.7	78	7.5	58,500	27.4	5,000	4,900	1400d	355d	53.9d	81
AUG													
02...	1205	7.3	3.9	63	7.2	48,000	28.4	4,300	4,200	1210d	314d	52.0d	69
SEP													
01...	1205	7.7	5.1	79	7.4	59,600	23.5	4,900	4,800	1410d	336d	68.6d	79

07311782 South Wichita River at low-flow dam near Guthrie, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium, water, fltrd, mg/L (00930)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
OCT													
14...	13200d	112	21500d	.6	9.8	2940d	39,400	<10	.60	.51	.12	.22	.097
NOV													
20...	14600d	112	22100d	.6	9.2	3240d	41,900	10	.47	.50	.14	.27	.130
DEC													
08...	12800d	116	20400d	.7	7.4	3090d	38,100	12	.37	.36	.16	.30	.135
JAN													
20...	11300dr	122	18700dr	.6	8.9	3160d	34,900	16	.54	.43	.13	.23	.103
FEB													
23...	13500dr	115	21400dv	.6	5.9	3200d	40,000	29	.55	.36	.12	.21	.089
MAR													
17...	10400d	103	16900d	.6	5.3	2710d	31,700	18	.38	.21	.10	.17	.069
APR													
21...	11300d	103	19100d	.6	4.4	2840d	34,900	19	.34	.15d	.04	.08	.046
MAY													
17...	12800d	98	21000d	.6	1.5	3080d	38,700	54	.35	.22	.03	.08	.048
JUN													
21...	12600d	97	20400d	.6	2.5	3080d	37,800	15	.56	.28	.05	.10	.048
JUL													
06...	13100d	94	21600d	.6	5.8	3190d	39,800	32	.61	.39	.04	.09	.050
AUG													
02...	10400d	109	17400d	.6	10.6	2790d	32,200	16	.94	.63	.06	.10	.046
SEP													
01...	12700d	103	21200d	.6	8.0	3110d	38,900	<10	.75	.68	.10	.17	.074

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L (00660)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)
OCT													
14...	.09	--	<.02	<.04	<.04	.82	<4.2d	65dc	35d	38d	<.84d	<.84d	<8.0d
NOV													
20...	--	--	<.02	<.04	<.04	.75	--u	E11ndc	39d	34d	<.76d	<.76d	<4.0d
DEC													
08...	.01	--	<.02	<.04	<.04	.67	<5.0d	<11dc	26d	34d	<1.00d	<.92d	<4.8d
JAN													
20...	.10	--	<.02	<.04	<.04	.77	<4.2d	<11dc	30d	30d	<.84d	<.84d	<4.8d
FEB													
23...	.18	.058	.02	<.04	<.04	.76	5.5d	E7nd	29d	30d	<1.00d	<.96d	<4.8d
MAR													
17...	.17	--	<.02	<.04	<.04	.55	<4.0d	<10d	50d	54d	<.80d	<.80d	<4.0d
APR													
21...	.19	--	<.04d	<.04	<.04	.42	<4.4d	<11d	41d	45d	<.88d	<.88d	<4.8d
MAY													
17...	.13	.058	.02	<.04	<.04	.43	<4.8d	<11d	36d	39d	<.96d	<.96d	<4.8d
JUN													
21...	.28	--	<.02	<.04	<.04	.66	<5.0d	<11d	29d	38d	<1.00d	<.92d	<4.8d
JUL													
06...	.22	--	<.02	<.04	<.04	.70	4.1d	<11d	37d	38d	E.08nd	<.96d	<4.8d
AUG													
02...	.32	--	<.02	<.04	E.02n	1.0	--u	<10d	46d	46d	<.80d	<.80d	<.8
SEP													
01...	.06	--	E.01n	<.04	<.04	.92	<5.0d	<11d	12d	35d	<1.00d	<.96d	<4.8d

07311782 South Wichita River at low-flow dam near Guthrie, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recoverable, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recoverable, ug/L (01067)
OCT 14...	<4.0d	40.9d	37.0d	<320d	210d	<1.68d	<1.26d	99.5d	96d	<.02	<.02	46.4d	89.9d
NOV 20...	6.3d	15.7d	38.5d	<320d	E120nd	<1.52d	<1.14d	55.5d	52d	<.02	<.02	<1.14d	77.1d
DEC 08...	<4.8d	12.7d	53.7d	<320d	<450d	<2.00d	<1.38d	39.2d	48d	<.02	<.02	24.7d	89.8d
JAN 20...	<4.8d	13.7d	57.4d	<320d	E170nd	E1.11nd	<1.26d	101d	100d	<.02	<.02	28.5d	65.3d
FEB 23...	<4.8d	15.8d	23.9d	79	490d	<2.00d	<1.44d	265d	287d	<.02	<.02	44.5d	42.6d
MAR 17...	<4.0d	16.0d	26.3d	<160d	E210nd	E.96nd	<1.20d	100d	119d	<.02	E.01n	19.9d	43.4d
APR 21...	<4.8d	13.4d	25.6d	<320d	E170nd	<1.76d	<1.32d	74.7d	79d	<.02	<.02	23.6d	54.6d
MAY 17...	<4.8d	33.7d	29.9d	<320d	E180nd	<1.92d	<1.44d	46.4d	61d	<.02	<.02	39.5d	75.8d
JUN 21...	<4.8d	19.7d	43.3d	<192d	270d	2.40d	<1.38d	67.0d	100d	<.02	<.02	33.2d	60.5d
JUL 06...	<.8	16.8d	49.1d	<192d	E180nd	E.21nd	<1.44d	94.8d	102d	<.02	<.02	35.5d	91.6d
AUG 02...	<.8	24.3d	24.4d	<192d	360d	<1.60d	<1.20d	211d	186d	<.02	<.02	29.5d	71.2d
SEP 01...	<4.8d	19.0d	61.0d	<320d	240d	2.28d	<1.44d	31.4d	75d	<.02	<.02	2.35d	77.8d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recoverable, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha-Endosulfan, water, unfltrd ug/L (34361)	alpha-HCH, water, unfltrd ug/L (39337)	alpha-HCH-d6, surrog, Sch1608 water, unfltrd pct rcv (99778)	Aroclor 1016 + 1242, water, unfltrd ug/L (81648)	Aroclor 1221, water, unfltrd ug/L (39488)	Aroclor 1232, water, unfltrd ug/L (39492)
OCT 14...	<1	<1	<4.2d	<3.36d	E12.6nd	<42d	--	--	--	--	--	--	--
NOV 20...	<1	<1	<3.8d	<3.04d	E11.0nd	<38d	--	--	--	--	--	--	--
DEC 08...	1	1	<5.0d	<3.68d	E8.5nd	E27nd	--	--	--	--	--	--	--
JAN 20...	<1c	<1	<4.2d	<3.36d	E11.6nd	E25nd	--	--	--	--	--	--	--
FEB 23...	<1	6	<5.0d	<3.84d	E12.4nd	<48d	--	--	--	--	--	--	--
MAR 17...	<1	<1	<4.0d	<3.20d	12.2d	<40d	--	--	--	--	--	--	--
APR 21...	<1	<1	<4.4d	<3.52d	E9.1nd	<44d	<.04	<.1	<.03	E88.1	<.1	<1	<.1
MAY 17...	<1	1	<4.8d	<3.84d	16.5d	<48d	--	--	--	--	--	--	--
JUN 21...	<1	<1	<5.0d	<3.68d	16.9d	93d	<.04	<.1	<.03	E109	<.1	<1	<.1
JUL 06...	<1	<1	.7d	<3.84d	21.1d	E40nd	--	--	--	--	--	--	--
AUG 02...	2	4	<4.0d	<3.20d	15.7d	<40d	--	--	--	--	--	--	--
SEP 01...	<1	<1	<5.0d	<3.84d	19.3d	E24nd	--	--	--	--	--	--	--

07311782 South Wichita River at low-flow dam near Guthrie, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Aroclor 1248, water, unfltrd ug/L (39500)	Aroclor 1254, water, unfltrd ug/L (39504)	Aroclor 1260, water, unfltrd ug/L (39508)	beta-Endo-sulfan, water, unfltrd ug/L (34356)	beta-HCH, water, unfltrd ug/L (39338)	Chlor-dane, tech-nical, water, unfltrd ug/L (39350)	cis-Chlor-dane, water, unfltrd ug/L (39062)	delta-HCH, water, unfltrd ug/L (34259)	Diel-drin, water, unfltrd ug/L (39380)	Endo-sulfan sulfate water unfltrd ug/L (34351)	Endrin alde-hyde, water, unfltrd ug/L (34366)	Endrin, water, unfltrd ug/L (39390)	Hepta-chlor epoxide water unfltrd ug/L (39420)
OCT													
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
21...	<.1	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8
MAY													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
21...	<.1	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8
JUL													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 2003 TO SEPTEMBER 2004

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Hepta-chlor, water, unfltrd ug/L (39410)	Lindane water, unfltrd ug/L (39340)	p,p'-DDD, water, unfltrd ug/L (39310)	p,p'-DDE, water, unfltrd ug/L (39320)	p,p'-DDT, water, unfltrd ug/L (39300)	PCB 207, surrog, Sch1608 water, unfltrd pct rcv (99781)	Toxa-phene, water, unfltrd ug/L (39400)	trans-Chlor-dane, water, unfltrd ug/L (39065)
OCT								
14...	--	--	--	--	--	--	--	--
NOV								
20...	--	--	--	--	--	--	--	--
DEC								
08...	--	--	--	--	--	--	--	--
JAN								
20...	--	--	--	--	--	--	--	--
FEB								
23...	--	--	--	--	--	--	--	--
MAR								
17...	--	--	--	--	--	--	--	--
APR								
21...	<.03	<.03	<.1	<.04	<.1	E95.7	<2	<.1
MAY								
17...	--	--	--	--	--	--	--	--
JUN								
21...	<.03	<.03	<.1	<.04	<.1	E137	<2	<.1
JUL								
06...	--	--	--	--	--	--	--	--
AUG								
02...	--	--	--	--	--	--	--	--
SEP								
01...	--	--	--	--	--	--	--	--

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

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL
r -- Value verified by rerun, same method
v -- Analyte detected in laboratory blank

Null value qualifier codes used in this table:
u -- Unable to determine-matrix interference

07311782 South Wichita River at low-flow dam near Guthrie, TX—Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 2003 TO SEPTEMBER 2004

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.	2003	146.83	48050	32870	13030	17300	6870	3100	1230	4400
NOV.	2003	157.11	48440	33130	14060	17500	7420	3100	1320	4400
DEC.	2003	136.8	47070	32230	11900	17000	6260	3100	1140	4400
JAN.	2004	127.77	45890	31450	10850	16500	5690	3100	1060	4300
FEB.	2004	155.7	45510	31200	13120	16400	6880	3100	1280	4300
MAR.	2004	148.4	40170	27640	11070	14400	5750	2900	1150	3900
APR.	2004	166.87	43350	29770	13410	15500	7000	3000	1350	4200
MAY	2004	154.2	47240	32340	13460	17000	7090	3100	1290	4400
JUNE	2004	151.58	45910	31460	12880	16500	6760	3100	1250	4300
JULY	2004	152.01	47690	32630	13390	17200	7060	3100	1270	4400
AUG.	2004	174.73	46930	32130	15160	16900	7980	3100	1450	4400
SEPT	2004	152.97	49810	34030	14060	18000	7440	3100	1290	4500
TOTAL		1824.97	**	**	156400	**	82200	**	15080	**
WTD.AVG.		5.0	46340	31740	**	16700	**	3100	**	4300

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	47,700	47,000	47,300	49,700	48,700	49,200	47,200	47,100	47,200	50,600	41,300	47,300
2	---	---	e47,700	49,500	48,500	48,900	47,900	47,200	47,600	50,600	45,300	49,000
3	---	---	e47,400	48,600	47,700	48,100	48,000	47,500	47,900	50,400	45,500	48,800
4	47,700	47,400	47,600	47,700	47,300	47,500	---	---	e47,600	49,900	46,500	48,700
5	47,800	47,600	47,700	48,300	47,700	48,000	---	---	e47,400	49,200	---	e48,400
6	47,800	47,600	47,700	49,400	48,200	48,700	---	---	e46,900	---	---	e47,300
7	47,800	47,500	47,600	49,200	47,600	48,500	---	---	e46,800	45,300	38,700	42,200
8	47,800	47,500	47,700	47,600	46,500	47,200	---	---	e46,800	44,400	40,900	42,500
9	47,800	47,200	47,600	46,600	45,900	46,300	48,400	43,500	47,100	---	---	e47,700
10	47,500	47,200	47,400	46,200	44,600	45,800	48,600	45,500	47,900	48,200	46,900	47,800
11	47,700	45,900	46,900	45,900	45,700	45,800	47,700	45,700	47,300	47,900	41,100	45,100
12	46,300	46,100	46,200	46,500	45,800	46,100	47,700	44,500	47,100	47,000	40,200	45,300
13	46,600	46,300	46,400	49,500	46,500	47,800	48,000	47,500	47,800	45,800	39,700	44,300
14	47,500	46,600	47,000	49,500	48,500	49,300	47,800	47,300	47,600	45,500	43,300	45,100
15	48,100	47,400	47,700	49,500	48,500	49,000	48,000	44,700	47,300	46,100	43,400	45,100
16	48,300	47,900	48,200	49,800	49,400	49,600	48,800	44,700	48,300	46,600	39,800	45,500
17	48,500	48,200	48,300	49,500	48,000	48,700	48,900	44,700	48,100	46,600	41,700	44,700
18	49,100	48,300	48,600	49,000	47,700	48,100	48,100	47,100	47,700	44,800	41,600	43,900
19	49,200	48,600	48,900	49,000	48,000	48,300	47,800	44,500	46,900	44,600	40,900	44,100
20	49,200	48,300	48,700	48,200	47,700	47,900	47,300	43,300	46,200	44,500	41,000	43,800
21	48,800	48,100	48,500	48,300	47,500	47,900	46,500	42,700	45,300	44,400	43,000	43,800
22	48,800	47,900	48,200	48,000	47,600	47,800	45,900	43,400	45,600	44,800	42,200	43,300
23	49,500	48,800	49,200	48,900	47,800	48,400	46,300	43,900	45,800	45,700	44,200	45,200
24	49,400	48,800	49,100	49,400	48,800	49,100	46,200	42,000	45,400	45,800	43,800	45,500
25	49,200	48,900	49,000	51,200	49,400	50,200	45,800	42,800	45,300	45,800	43,000	44,700
26	48,900	47,500	48,200	50,600	49,800	50,100	---	---	e45,800	45,500	44,200	45,200
27	48,300	47,600	48,000	49,900	49,200	49,500	---	---	e46,200	45,500	42,600	44,900
28	49,800	48,300	49,200	49,300	48,000	48,300	---	---	e47,000	45,400	42,300	44,500
29	50,000	49,000	49,300	48,000	47,800	47,900	---	---	e48,200	45,400	41,500	44,100
30	49,000	48,500	48,700	47,800	47,200	47,400	48,400	44,300	46,600	45,800	43,000	44,800
31	48,900	48,600	48,700	---	---	---	47,800	43,200	45,400	44,700	40,000	43,300
MONTH	---	---	48,000	51,200	44,600	48,200	---	---	46,900	---	---	45,400

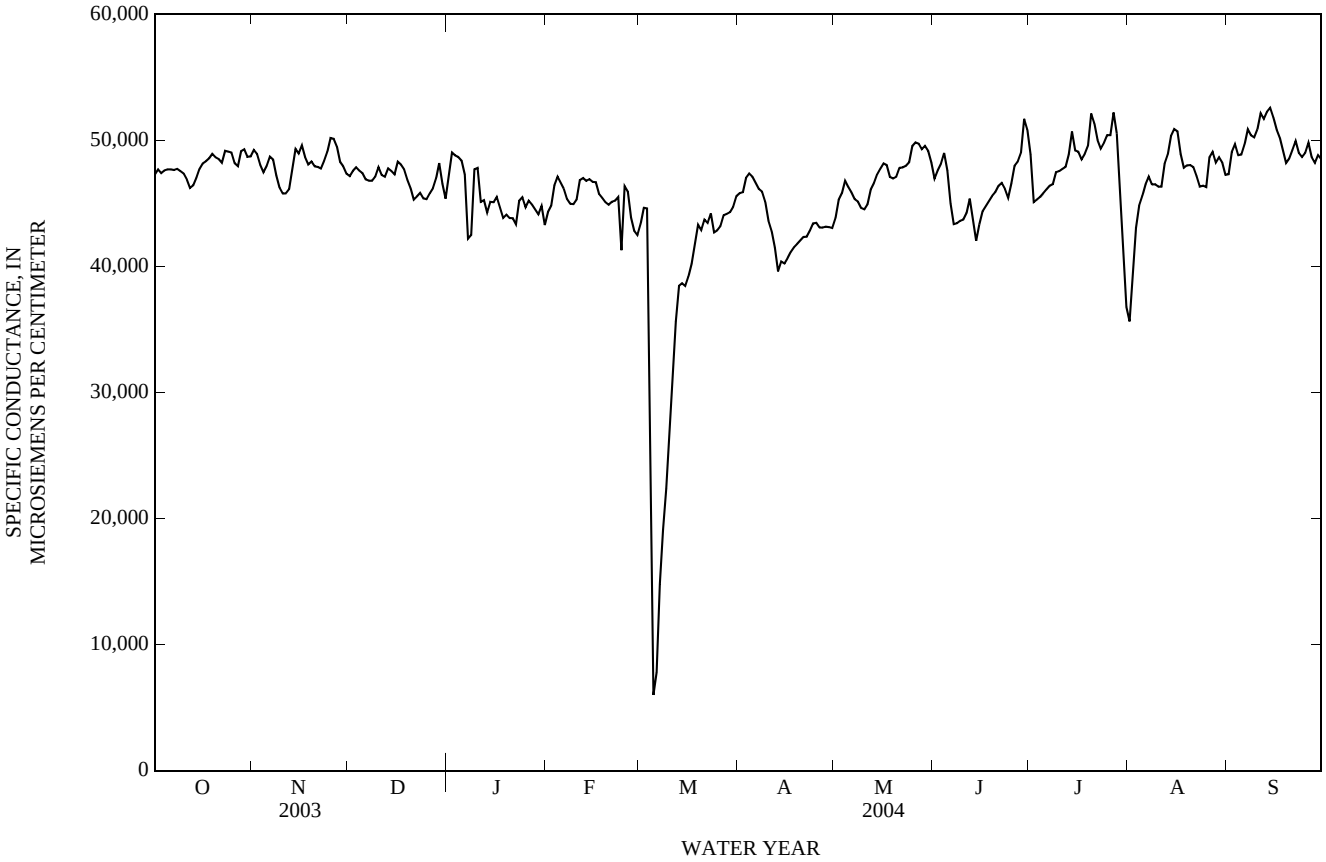
07311782 South Wichita River at low-flow dam near Guthrie, TX—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	44,800	40,900	44,300	43,900	41,000	43,400	46,000	45,600	45,800	44,100	43,300	43,800
2	45,600	41,700	44,800	45,400	43,800	44,700	46,800	45,700	45,900	45,800	44,100	45,300
3	47,700	44,100	46,400	45,000	42,900	44,600	47,300	46,800	47,000	46,600	45,500	45,800
4	47,900	44,600	47,100	44,700	3,260	34,800	47,500	47,200	47,400	47,000	46,400	46,800
5	47,100	45,300	46,700	---	2,180	e6,000	47,400	46,600	47,100	46,800	45,900	46,300
6	47,100	45,600	46,200	---	---	e7,800	47,000	46,000	46,600	46,400	45,400	45,900
7	46,300	43,900	45,400	---	---	e14,800	46,800	45,300	46,100	45,800	44,900	45,300
8	45,800	42,400	45,000	21,000	---	e19,100	46,400	45,500	45,900	45,800	44,600	45,200
9	45,600	41,200	44,900	25,000	21,000	22,400	45,700	44,600	45,100	45,200	44,100	44,600
10	46,500	43,900	45,300	30,700	25,000	27,800	45,200	42,500	43,600	44,800	44,300	44,500
11	47,700	45,500	46,900	34,600	30,000	32,100	---	---	e42,800	45,500	44,500	44,900
12	47,800	46,200	47,000	37,600	34,600	35,600	---	---	e41,500	46,700	45,500	46,100
13	47,200	45,900	46,800	38,800	37,600	38,500	---	---	e39,600	46,900	46,300	46,600
14	47,400	46,000	46,900	39,400	37,500	38,700	41,200	39,800	40,400	47,700	46,900	47,300
15	47,400	46,200	46,700	38,900	37,600	38,500	41,200	39,900	40,200	48,200	47,400	47,800
16	47,300	46,100	46,700	39,800	38,200	39,200	41,300	40,300	40,700	48,700	47,900	48,200
17	46,500	44,000	45,800	40,600	39,800	40,200	41,400	40,900	41,200	48,600	47,400	48,000
18	46,100	44,500	45,400	43,100	40,400	41,700	41,700	41,300	41,500	47,600	46,500	47,100
19	45,400	43,600	45,100	43,600	43,000	43,300	42,100	41,700	41,800	47,700	46,400	47,000
20	45,500	42,500	44,900	43,600	41,900	42,900	42,300	41,800	42,100	47,500	46,800	47,100
21	45,400	44,500	45,100	44,000	42,900	43,700	42,500	42,100	42,300	48,100	47,400	47,800
22	45,900	43,700	45,200	44,100	43,000	43,500	42,700	41,900	42,400	48,100	47,500	47,900
23	45,900	44,800	45,500	44,800	43,400	44,200	43,100	42,700	42,800	48,100	47,800	48,000
24	46,100	31,500	41,300	43,400	42,100	42,700	43,800	43,100	43,400	48,600	48,000	48,300
25	46,800	45,600	46,400	43,000	42,700	42,900	43,800	43,100	43,500	50,200	48,600	49,600
26	46,700	44,800	45,900	43,500	42,900	43,200	43,700	42,500	43,100	50,300	49,300	49,800
27	45,000	42,600	43,900	44,500	43,500	44,100	43,400	42,700	43,100	49,900	49,100	49,700
28	43,900	41,600	42,800	44,500	43,800	44,200	43,500	42,800	43,200	49,800	48,900	49,300
29	43,700	40,400	42,500	44,900	44,000	44,300	43,300	42,800	43,100	50,000	49,100	49,600
30	---	---	---	45,300	44,200	44,700	43,300	42,900	43,000	49,700	48,600	49,200
31	---	---	---	46,000	45,200	45,600	---	---	---	49,100	47,500	48,200
MONTH	47,900	31,500	45,400	---	---	36,700	---	---	43,400	50,300	43,300	47,100
		JUNE			JULY			AUGUST			SEPTEMBER	
1	47,700	46,300	47,000	50,300	46,700	48,900	36,900	34,600	35,600	47,800	47,000	47,300
2	48,000	47,000	47,600	46,700	44,400	45,100	41,600	36,900	39,400	50,400	47,400	49,100
3	48,300	47,900	48,100	---	---	e45,300	44,100	41,600	43,100	50,600	49,100	49,700
4	49,400	48,300	49,000	---	---	e45,500	45,800	43,600	44,800	49,300	48,500	48,800
5	48,800	46,800	47,600	---	---	e45,800	46,000	45,300	45,600	49,100	48,700	48,900
6	46,800	43,900	45,000	---	---	e46,100	47,300	45,900	46,500	51,700	48,800	49,700
7	44,500	42,400	43,300	46,800	45,900	46,400	47,300	46,800	47,100	51,400	50,100	50,900
8	43,700	43,000	43,400	47,200	46,100	46,500	47,300	45,700	46,500	50,900	50,100	50,400
9	43,800	43,400	43,600	47,900	47,200	47,500	46,700	46,100	46,500	50,500	49,900	50,200
10	43,900	43,400	43,700	47,700	47,400	47,600	46,600	46,100	46,300	52,400	50,000	50,900
11	45,300	43,400	44,200	47,900	47,400	47,700	48,000	46,000	46,300	52,700	51,500	52,200
12	45,800	44,900	45,400	---	---	e47,900	48,700	47,900	48,200	52,000	51,500	51,700
13	44,900	42,000	43,700	---	---	e48,900	50,400	48,200	48,900	52,900	51,700	52,300
14	43,000	41,500	42,000	---	---	e50,700	50,900	49,400	50,400	52,700	52,400	52,600
15	44,200	43,000	43,300	---	---	e49,200	51,100	50,700	50,900	52,600	51,100	51,800
16	44,500	44,200	44,400	49,400	48,500	49,100	51,100	50,000	50,700	51,200	50,500	50,900
17	44,900	44,500	44,800	48,700	48,300	48,500	50,000	48,100	48,900	51,000	49,600	50,200
18	---	---	e45,200	49,100	48,700	48,900	48,200	47,500	47,800	50,000	48,700	49,300
19	---	---	e45,600	50,500	48,800	49,600	48,600	47,600	48,000	48,700	48,000	48,200
20	---	---	e45,900	53,000	50,500	52,100	48,700	46,800	48,000	48,700	48,300	48,600
21	---	45,500	e46,400	52,200	50,800	51,300	48,600	46,800	47,900	50,400	48,500	49,200
22	47,500	45,700	46,600	50,800	49,600	50,000	48,100	46,600	47,200	50,400	49,500	50,000
23	47,400	45,000	46,200	49,900	49,000	49,400	47,100	46,000	46,300	49,600	48,500	49,000
24	46,400	44,700	45,400	50,200	49,200	49,800	46,600	46,200	46,400	48,900	48,400	48,700
25	47,600	45,300	46,600	50,600	50,200	50,400	46,600	46,100	46,300	50,500	48,400	49,000
26	48,200	47,600	48,000	50,800	50,300	50,400	49,400	46,600	48,700	50,500	49,500	49,800
27	48,600	48,200	48,300	53,300	50,500	52,200	49,500	48,700	49,100	49,500	48,100	48,700
28	50,600	48,600	49,000	52,300	49,100	50,500	49,000	47,600	48,200	48,700	47,900	48,200
29	52,500	50,600	51,700	49,600	42,800	46,600	49,000	48,200	48,700	49,000	48,600	48,800
30	52,600	49,400	50,900	43,500	38,300	41,300	49,000	47,500	48,200	48,900	47,700	48,500
31	---	---	---	38,800	35,100	36,800	47,500	47,100	47,300	---	---	---
MONTH	---	---	46,100	---	---	47,900	51,100	34,600	46,900	52,900	47,000	49,800

e Estimated

07311782 South Wichita River at low-flow dam near Guthrie, TX—Continued



TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

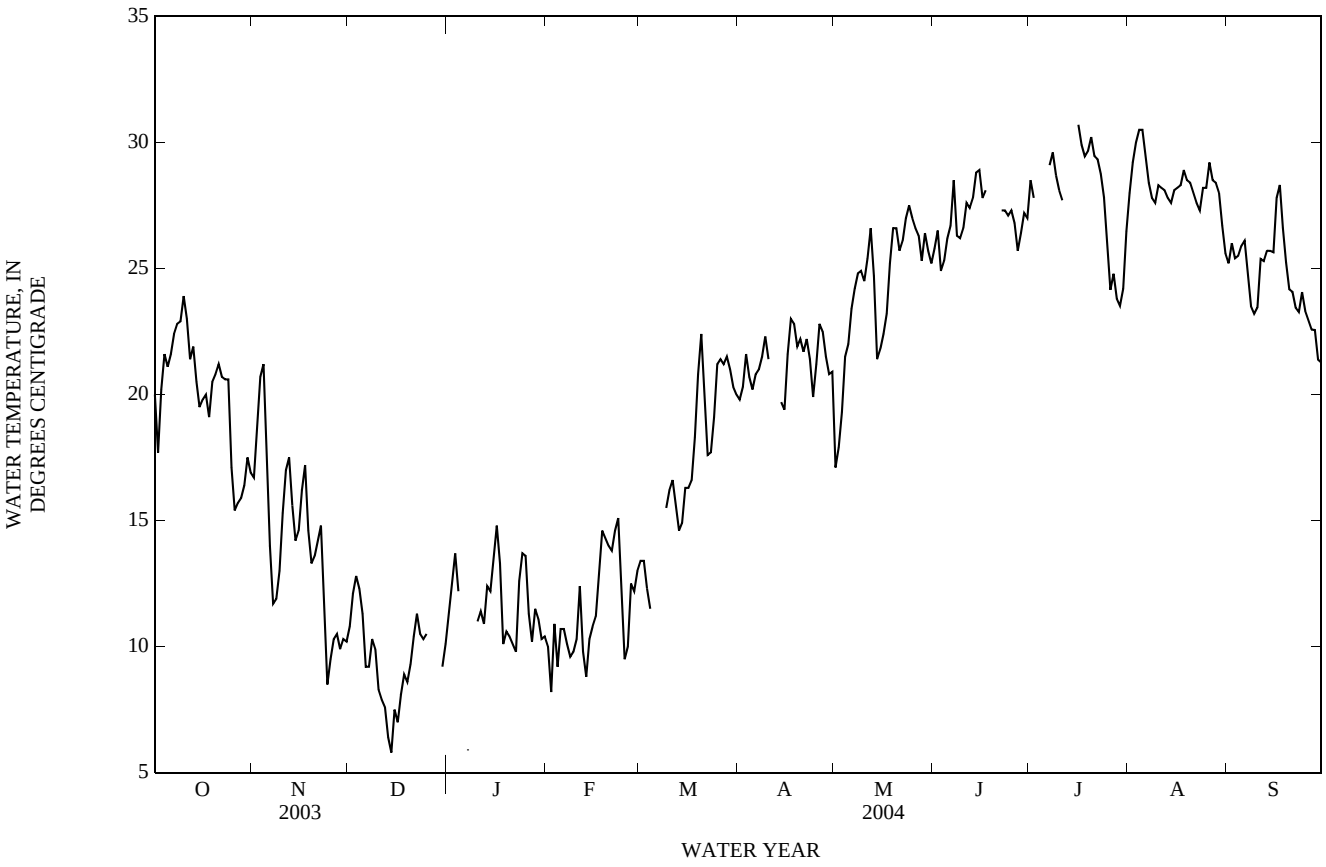
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	22.5	16.6	20.0	18.4	15.3	16.7	11.6	9.7	10.8	13.0	10.3	11.4
2	21.5	14.1	17.7	20.4	17.2	18.7	13.5	10.9	12.1	14.3	10.9	12.6
3	25.4	14.9	20.2	22.6	19.0	20.7	13.6	11.7	12.8	15.5	12.0	13.7
4	22.6	21.2	21.6	22.8	20.3	21.2	14.4	10.4	12.3	14.5	10.8	12.2
5	21.6	20.4	21.1	20.7	16.7	17.7	12.3	9.6	11.3	---	8.5	---
6	22.3	21.2	21.6	16.8	13.2	14.0	10.0	8.1	9.2	---	6.0	---
7	24.0	21.2	22.4	13.2	11.0	11.7	10.3	8.3	9.2	7.1	5.1	5.9
8	23.7	21.7	22.8	12.5	11.3	11.9	12.0	9.1	10.3	---	5.6	---
9	24.0	22.1	22.9	13.6	12.4	13.0	11.9	7.7	9.9	9.9	---	---
10	24.5	23.5	23.9	17.4	13.3	15.3	10.2	6.6	8.3	12.3	9.8	11.0
11	23.8	22.4	23.0	17.7	16.2	17.0	9.4	6.5	7.9	12.2	10.4	11.4
12	22.5	20.2	21.4	18.3	16.7	17.5	8.6	6.9	7.6	12.2	10.0	10.9
13	24.3	20.0	21.9	16.7	14.8	15.6	6.9	5.8	6.4	14.1	11.0	12.4
14	22.2	18.3	20.5	15.3	13.8	14.2	7.1	5.0	5.8	13.0	11.4	12.2
15	21.1	17.5	19.5	16.0	13.4	14.6	8.5	6.6	7.5	14.5	12.4	13.4
16	22.3	17.7	19.8	17.3	15.3	16.2	8.0	5.8	7.0	14.9	14.5	14.8
17	21.3	18.9	20.0	17.7	16.8	17.2	9.5	7.0	8.1	14.9	10.8	13.3
18	21.2	17.2	19.1	16.8	12.9	14.6	10.1	7.6	8.9	10.8	9.5	10.1
19	22.7	18.8	20.5	16.3	10.7	13.3	10.9	6.1	8.6	11.6	10.1	10.6
20	22.8	18.8	20.8	15.4	11.9	13.6	11.6	7.4	9.3	11.0	9.8	10.4
21	22.1	19.9	21.2	16.4	12.3	14.2	12.8	7.5	10.4	10.8	9.1	10.1
22	22.2	18.9	20.7	16.0	13.7	14.8	12.1	10.7	11.3	11.8	8.9	9.8
23	22.5	18.7	20.6	15.1	9.5	11.6	12.3	9.0	10.5	13.2	11.8	12.6
24	22.2	19.0	20.6	9.5	7.2	8.5	12.2	8.6	10.3	14.1	13.2	13.7
25	20.1	15.3	17.1	10.9	8.5	9.5	11.3	9.8	10.5	14.1	12.9	13.6
26	17.1	13.7	15.4	12.1	8.8	10.3	---	---	---	13.7	9.5	11.3
27	17.5	14.1	15.7	11.9	9.2	10.5	---	---	---	11.3	9.5	10.2
28	17.8	14.2	15.9	12.0	7.5	9.9	---	---	---	12.8	10.6	11.5
29	19.1	14.0	16.4	12.3	8.5	10.3	---	---	---	13.4	9.7	11.1
30	19.1	15.9	17.5	11.9	9.0	10.2	10.1	8.1	9.2	12.3	8.9	10.3
31	18.0	16.3	16.9	---	---	---	11.3	9.1	10.1	12.1	9.3	10.4
MONTH	25.4	13.7	20.0	22.8	7.2	14.2	---	---	---	---	---	---

07311782 South Wichita River at low-flow dam near Guthrie, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.1	8.7	10.0	16.0	11.0	13.4	21.1	18.5	19.8	18.6	15.6	17.1
2	9.4	7.1	8.2	14.4	12.4	13.4	21.1	19.7	20.3	18.8	16.7	17.9
3	12.3	9.4	10.9	12.5	12.0	12.3	22.4	20.9	21.6	20.9	18.4	19.3
4	9.9	8.7	9.2	13.2	9.5	11.5	22.0	20.0	20.7	23.3	19.5	21.5
5	12.2	9.2	10.7	---	---	---	21.0	19.5	20.2	24.1	20.1	22.0
6	12.0	9.1	10.7	---	---	---	21.3	20.1	20.8	26.0	21.4	23.4
7	13.1	8.0	10.1	---	---	---	21.3	20.6	21.0	26.5	22.4	24.2
8	10.6	8.5	9.6	16.5	---	---	22.1	21.0	21.5	27.7	22.5	24.8
9	10.5	9.1	9.8	17.7	13.9	15.5	23.4	21.6	22.3	28.2	22.4	24.9
10	12.2	9.2	10.3	18.1	14.0	16.2	23.3	19.9	21.4	26.6	22.9	24.5
11	13.2	11.5	12.4	18.4	14.0	16.6	---	---	---	27.4	23.6	25.4
12	13.1	8.5	9.8	16.6	14.9	15.6	---	---	---	30.7	23.9	26.6
13	9.6	8.2	8.8	15.5	13.7	14.6	19.8	---	---	26.3	22.5	24.7
14	11.9	8.5	10.3	15.4	14.6	14.9	21.0	18.5	19.7	23.4	19.5	21.4
15	11.7	9.9	10.8	19.0	14.3	16.3	21.0	17.7	19.4	25.6	19.0	21.8
16	12.9	9.9	11.2	17.7	15.7	16.3	23.3	20.4	21.6	23.6	21.1	22.4
17	15.2	11.9	13.1	18.1	15.6	16.6	25.2	21.2	23.0	25.8	21.1	23.2
18	16.6	12.8	14.6	20.5	16.7	18.3	23.8	21.6	22.8	29.3	22.7	25.2
19	15.7	13.0	14.3	22.1	19.8	20.8	22.8	21.2	21.9	29.3	24.3	26.6
20	15.9	12.1	14.0	25.5	20.8	22.4	24.4	20.1	22.2	28.6	24.9	26.6
21	15.6	12.1	13.8	21.7	18.6	19.9	24.5	19.3	21.7	28.3	23.8	25.7
22	17.4	12.3	14.6	19.0	16.1	17.6	25.8	19.2	22.2	29.3	24.4	26.1
23	15.7	14.8	15.1	19.6	16.1	17.7	22.5	20.0	21.4	29.0	25.6	27.0
24	14.8	10.4	12.7	21.7	17.1	19.1	23.3	17.3	19.9	29.1	26.2	27.5
25	10.4	8.5	9.5	23.6	19.1	21.2	24.0	18.1	21.2	27.6	26.1	27.0
26	12.5	8.3	10.0	22.1	20.7	21.4	25.1	21.0	22.8	28.6	24.6	26.6
27	15.1	10.2	12.5	23.6	19.8	21.2	26.0	19.9	22.5	27.4	25.4	26.3
28	13.3	11.6	12.2	23.8	19.0	21.5	23.1	20.4	21.5	27.6	23.2	25.3
29	14.3	11.8	13.0	22.3	19.7	21.0	23.9	19.0	20.8	29.2	24.8	26.4
30	---	---	---	22.7	17.5	20.3	22.8	18.6	20.9	28.8	23.1	25.7
31	---	---	---	21.3	18.6	20.0	---	---	---	28.7	22.2	25.2
MONTH	17.4	7.1	11.5	---	---	---	---	---	---	30.7	15.6	24.3
		JUNE			JULY			AUGUST			SEPTEMBER	
1	29.5	23.0	25.8	30.7	26.9	28.5	28.9	27.3	28.0	26.2	24.0	25.2
2	28.9	24.2	26.5	30.4	26.1	27.8	30.4	28.1	29.2	28.4	23.2	26.0
3	26.4	23.0	24.9	---	---	---	31.0	29.2	30.0	27.8	23.5	25.4
4	28.7	23.0	25.3	---	---	---	31.4	29.7	30.5	27.0	24.0	25.5
5	28.1	24.9	26.2	---	---	---	31.1	30.2	30.5	27.1	25.0	25.9
6	29.8	24.3	26.7	32.0	---	---	30.3	28.4	29.5	28.0	24.4	26.1
7	30.3	26.6	28.5	31.4	26.7	29.1	30.4	27.1	28.4	26.8	22.9	24.8
8	28.1	24.6	26.3	31.6	27.7	29.6	30.3	25.6	27.8	26.0	21.3	23.5
9	27.4	24.9	26.2	30.5	26.9	28.7	29.2	26.2	27.6	24.6	22.2	23.2
10	28.1	25.4	26.6	29.3	27.2	28.1	29.3	27.1	28.3	26.7	20.8	23.5
11	29.8	26.0	27.6	29.3	26.4	27.7	29.4	26.4	28.2	26.4	24.5	25.4
12	30.2	25.4	27.4	---	26.4	---	29.5	27.0	28.1	26.0	24.5	25.3
13	30.2	25.6	27.8	---	---	---	29.4	26.8	27.8	27.4	24.4	25.7
14	31.7	26.5	28.8	31.3	---	---	28.8	26.4	27.6	27.5	24.0	25.7
15	31.0	27.1	28.9	33.9	---	---	29.1	27.0	28.1	27.4	24.4	25.6
16	29.4	26.0	27.8	33.6	28.2	30.7	28.8	27.6	28.2	28.8	27.0	27.8
17	29.8	27.1	28.1	32.1	28.0	29.9	29.1	27.2	28.3	30.0	27.1	28.3
18	---	---	---	30.5	28.6	29.4	29.2	28.5	28.9	28.3	25.5	26.6
19	---	---	---	30.8	28.3	29.7	29.5	27.6	28.5	26.0	24.5	25.2
20	---	---	---	32.0	28.1	30.2	29.4	27.2	28.4	25.3	23.8	24.2
21	31.1	---	---	32.8	27.2	29.5	29.5	26.0	28.0	25.8	22.7	24.1
22	29.5	25.5	27.3	32.5	27.1	29.3	30.2	25.3	27.6	24.6	22.2	23.4
23	30.0	24.8	27.3	30.9	26.9	28.8	29.4	25.4	27.3	25.0	21.8	23.3
24	30.2	24.2	27.1	29.1	26.5	27.8	29.6	27.0	28.2	25.0	23.3	24.1
25	29.7	24.8	27.3	27.8	24.4	25.9	29.2	26.9	28.2	24.7	21.9	23.3
26	28.3	26.2	26.8	25.1	23.2	24.2	30.6	28.3	29.2	24.1	21.8	22.9
27	26.6	24.7	25.7	25.0	24.4	24.8	30.1	26.8	28.5	24.0	21.3	22.6
28	27.6	25.2	26.4	24.5	23.0	23.8	30.2	26.9	28.4	24.1	21.5	22.6
29	27.5	26.8	27.2	23.7	23.2	23.5	30.1	26.2	28.0	23.4	20.0	21.4
30	28.3	26.0	27.0	25.0	23.7	24.2	28.7	25.2	26.7	22.4	20.7	21.3
31	---	---	---	27.8	25.0	26.5	26.6	24.8	25.6	---	---	---
MONTH	---	---	---	---	---	---	31.4	24.8	28.3	30.0	20.0	24.6

07311782 South Wichita River at low-flow dam near Guthrie, TX—Continued



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07311783 South Wichita River below low-flow 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 mouth.

DRAINAGE AREA.--223 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,590.0 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No known regulation. Low-flow diversions from South Wichita River at low-flow dam near Guthrie (station 07311782) via pipeline to Truscott Brine Lake near Truscott (station 07311669) began in May 1987. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1950, 20.8 ft in May 1954, at South Fork Wichita River near Guthrie (discontinued station 07311780) located about 1.1 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	0.03	0.02	0.03	0.06	0.03	0.02	0.03	0.02	0.06	0.02	e0.04
2	28	0.03	0.02	0.03	0.06	0.03	6.2	2.9	0.02	0.06	0.04	0.04
3	23	0.03	0.02	0.03	0.06	0.02	4.9	2.4	0.01	0.06	0.05	0.04
4	0.01	0.03	0.03	0.03	0.06	98	0.01	0.02	0.02	0.06	0.04	0.04
5	0.02	0.03	0.03	e0.03	0.06	140	0.02	0.02	0.02	0.06	0.05	0.04
6	14	0.03	0.02	e0.03	0.06	56	0.84	0.02	0.02	0.06	0.04	0.03
7	0.02	0.03	0.02	0.03	0.06	18	29	0.03	0.02	12	0.03	0.02
8	0.01	0.03	0.02	e0.04	0.06	9.2	6.1	0.04	0.02	0.03	0.03	0.02
9	0.01	0.03	0.02	e0.03	0.06	0.11	3.4	0.04	0.02	0.04	0.04	0.04
10	0.01	0.03	0.03	0.03	0.06	0.08	0.27	0.05	0.01	0.04	0.03	0.05
11	0.02	0.03	0.03	0.03	0.06	0.14	e0.05	0.04	0.02	0.05	0.03	0.07
12	0.01	0.03	0.03	0.03	0.06	0.28	e0.05	0.03	0.02	0.05	1.4	0.23
13	0.01	0.03	0.03	0.03	0.06	0.28	e2.2	0.03	0.02	0.05	4.6	e0.05
14	0.01	0.03	0.04	0.03	0.06	0.15	2.6	0.02	0.02	0.05	0.07	e0.05
15	0.03	0.03	2.2	0.15	0.06	0.10	0.04	0.02	0.02	0.05	0.02	e0.41
16	0.03	0.03	0.03	2.6	0.06	e0.09	0.03	0.02	0.03	0.04	0.01	0.58
17	0.02	0.03	0.03	6.2	0.06	e0.06	0.03	0.03	1.3	0.05	0.03	0.48
18	0.02	0.03	0.03	5.6	0.06	0.04	0.03	0.03	0.03	0.05	0.02	0.48
19	0.02	0.03	0.03	5.1	0.05	0.05	0.03	0.02	0.03	0.05	0.03	0.70
20	0.03	0.03	0.04	5.0	0.10	0.06	0.03	0.03	0.03	0.05	0.04	e0.80
21	0.02	0.03	0.04	5.2	0.04	0.06	0.03	0.03	0.04	0.05	0.04	e0.05
22	0.02	0.02	0.02	5.0	0.04	0.06	0.04	0.03	0.04	0.05	0.04	e0.05
23	0.02	0.02	0.02	2.6	0.03	0.07	0.02	0.03	0.05	0.04	0.04	e2.0
24	0.03	0.03	0.02	0.05	0.04	0.05	0.02	0.03	0.05	0.04	0.05	e2.0
25	0.03	0.03	0.02	0.05	0.03	0.03	0.02	0.04	0.05	0.05	0.05	e0.05
26	0.03	0.03	e0.02	0.05	0.03	0.04	0.02	0.04	0.05	0.04	0.04	e0.05
27	0.03	0.02	e0.03	0.06	0.03	0.03	0.02	0.03	0.05	0.04	0.05	e1.2
28	0.03	0.02	e0.03	0.06	0.03	0.02	0.02	0.02	0.07	e0.89	0.05	e0.05
29	0.03	0.02	e0.02	0.06	0.03	0.02	0.02	0.02	0.06	2.9	e0.05	e4.0
30	0.03	0.02	0.03	0.06	---	0.02	0.03	0.01	0.06	0.74	e0.05	e2.0
31	0.03	---	0.03	0.06	---	3.8	---	0.02	---	0.07	e3.0	---
MEAN	2.12	0.03	0.10	1.24	0.05	10.5	1.87	0.20	0.07	0.58	0.33	0.52
MAX	28	0.03	2.2	6.2	0.10	140	29	2.9	1.3	12	4.6	4.0
MIN	0.01	0.02	0.02	0.03	0.03	0.02	0.01	0.01	0.01	0.03	0.01	0.02
AC-FT	130	1.7	6.0	76	3.0	648	111	12	4.4	35	20	31

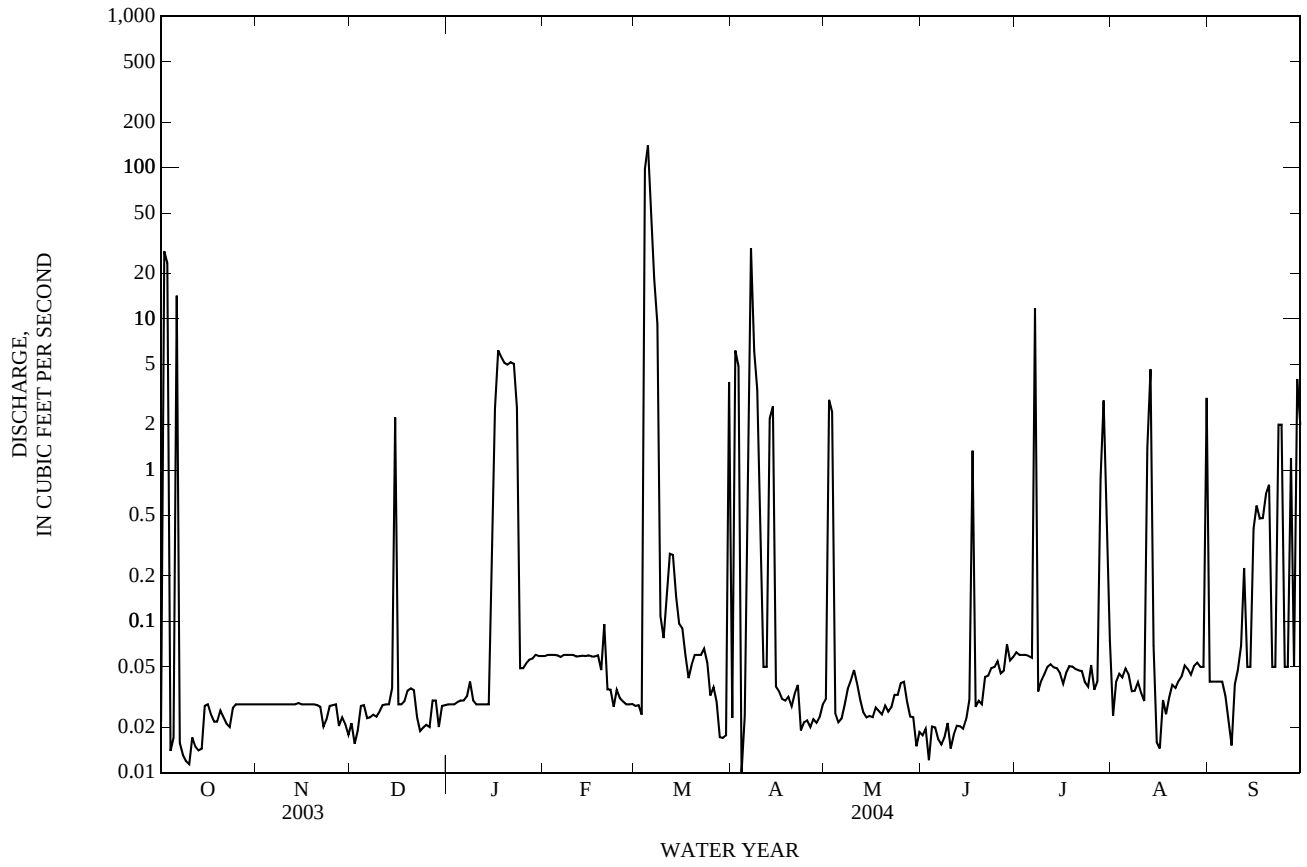
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2004, BY WATER YEAR (WY)

MEAN	3.91	1.77	2.48	2.57	2.55	2.22	2.17	6.76	3.53	9.89	2.72	10.2
MAX	30.6	8.51	9.34	9.16	17.8	10.5	10.4	53.2	13.8	154	15.7	90.1
(WY)	(1987)	(1987)	(1992)	(1990)	(1992)	(2004)	(1997)	(1987)	(1991)	(1986)	(1995)	(1996)
MIN	0.03	0.02	0.03	0.07	0.04	0.02	0.01	0.04	0.07	0.02	0.02	0.02
(WY)	(2000)	(1997)	(1989)	(1989)	(1995)	(1991)	(1996)	(1988)	(2004)	(1993)	(1994)	(1990)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1986 - 2004	
ANNUAL MEAN	1.54		1.49		4.24	
HIGHEST ANNUAL MEAN					20.8	1986
LOWEST ANNUAL MEAN					0.75	1988
HIGHEST DAILY MEAN	47	Sep 11	140	Mar 5	3,520	Jul 3, 1986
LOWEST DAILY MEAN	0.00	Sep 3	0.01	Oct 4	0.00	Jan 4, 1986
ANNUAL SEVEN-DAY MINIMUM	0.01	Oct 8	0.01	Oct 8	0.01	Sep 10, 2000
MAXIMUM PEAK FLOW			1,020	Mar 4	13,100	Jul 3, 1989
MAXIMUM PEAK STAGE			8.10	Mar 4	19.01	Jul 3, 1989
ANNUAL RUNOFF (AC-FT)	1,110		1,080		3,070	
10 PERCENT EXCEEDS	4.7		1.3		6.8	
50 PERCENT EXCEEDS	0.03		0.03		0.06	
90 PERCENT EXCEEDS	0.02		0.02		0.02	

e Estimated

07311783 South Wichita River below low-flow dam near Guthrie, TX—Continued



07311783 South Wichita River below low-flow dam near Guthrie, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: May 1987 to Sept. 1989, Oct. 1990 to Sept. 1991, Oct. 1996 to current year.
PESTICIDE DATA: Oct. 1996 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1987 to Sept. 1989.
WATER TEMPERATURE: May 1987 to Sept. 1989.

INSTRUMENTATION.--Water-quality monitor May 1987 to Sept. 1989.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 41,600 microsiemens/cm, Aug. 17, 1989; minimum, 350 microsiemens/cm, May 28, 1987.
WATER TEMPERATURE: Maximum, 34.5°C, June 8, 1988; minimum, 0.0°C, Feb. 5-8, 1989.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
OCT													
14...	1300	.03	8.8	119	7.4	44,400	22.3	4,700	4,800	1420d	315d	48.6d	61
NOV													
20...	1255	.14	9.6	120	7.5	45,100	17.4	4,500	4,700	1360d	315d	42.1d	63
DEC													
08...	1250	.03	8.1	100	7.4	43,600	16.7	4,500	4,700	1350d	324d	42.7d	62
JAN													
20...	1150	5.0	9.8	97	7.6	41,000	8.0	4,000	4,100	1170d	288d	36.5d	60
FEB													
23...	1055	.02	3.6	42	7.1	44,600	14.7	4,400	4,600	1310d	315d	8.65	61
MAR													
17...	1100	.03	7.9	105	7.2	43,700	21.3	4,700	4,900	1390d	337d	41.0d	62
APR													
21...	1125	.04	7.9	105	7.1	45,600	20.5	4,100	4,300	1250d	282d	40.2d	60
MAY													
17...	1100	.03	7.4	109	7.2	44,700	23.1	4,400	4,600	1320d	310d	44.5d	61
JUN													
21...	1140	.05	7.8	126	7.2	44,700	28.0	4,300	4,500	1330d	285d	38.1d	61
JUL													
06...	1040	.06	8.0	126	7.2	44,900	27.3	4,500	4,600	1340d	315d	42.3d	62
AUG													
02...	1145	.05	7.3	117	7.1	43,400	28.1	4,400	4,500	1310d	310d	50.6d	58
SEP													
01...	1145	.04	8.6	128	7.2	45,600	24.4	4,700	4,900	1410d	336d	50.4d	60

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
OCT													
14...	9760d	155	15400d	.6	11.8	3040d	30,100	<10	.42	.29	--	<.06	<.008
NOV													
20...	9860d	158	15600d	.6	13.3	3180d	30,500	25	.32	.29	--	<.06	<.008
DEC													
08...	9790d	158	15400d	.6	12.4	3100d	30,100	10	.40	.30	--	<.06	<.008
JAN													
20...	8850d	129	16000d	.6	10.0	2940d	29,400	24	.62	.39	.12	.18	.062
FEB													
23...	9460dr	159	15300dr	.6	8.3	3430d	29,900	51	.60	.39	--	<.06	<.008
MAR													
17...	10000d	161	15300d	.6	10.9	3170d	30,300	34	.43	.33	--	<.06	<.008
APR													
21...	9080d	158	15500d	.6	11.5	3050d	29,300	24	.40	.18d	--	<.06	<.008
MAY													
17...	9470d	144	15300d	.6	11.2	3030d	29,600	42	.57	.16	--	<.06	<.008
JUN													
21...	9370d	150	15000d	.6	11.4	3070d	29,200	27	.40	.20	--	<.06	<.008
JUL													
06...	9780d	149	15600d	.6	13.6	3170d	30,300	30	.72	.16	--	<.06	<.008
AUG													
02...	9020d	170	15000d	.6	14.6	3120d	28,900	38d	.45	.45	--	<.06	<.008
SEP													
01...	9730d	158	15900d	.6	11.5	3100d	30,600	26	.50	.20	--	<.06	<.008

07311783 South Wichita River below low-flow dam near Guthrie, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)
OCT													
14...	.12	<.02	<.04	<.04	--	<3.6d	E9ndc	32d	37d	<.72d	<.72d	<4.0d	<4.0d
NOV													
20...	.03	<.02	<.04	<.04	--	<3.8d	<10dc	34d	34d	<.76d	<.76d	<4.0d	<4.0d
DEC													
08...	.11	<.02	<.04	E.03n	--	<3.6d	<10dc	28d	33d	<.72d	<.72d	<4.0d	<4.0d
JAN													
20...	.23	<.02	<.04	<.04	.80	<3.4d	<10d	24d	27d	<.68d	<.68d	<4.0d	<4.0d
FEB													
23...	.21	E.02n	<.04	.04	--	5.5d	E8nd	30d	35d	<.80d	<.72d	<4.0d	E2.4nd
MAR													
17...	.10	<.02	<.04	E.02n	--	<3.6d	<10d	58d	67d	<.72d	<.72d	<4.0d	<4.0d
APR													
21...	.22	<.04d	<.04	E.02n	--	E2.9nd	<10d	33d	38d	<.80d	<.76d	<4.0d	<4.0d
MAY													
17...	.41	E.02n	<.04	E.04n	--	<3.6d	<10d	35d	37d	<.72d	<.72d	<4.0d	<4.0d
JUN													
21...	.20	<.02	<.04	E.03n	--	<3.6d	<10d	32d	40d	<.72d	<.72d	<4.0d	<4.0d
JUL													
06...	.56	E.01n	<.04	.04	--	<3.6d	E5nd	33d	39d	<.72d	<.72d	<4.0d	E.4n
AUG													
02...	.01	<.02	<.04	E.03n	--	3.9d	<10d	42d	42d	<.72d	<.72d	<.8	E.7n
SEP													
01...	.30	E.01n	<.04	E.03n	--	<4.0d	E7nd	35d	31d	<.80d	<.76d	<4.0d	<4.0d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover-able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)
OCT													
14...	8.5d	40.8d	<320d	920d	<1.44d	<1.08d	355d	360d	<.02	<.02	28.5d	75.3d	<7r
NOV													
20...	14.4d	42.9d	<320d	800d	<1.52d	<1.14d	313d	318d	<.02	<.02	1.92d	67.3d	2
DEC													
08...	13.1d	51.0d	E174nd	960d	<1.44d	<1.08d	350d	377d	<.02	<.02	23.1d	74.5d	<1
JAN													
20...	12.8d	55.6d	<320d	210d	<1.36d	<1.02d	118d	137d	<.02	<.02	23.1d	58.1d	<1
FEB													
23...	19.0d	24.7d	490	1540d	<1.60d	<1.08d	604d	623d	<.02	<.02	21.8d	43.4d	<1
MAR													
17...	16.5d	33.4d	<160d	1230d	E1.21nd	<1.08d	454d	538d	<.02	<.02	21.3d	47.8d	<1
APR													
21...	15.3d	25.4d	<320d	990d	<1.60d	<1.14d	503d	530d	<.02	<.02	26.1d	52.0d	<1
MAY													
17...	34.2dr	28.5dr	E88nd	1430d	<1.44d	<1.08d	361d	408d	<.02	<.02	34.9d	64.2d	<1
JUN													
21...	27.3d	23.5d	E178nd	960d	2.05d	<1.08d	353d	425d	<.02	<.02	33.7d	45.8d	<1
JUL													
06...	23.4d	41.9d	<192d	1030d	<1.44d	<1.08d	435d	468d	<.02	<.02	27.5d	70.0d	<1
AUG													
02...	27.2d	30.1d	<192d	970d	<1.44d	<1.08d	790d	659d	<.02	<.02	21.9d	70.0d	1
SEP													
01...	24.1d	44.0d	<320d	700d	<1.60d	<1.14d	318d	290d	<.02	<.02	47.8d	83.9d	<1

07311783 South Wichita River below low-flow dam near Guthrie, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Selenium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha-Endosulfan, water, unfltrd ug/L (34361)	alpha-HCH, water, unfltrd ug/L (39337)	alpha-HCH-d6, surrog, Sch1608 water, unfltrd pct rcv (99778)	Aroclor 1016 + 1242, water, unfltrd ug/L (81648)	Aroclor 1221, water, unfltrd ug/L (39488)	Aroclor 1232, water, unfltrd ug/L (39492)	Aroclor 1248, water, unfltrd ug/L (39500)
OCT													
14...	7r	<3.6d	<2.88d	15.5d	E19nd	--	--	--	--	--	--	--	--
NOV													
20...	2	<3.8d	<3.04d	E10.0nd	<38d	--	--	--	--	--	--	--	--
DEC													
08...	<1	<3.6d	<2.88d	E9.1nd	E26nd	--	--	--	--	--	--	--	--
JAN													
20...	<1	<3.4d	<2.72d	E9.7nd	E26nd	--	--	--	--	--	--	--	--
FEB													
23...	<1	<4.0d	<2.88d	13.5d	<36d	--	--	--	--	--	--	--	--
MAR													
17...	<1	<3.6d	<2.88d	12.6d	<36d	--	--	--	--	--	--	--	--
APR													
21...	<1	<4.0d	<3.04d	12.6d	<38d	<.04	<.1	<.03	E90.0	<.1	<1	<.1	<.1
MAY													
17...	1	<3.6d	<2.88d	16.8d	<36d	--	--	--	--	--	--	--	--
JUN													
21...	<1	<3.6d	<2.88d	15.5d	<36d	<.04	<.1	<.03	E65.6	<.1	<1	<.1	<.1
JUL													
06...	<1	<3.6d	<2.88d	22.7d	E20nd	--	--	--	--	--	--	--	--
AUG													
02...	1	<3.6d	<2.88d	13.1d	<36d	--	--	--	--	--	--	--	--
SEP													
01...	<1	<4.0d	<3.04d	21.6d	E28nd	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Aroclor 1254, water, unfltrd ug/L (39504)	Aroclor 1260, water, unfltrd ug/L (39508)	beta-Endosulfan, water, unfltrd ug/L (34356)	beta-HCH, water, unfltrd ug/L (39338)	Chlordane, technical, water, unfltrd ug/L (39350)	cis-Chlordane, water, unfltrd ug/L (39062)	delta-HCH, water, unfltrd ug/L (34259)	Dieldrin, water, unfltrd ug/L (39380)	Endosulfan sulfate water unfltrd ug/L (34351)	Endrin aldehyde, water, unfltrd ug/L (34366)	Endrin, water, unfltrd ug/L (39390)	Heptachlor epoxide water unfltrd ug/L (39420)	Heptachlor, water, unfltrd ug/L (39410)
OCT													
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
21...	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8	<.03
MAY													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
21...	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8	<.03
JUL													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--

07311783 South Wichita River below low-flow dam near Guthrie, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Lindane water, unfltrd ug/L (39340)	p,p-' DDD, water, unfltrd ug/L (39310)	p,p-' DDE, water, unfltrd ug/L (39320)	p,p-' DDT, water, unfltrd ug/L (39300)	PCB 207, surrog, Sch1608 water, unfltrd pct rcv (99781)	Toxa-phene, water, unfltrd ug/L (39400)	trans-Chlor-dane, water, unfltrd ug/L (39065)
OCT							
14...	--	--	--	--	--	--	--
NOV							
20...	--	--	--	--	--	--	--
DEC							
08...	--	--	--	--	--	--	--
JAN							
20...	--	--	--	--	--	--	--
FEB							
23...	--	--	--	--	--	--	--
MAR							
17...	--	--	--	--	--	--	--
APR							
21...	<.03	<.1	<.04	<.1	E97.4	<2	<.1
MAY							
17...	--	--	--	--	--	--	--
JUN							
21...	<.03	<.1	<.04	<.1	E76.5	<2	<.1
JUL							
06...	--	--	--	--	--	--	--
AUG							
02...	--	--	--	--	--	--	--
SEP							
01...	--	--	--	--	--	--	--

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

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL
r -- Value verified by rerun, same method

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, 2.0 mi downstream from Panhandle and Santa Fe Railway Co. bridge, 4.0 mi north of Benjamin, and 41.0 mi upstream from mouth.

DRAINAGE AREA.--584 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,334.23 ft above NGVD of 1929. Prior to Jan. 2, 1960, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. There are low flow diversions upstream on the South Wichita River at low flow dam near Guthrie (station 07311782) to Truscott Brine Lake. There were other minor diversions upstream from station during the year. No flow Oct. 14 to Nov. 6, Nov. 8 to Jan. 15, May 23 to June 1 and July 20 to 23.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

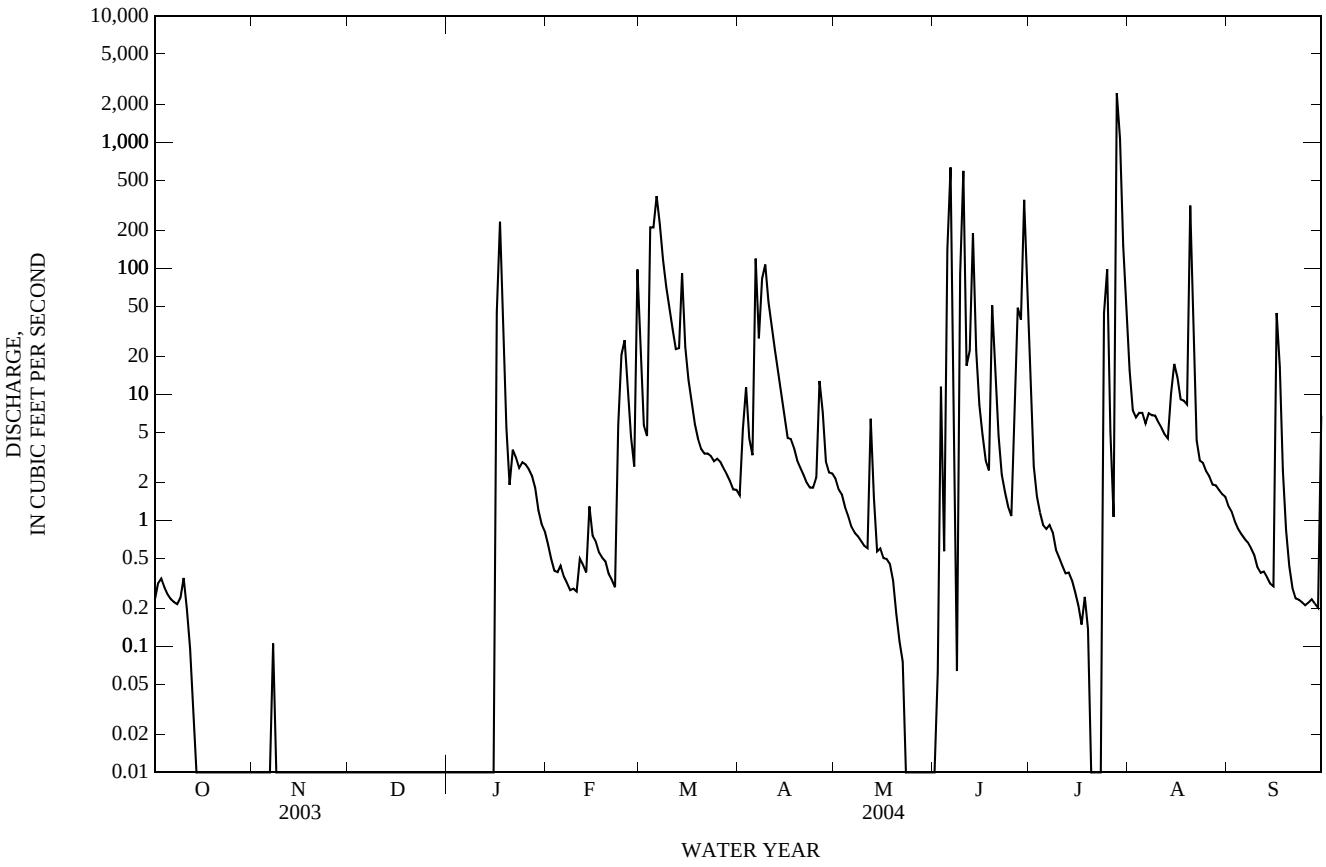
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.23	0.00	0.00	0.00	0.65	31	1.6	2.1	0.00	9.9	16	1.3
2	0.32	0.00	0.00	0.00	0.49	5.7	5.3	1.8	0.06	2.7	7.5	1.2
3	0.35	0.00	0.00	0.00	0.40	4.7	11	1.6	11	1.5	6.5	0.97
4	0.29	0.00	0.00	0.00	0.39	210	4.5	1.3	0.57	1.2	7.1	0.85
5	0.26	0.00	0.00	0.00	0.44	211	3.3	1.1	141	0.91	7.1	0.77
6	0.24	0.00	0.00	0.00	0.36	373	119	0.89	630	0.85	5.8	0.71
7	0.22	0.11	0.00	0.00	0.32	222	28	0.80	8.4	0.92	7.1	0.67
8	0.22	0.00	0.00	0.00	0.28	116	83	0.75	0.06	0.80	6.8	0.60
9	0.24	0.00	0.00	0.00	0.29	71	107	0.68	89	0.58	6.8	0.53
10	0.35	0.00	0.00	0.00	0.27	49	54	0.63	591	0.51	6.0	0.42
11	0.20	0.00	0.00	0.00	0.50	33	35	0.60	17	0.44	5.4	0.38
12	0.10	0.00	0.00	0.00	0.44	23	23	6.4	22	0.38	4.8	0.39
13	0.03	0.00	0.00	0.00	0.39	23	15	1.5	189	0.38	4.4	0.35
14	0.00	0.00	0.00	0.00	1.3	91	10	0.57	22	0.33	10	0.31
15	0.00	0.00	0.00	0.00	0.75	24	6.8	0.60	8.2	0.27	17	0.30
16	0.00	0.00	0.00	45	0.68	13	4.5	0.50	4.7	0.21	14	44
17	0.00	0.00	0.00	233	0.56	8.8	4.4	0.49	3.0	0.15	9.1	16
18	0.00	0.00	0.00	37	0.51	5.8	3.7	0.45	2.5	0.25	8.9	2.5
19	0.00	0.00	0.00	5.4	0.47	4.4	3.0	0.33	51	0.14	8.3	0.83
20	0.00	0.00	0.00	1.9	0.38	3.7	2.6	0.18	16	0.00	313	0.43
21	0.00	0.00	0.00	3.6	0.34	3.4	2.3	0.11	4.7	0.00	22	0.29
22	0.00	0.00	0.00	3.1	0.29	3.4	2.0	0.08	2.3	0.00	4.3	0.24
23	0.00	0.00	0.00	2.6	5.7	3.2	1.8	0.00	1.7	0.00	3.0	0.23
24	0.00	0.00	0.00	2.9	21	2.9	1.8	0.00	1.3	44	2.8	0.22
25	0.00	0.00	0.00	2.8	27	3.1	2.2	0.00	1.1	98	2.4	0.21
26	0.00	0.00	0.00	2.5	11	2.9	13	0.00	5.9	5.0	2.2	0.22
27	0.00	0.00	0.00	2.2	4.6	2.6	7.2	0.00	48	1.1	1.9	0.24
28	0.00	0.00	0.00	1.8	2.7	2.3	2.9	0.00	39	2,440	1.9	0.22
29	0.00	0.00	0.00	1.2	98	2.0	2.4	0.00	348	1,070	1.7	0.20
30	0.00	0.00	0.00	0.94	---	1.8	2.3	0.00	62	151	1.6	6.7
31	0.00	---	0.00	0.82	---	1.7	---	0.00	---	51	1.5	---
TOTAL	3.05	0.11	0.00	346.76	180.50	1,552.4	562.6	23.46	2,320.49	3,882.52	516.9	82.28
MEAN	0.10	0.00	0.00	11.2	6.22	50.1	18.8	0.76	77.3	125	16.7	2.74
MAX	0.35	0.11	0.00	233	98	373	119	6.4	630	2,440	313	44
MIN	0.00	0.00	0.00	0.00	0.27	1.7	1.6	0.00	0.00	0.00	1.5	0.20
AC-FT	6.0	0.2	0.00	688	358	3,080	1,120	47	4,600	7,700	1,030	163
IN.	0.00	0.00	0.00	0.02	0.01	0.10	0.04	0.00	0.15	0.25	0.03	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004, BY WATER YEAR (WY)

MEAN	67.2	19.3	12.1	11.2	17.2	25.3	29.5	70.4	78.9	26.7	42.8	71.3
MAX	656	66.4	77.5	60.3	172	147	187	256	458	162	578	502
(WY)	(1984)	(2001)	(1992)	(1992)	(1992)	(2000)	(1990)	(1989)	(1990)	(1986)	(1995)	(1966)
MIN	0.00	0.00	0.00	0.00	0.46	0.97	0.07	0.76	0.06	0.00	0.00	0.00
(WY)	(2000)	(2000)	(1999)	(2000)	(2000)	(1989)	(1989)	(2004)	(2001)	(2001)	(1963)	(1998)

07311800 South Wichita River near Benjamin, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004	
ANNUAL TOTAL	7,966.94		9,471.07			
ANNUAL MEAN	21.8		25.9		39.7	
HIGHEST ANNUAL MEAN					107	1966
LOWEST ANNUAL MEAN					11.2	1988
HIGHEST DAILY MEAN	1,270	Jun 6	2,440	Jul 28	8,260	Oct 20, 1983
LOWEST DAILY MEAN	0.00	Jul 23	0.00	Oct 14	0.00	May 24, 1960
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 23	0.00	Oct 14	0.00	Jun 27, 1960
MAXIMUM PEAK FLOW			5,010	Jul 28	14,900	Jun 1, 1990
MAXIMUM PEAK STAGE			16.78	Jul 28	17.07	Jun 1, 1990
ANNUAL RUNOFF (AC-FT)	15,800		18,790		28,780	
ANNUAL RUNOFF (INCHES)	0.51		0.60		0.92	
10 PERCENT EXCEEDS	18		32		45	
50 PERCENT EXCEEDS	2.5		0.66		6.5	
90 PERCENT EXCEEDS	0.00		0.00		0.00	



07311800 South Wichita River near Benjamin, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: July 1949 to Mar. 1959, July 1966 to current year.
PESTICIDE DATA: Oct. 1996 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct. 1967 to current year.
WATER TEMPERATURE: Oct. 1967 to current year.

INSTRUMENTATION.--Water-quality monitor since Aug. 1968.

REMARKS.--Records fair. Interruptions in the record were caused by malfunctions of the instrument and no flow. No flow Oct. 14 to Nov. 6, Nov. 8 to Jan. 15, May 23 to June 1 and July 20 to 23. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. New regression equations were developed based on data from water years 1995 to 2004. The standard error of estimate for dissolved solids is 6%, chloride is 52%, sulfate is 17% and for hardness is 15%. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 48,900 microsiemens/cm, May 13, 1971; minimum, 374 microsiemens/cm, July 28, 2004.
WATER TEMPERATURE: Maximum, 39.8°C, July 15, 2003; minimum, -0.9°C, Feb. 25, 2003.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 21,800 microsiemens/cm, Jan. 27 and 29; minimum, 374 microsiemens/cm, July 28.
WATER TEMPERATURE: Maximum, 36.9°C, Sept. 16; minimum, -0.8°C, Feb. 7.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
OCT													
02...	1105	.31	8.6	95	7.8	9,200	19.5	2,300	2,100	670d	148d	14.8d	12
JAN													
22...	1135	3.7	11.6	100	7.6	9,270	8.3	1,900	1,800	514d	144d	13.1d	15
FEB													
10...	1100	.28	11.7	101	7.9	18,200	6.6	3,500	3,300	931d	274d	22.1d	23
MAR													
02...	1130	4.2	10.7	95	7.7	6,190	9.6	1,300	1,200	365	91.0	11.3	11
APR													
05...	1145	3.0	9.2	95	7.7	12,800	15.3	2,300	2,200	617d	181d	15.2d	19
MAY													
05...	1120	1.2	7.5	101	7.8	18,300	24.8	3,400	3,300	893d	289d	21.7d	23
JUN													
15...	1100	9.2	6.7	93	7.8	9,760	28.2	1,900	1,900	585d	113d	16.9d	15
JUL													
01...	1410	7.2	6.7	94	7.7	3,690	30.5	1,200	1,100	370d	64.0d	11.8d	5
AUG													
09...	1135	7.3	6.5	91	7.7	12,900	28.7	3,000	2,900	828d	233d	19.2d	17
SEP													
09...	1105	.52	7.3	93	7.6	14,200	22.8	3,300	3,100	843d	287d	19.3d	15

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, unfltrd mg/L (00605)
OCT													
02...	1280dc	144	2190dc	.2	8.3	1850dc	6,250	21	.14	.10	<.06	<.008	.04
JAN													
22...	1460d	74	2410d	.2	4.5	1380d	5,960	31	.21	<.04	.10	<.008	--
FEB													
10...	3090d	173	5350d	.2	4.3	2520d	12,300	14	.23	.07	<.06	<.008	.16
MAR													
02...	879d	64	1450d	.2	6.3	1080d	3,920	98d	.36	.04	.21	E.006n	.32
APR													
05...	2100d	107	3510d	.3	4.5	1760d	8,260	38d	.32	.05	.06	<.008	.27
MAY													
05...	3110d	154	5290d	.2	4.5	2570d	12,300	60	.29	.09	<.06	<.008	.20
JUN													
15...	1470d	64	2570d	.3	10.3	1500d	6,300	82d	.58	E.03n	.07	<.008	--
JUL													
01...	375d	65	636d	.2	7.9	1010d	2,510	150d	.45	<.04	.13	E.004n	--
AUG													
09...	2100d	176	3530d	.2	9.0	2060d	8,890	64	.45	.05	<.06	<.008	.40
SEP													
09...	1990d	221	3600d	<.2	9.6	2550d	9,430	46	.30	.08	<.06	<.008	.21

07311800 South Wichita River near Benjamin, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)
OCT													
02...	<.02	<.04	E.03n	--	8.6d	7	98d	115d	<.16d	<.16d	<.8	.9	5.1d
JAN													
22...	<.02	<.04	.05	.32	4.3d	3	148d	158d	<.16d	<.16d	<.8	1.5	7.1d
FEB													
10...	<.02	<.04	<.04	--	3.7d	6d	52d	51d	<.32d	<.32d	<1.6d	<1.6d	10.4d
MAR													
02...	<.02	<.04	.07	.58	3.2d	4	100d	122d	<.12d	<.12d	<.8	2.8	5.4d
APR													
05...	<.02	<.04	E.03n	.38	4.0d	E3nd	51d	68d	<.24d	<.24d	<1.6d	1.7d	9.3d
MAY													
05...	<.02	<.04	E.03n	--	5.2d	5d	84d	94d	<.32d	<.32d	<1.6d	E1.4nd	15.9d
JUN													
15...	E.01n	<.04	.10	.65	7.6d	10	340d	1380d	<.16d	<.16d	<.8	3.7	9.7d
JUL													
01...	<.02	<.04	.13	.58	4.6	6	169	210d	E.02n	<.08d	<.8	5.0	9.4
AUG													
09...	<.02	<.04	.12	--	10.0d	13d	126d	153d	<.24d	E.16nd	<.8	5.6	15.0d
SEP													
09...	<.02	<.04	E.02n	--	10.8d	12d	77d	71d	<.24d	<.24d	<1.6d	<1.6d	30.9d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover-able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)
OCT													
02...	22.1d	<64d	820d	<.32d	.36d	28.5d	56d	<.02	<.02	11.6d	25.8d	4.1d	4.3d
JAN													
22...	10.6d	<32dr	1670r	<.32d	.46d	11.5d	44d	<.02	<.02	8.16d	12.6d	<1	<1
FEB													
10...	16.1d	<64d	540d	E.45nd	<.48d	54.6d	59d	<.02	<.02	7.45d	29.8d	<1	1
MAR													
02...	9.2d	<6	1900d	<.24d	.89d	6.1d	50d	<.02	<.02	6.26d	15.1d	<1	1
APR													
05...	15.4d	<64d	1410d	E.40nd	.45d	8.1d	46d	<.02	<.02	20.2d	18.1d	1	2
MAY													
05...	19.6d	<96d	730d	<.64d	<.48d	26.1d	45d	<.02	<.02	26.4d	24.0d	<1	8
JUN													
15...	15.2d	<35d	2850d	<.32d	3.48d	6.9d	217d	<.02	<.02	9.65d	58.6d	2	1
JUL													
01...	10.6d	<19d	2,980	<.08	1.60d	5.4	81d	<.02	<.02	5.01	12.3d	<1	<1
AUG													
09...	17.7d	<64d	7750d	<.48d	1.15d	41.8d	117d	<.02	<.02	17.6d	39.6d	5	2
SEP													
09...	37.8d	<96d	220d	<.48d	<.36d	73.2d	81d	<.02	<.02	13.0d	25.6d	<1	<1

07311800 South Wichita River near Benjamin, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha-Endo-sulfan, water, unfltrd ug/L (34361)	alpha-HCH, water, unfltrd ug/L (39337)	alpha-HCH-d6, surrog, Sch1608 water, unfltrd pct rcv (99778)	Aroclor 1016 + 1242, water, unfltrd ug/L (81648)	Aroclor 1221, water, unfltrd ug/L (39488)	Aroclor 1232, water, unfltrd ug/L (39492)	Aroclor 1248, water, unfltrd ug/L (39500)	Aroclor 1254, water, unfltrd ug/L (39504)
OCT													
02...	<.8d	<.64d	5.1d	12d	--	--	--	--	--	--	--	--	--
JAN													
22...	<.8d	<.64d	8.4d	10d	--	--	--	--	--	--	--	--	--
FEB													
10...	<1.6d	<1.28d	<4.8d	<16d	--	--	--	--	--	--	--	--	--
MAR													
02...	<.6d	<.48d	3.9d	9d	--	--	--	--	--	--	--	--	--
APR													
05...	<1.2d	<.96d	3.8d	E10nd	<.04	<.1	<.03	E96.2	<.1	<1	<.1	<.1	<.1
MAY													
05...	<1.6d	<1.28d	9.1d	E10nd	--	--	--	--	--	--	--	--	--
JUN													
15...	<.8d	<.64d	4.7d	59d	<.04	<.1	<.03	E76.5	<.1	<1	<.1	<.1	<.1
JUL													
01...	<.2	<.32d	3.3	13d	--	--	--	--	--	--	--	--	--
AUG													
09...	<1.2d	<.96d	6.6d	22d	--	--	--	--	--	--	--	--	--
SEP													
09...	<1.2d	<.96d	12.8d	13d	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Aroclor 1260, water, unfltrd ug/L (39508)	beta-Endo-sulfan, water, unfltrd ug/L (34356)	beta-HCH, water, unfltrd ug/L (39338)	Chlor-dane, tech-nical, water, unfltrd ug/L (39350)	cis-Chlor-dane, water, unfltrd ug/L (39062)	delta-HCH, water, unfltrd ug/L (34259)	Diel-drin, water, unfltrd ug/L (39380)	Endo-sulfan sulfate water unfltrd ug/L (34351)	Endrin alde-hyde, water, unfltrd ug/L (34366)	Endrin, water, unfltrd ug/L (39390)	Hepta-chlor epoxide water unfltrd ug/L (39420)	Hepta-chlor, water, unfltrd ug/L (39410)	Lindane water, unfltrd ug/L (39340)
OCT													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
05...	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8	<.03	<.03
MAY													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
15...	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8	<.03	<.03
JUL													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--

07311800 South Wichita River near Benjamin, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	p,p-' DDD, water, unfltrd ug/L (39310)	p,p-' DDE, water, unfltrd ug/L (39320)	p,p-' DDT, water, unfltrd ug/L (39300)	PCB 207, surrog, Sch1608 water, unfltrd pct rcv (99781)	Toxa-phene, water, unfltrd ug/L (39400)	trans-Chlor-dane, water, unfltrd ug/L (39065)
OCT						
02...	--	--	--	--	--	--
JAN						
22...	--	--	--	--	--	--
FEB						
10...	--	--	--	--	--	--
MAR						
02...	--	--	--	--	--	--
APR						
05...	<.1	<.04	<.1	E112	<2	<.1
MAY						
05...	--	--	--	--	--	--
JUN						
15...	<.1	<.04	<.1	E97.0	<2	<.1
JUL						
01...	--	--	--	--	--	--
AUG						
09...	--	--	--	--	--	--
SEP						
09...	--	--	--	--	--	--

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

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL
r -- Value verified by rerun, same method

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 2003 TO SEPTEMBER 2004

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.	2003	3.05	9490	6620	54.6	2300	19.3	2000	16.2	2400
NOV.	2003	0.11	1960	1410	0.42	430	0.13	500	0.15	580
DEC.	2003	0	--	--	--	--	--	--	--	--
JAN.	2004	346.76	4260	2990	2800	1000	954	930	874	1100
FEB.	2004	180.5	10530	7300	3560	2700	1300	2100	1000	2500
MAR.	2004	1552.4	4360	3100	13000	1000	4200	1000	4310	1200
APR.	2004	562.6	7120	4990	7590	1700	2620	1500	2320	1800
MAY	2004	23.46	15060	10260	650	4100	258	2500	161	3200
JUNE	2004	2320.49	1790	1280	8050	390	2470	450	2820	520
JULY	2004	3882.52	2000	1440	15080	440	4590	510	5330	590
AUG.	2004	516.9	4030	2830	3950	960	1350	880	1230	1000
SEPT	2004	82.28	7230	5060	1120	1800	393	1500	339	1800
TOTAL		9471.07	**	**	55860	**	18140	**	18410	**
WTD.AVG.		26	3080	2180	**	710	**	720	**	840

07311800 South Wichita River near Benjamin, TX—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9,710	9,280	9,490	---	---	---	---	---	---	---	---	---
2	10,100	8,690	9,410	---	---	---	---	---	---	---	---	---
3	10,100	9,710	9,970	---	---	---	---	---	---	---	---	---
4	9,930	9,440	9,790	---	---	---	---	---	---	---	---	---
5	9,450	8,870	9,140	---	---	---	---	---	---	---	---	---
6	9,290	8,970	9,140	---	---	---	---	---	---	---	---	---
7	9,200	8,310	8,970	2,390	1,890	1,960	---	---	---	---	---	---
8	9,240	8,620	9,010	---	---	---	---	---	---	---	---	---
9	9,370	8,950	9,120	---	---	---	---	---	---	---	---	---
10	9,900	9,370	9,640	---	---	---	---	---	---	---	---	---
11	10,300	9,500	9,800	---	---	---	---	---	---	---	---	---
12	11,000	9,640	10,600	---	---	---	---	---	---	---	---	---
13	11,600	9,440	10,300	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	1,100	e1,850
17	---	---	---	---	---	---	---	---	---	---	---	e3,360
18	---	---	---	---	---	---	---	---	---	---	---	e4,500
19	---	---	---	---	---	---	---	---	---	---	---	e5,000
20	---	---	---	---	---	---	---	---	---	---	---	e5,950
21	---	---	---	---	---	---	---	---	---	---	---	e7,280
22	---	---	---	---	---	---	---	---	---	10,900	---	e9,100
23	---	---	---	---	---	---	---	---	---	17,900	10,900	15,000
24	---	---	---	---	---	---	---	---	---	19,600	17,900	19,000
25	---	---	---	---	---	---	---	---	---	20,300	19,600	20,000
26	---	---	---	---	---	---	---	---	---	21,300	20,300	20,800
27	---	---	---	---	---	---	---	---	---	21,800	21,100	21,400
28	---	---	---	---	---	---	---	---	---	21,800	21,300	21,600
29	---	---	---	---	---	---	---	---	---	21,700	21,000	21,400
30	---	---	---	---	---	---	---	---	---	21,500	20,600	21,100
31	---	---	---	---	---	---	---	---	---	21,000	20,300	20,700
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
1	20,500	20,000	20,300	5,630	4,470	5,110	---	---	e11,900	16,000	12,900	14,500
2	20,300	19,300	19,900	6,180	---	e5,840	---	---	e12,200	17,300	15,600	16,400
3	19,800	19,200	19,600	7,170	6,180	6,700	---	---	e12,400	17,800	16,500	17,100
4	19,500	19,300	19,500	8,550	1,100	5,060	---	---	e12,500	18,200	16,900	17,600
5	19,500	18,800	19,300	4,660	1,700	2,710	---	9,840	e12,000	18,800	17,800	18,200
6	19,400	18,700	19,000	12,200	3,430	6,270	11,600	1,290	5,090	18,700	17,800	18,400
7	19,200	18,200	18,700	4,850	2,100	3,580	---	---	e5,000	18,300	17,200	17,700
8	18,800	18,300	18,500	2,200	2,000	2,110	15,300	---	e7,900	17,200	16,200	16,800
9	18,500	18,200	18,300	2,600	2,200	2,410	8,430	5,580	7,500	16,600	15,800	16,100
10	18,500	17,600	18,100	3,710	2,600	3,150	5,580	4,300	4,610	16,300	15,400	15,800
11	17,600	16,700	17,300	4,720	3,710	4,360	4,300	4,110	4,180	15,900	15,200	15,600
12	17,900	16,800	17,400	5,020	4,720	4,870	5,460	4,110	4,770	15,800	---	e14,600
13	17,500	16,500	17,100	5,110	4,810	4,930	6,980	5,460	6,230	---	---	e8,550
14	16,700	15,200	15,900	5,100	2,280	3,180	---	---	e7,820	---	---	e10,900
15	16,000	15,300	15,700	3,210	2,710	2,890	---	---	e9,580	---	---	e13,300
16	15,800	15,200	15,500	5,360	3,210	4,330	11,400	---	e10,800	---	---	e14,000
17	15,300	14,700	15,100	6,170	5,360	5,750	12,800	11,500	12,000	---	---	e14,300
18	14,900	14,200	14,600	6,690	6,170	6,430	14,200	12,800	13,500	13,700	12,800	13,300
19	14,300	13,900	14,100	7,220	6,690	6,960	15,100	14,000	14,500	14,000	12,500	13,100
20	14,000	13,800	13,900	7,780	7,220	7,500	15,600	14,900	15,200	13,900	12,500	13,100
21	13,800	13,600	13,700	8,350	7,780	8,080	16,600	15,600	16,100	13,900	13,400	13,600
22	14,000	13,600	13,800	8,690	8,350	8,540	16,800	16,300	16,500	---	---	e13,400
23	14,200	14,000	14,100	9,060	8,690	8,890	16,900	16,400	16,700	---	---	---
24	14,000	13,800	13,900	9,530	9,040	9,290	17,100	16,500	16,800	---	---	---
25	13,800	7,670	9,580	9,890	9,530	9,730	17,600	8,060	16,100	---	---	---
26	16,500	8,130	13,500	10,000	9,850	9,950	18,300	7,960	10,300	---	---	---
27	16,600	15,100	15,900	10,100	9,850	9,980	18,400	12,700	16,100	---	---	---
28	17,300	15,500	16,300	10,600	10,100	10,400	12,700	9,720	11,000	---	---	---
29	17,600	2,170	8,430	11,000	10,600	10,800	13,700	11,700	12,600	---	---	---
30	---	---	---	---	---	e11,200	13,800	12,900	13,500	---	---	---
31	---	---	---	---	---	e11,500	---	---	---	---	---	---
MONTH	20,500	2,170	16,100	---	---	6,530	---	---	11,200	---	---	---

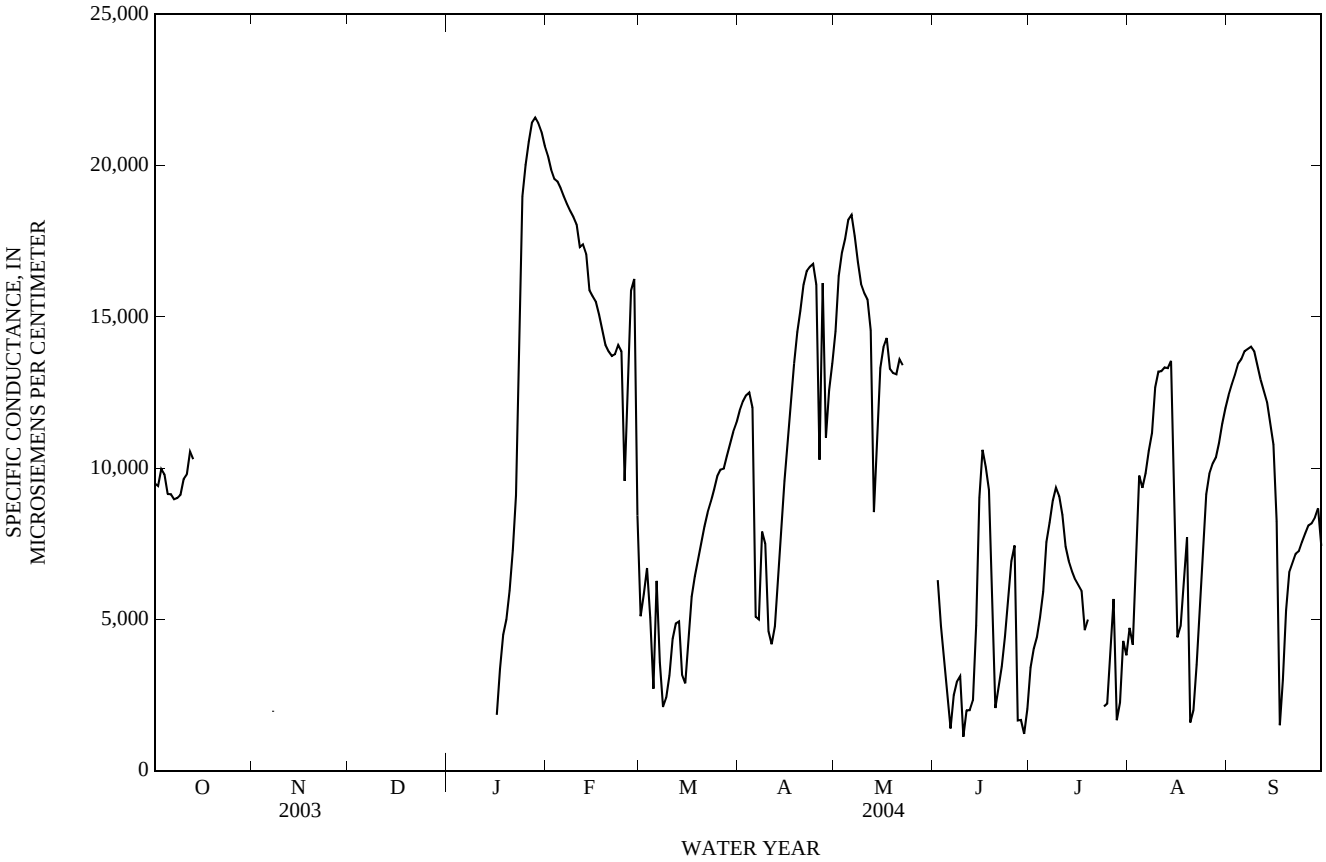
07311800 South Wichita River near Benjamin, TX—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	3,900	---	e3,410	5,400	3,380	4,720	12,900	12,000	12,400
2	8,860	3,210	6,300	4,100	3,900	4,030	5,500	3,180	4,160	13,200	12,300	12,800
3	14,400	3,310	4,780	4,710	4,100	4,420	8,270	5,500	6,480	13,400	12,700	13,100
4	3,920	3,410	3,590	5,730	4,710	5,060	10,300	8,160	9,750	13,700	13,200	13,500
5	3,920	2,290	2,480	7,150	5,630	5,910	10,200	8,980	9,350	13,800	13,500	13,600
6	2,390	793	1,400	8,480	6,440	7,550	10,000	9,500	9,830	14,200	13,700	13,900
7	2,800	1,650	2,490	9,290	7,460	8,200	11,000	10,000	10,600	14,300	13,600	13,900
8	3,200	2,690	2,950	9,900	7,970	8,930	11,500	10,600	11,200	14,400	13,700	14,000
9	3,610	659	3,120	9,800	8,780	9,360	13,400	11,100	12,700	14,000	13,700	13,900
10	2,470	655	1,120	9,800	8,580	9,080	13,400	13,000	13,200	13,900	13,100	13,400
11	2,880	1,750	1,990	8,980	7,860	8,450	13,400	13,100	13,200	13,100	12,800	12,900
12	2,660	1,530	2,000	7,860	7,150	7,410	13,400	13,200	13,300	12,800	12,400	12,500
13	---	1,120	e2,330	7,250	6,740	6,930	13,500	13,200	13,300	12,400	11,600	12,200
14	---	---	e4,790	6,940	6,430	6,600	15,000	13,200	13,500	12,200	9,880	11,500
15	11,100	---	e9,020	6,640	6,130	e6,320	15,000	3,590	8,070	11,800	9,180	10,800
16	11,000	10,300	10,600	6,330	5,920	e6,130	5,920	3,590	4,400	14,700	1,590	8,250
17	10,300	9,760	10,000	6,020	5,820	e5,940	6,650	3,390	4,780	---	1,460	e1,500
18	9,960	8,930	9,280	---	---	e4,640	8,610	1,690	6,310	---	---	e3,000
19	9,740	1,390	5,650	---	---	e4,990	9,650	1,590	7,720	---	---	e5,300
20	---	---	e2,070	---	---	---	5,930	895	1,590	6,610	---	e6,560
21	---	---	e2,750	---	---	---	---	---	e2,000	7,080	6,610	6,860
22	---	---	e3,440	---	---	---	---	---	e3,500	7,400	6,970	7,170
23	---	---	e4,430	---	---	---	6,140	---	e5,510	7,500	7,030	7,260
24	---	---	e5,650	8,370	1,370	2,120	8,590	6,180	7,390	7,820	7,380	7,560
25	7,520	---	e6,920	4,290	1,470	2,210	9,770	8,590	9,130	8,240	7,520	7,840
26	8,530	7,100	7,440	4,290	3,180	3,890	10,300	9,510	9,820	8,400	7,870	8,110
27	7,100	1,370	1,660	7,350	4,290	5,680	10,500	9,960	10,100	8,690	7,400	8,180
28	2,180	1,370	1,670	7,140	374	1,670	10,700	9,960	10,300	8,880	7,870	8,360
29	1,830	963	1,220	3,890	774	2,250	11,400	10,500	10,800	9,180	8,250	8,670
30	---	---	e2,040	4,990	3,680	4,290	12,100	11,000	11,500	8,830	765	7,430
31	---	---	---	4,990	3,280	3,810	12,600	11,600	12,000	---	---	---
MONTH	---	---	---	---	---	---	---	---	8,720	---	---	9,880

e Estimated

07311800 South Wichita River near Benjamin, TX—Continued



TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

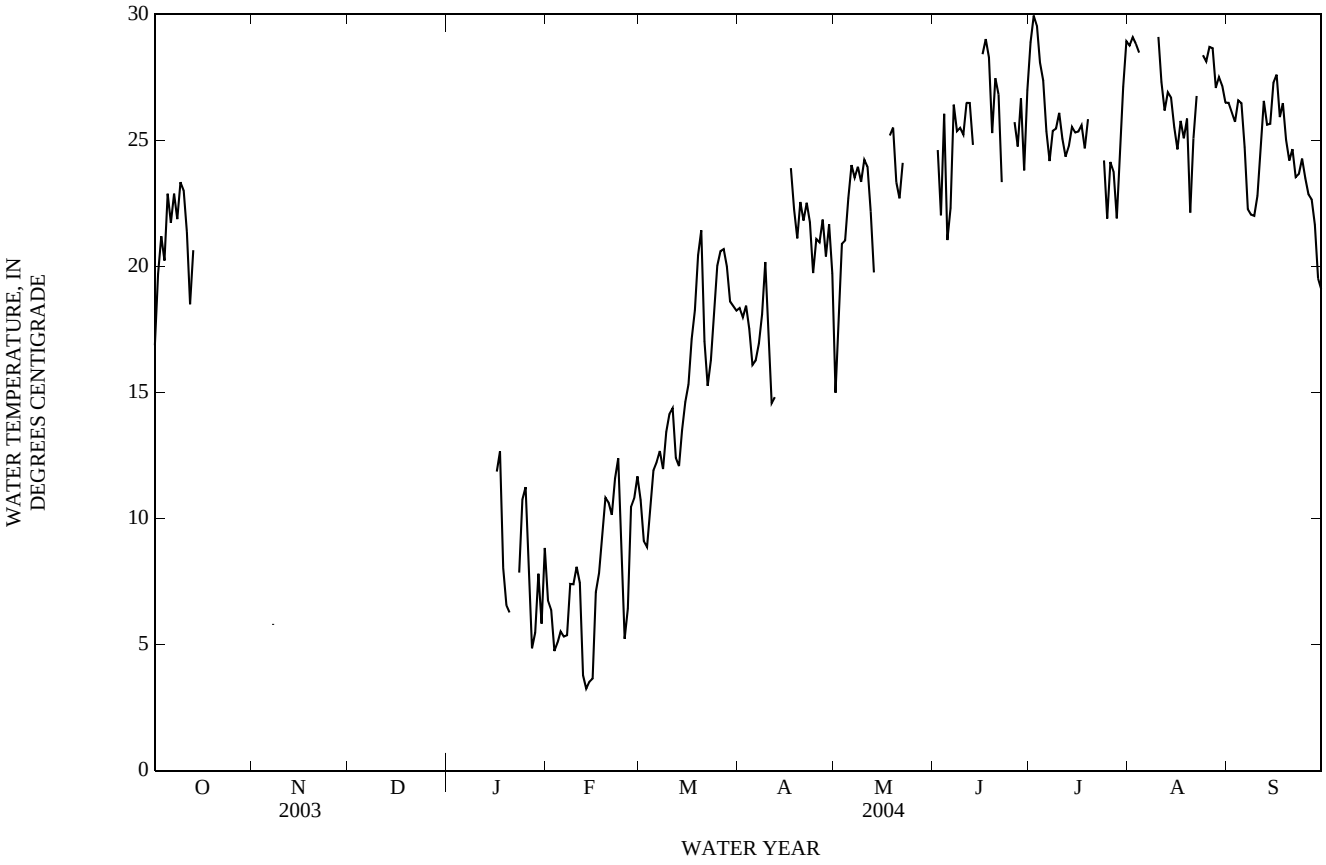
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	23.1	14.1	16.9	---	---	---	---	---	---	---	---	---
2	29.8	13.4	19.7	---	---	---	---	---	---	---	---	---
3	30.5	15.5	21.2	---	---	---	---	---	---	---	---	---
4	24.0	17.9	20.2	---	---	---	---	---	---	---	---	---
5	32.6	17.6	22.9	---	---	---	---	---	---	---	---	---
6	27.4	18.9	21.7	---	---	---	---	---	---	---	---	---
7	31.2	17.7	22.9	6.4	5.2	5.8	---	---	---	---	---	---
8	27.0	18.0	21.9	---	---	---	---	---	---	---	---	---
9	29.9	19.5	23.3	---	---	---	---	---	---	---	---	---
10	30.3	19.0	23.0	---	---	---	---	---	---	---	---	---
11	25.2	18.6	21.4	---	---	---	---	---	---	---	---	---
12	20.2	16.8	18.5	---	---	---	---	---	---	---	---	---
13	24.0	18.3	20.6	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	15.2	10.4	11.9
17	---	---	---	---	---	---	---	---	---	15.0	9.7	12.7
18	---	---	---	---	---	---	---	---	---	9.7	6.6	8.0
19	---	---	---	---	---	---	---	---	---	9.6	4.6	6.6
20	---	---	---	---	---	---	---	---	---	10.1	3.9	6.3
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	11.9	---	---
23	---	---	---	---	---	---	---	---	---	12.1	4.6	7.9
24	---	---	---	---	---	---	---	---	---	14.2	8.6	10.8
25	---	---	---	---	---	---	---	---	---	15.3	8.9	11.2
26	---	---	---	---	---	---	---	---	---	10.6	4.3	8.1
27	---	---	---	---	---	---	---	---	---	10.1	1.7	4.9
28	---	---	---	---	---	---	---	---	---	11.9	1.2	5.5
29	---	---	---	---	---	---	---	---	---	15.6	4.0	7.8
30	---	---	---	---	---	---	---	---	---	13.3	1.4	5.8
31	---	---	---	---	---	---	---	---	---	16.3	4.3	8.8
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07311800 South Wichita River near Benjamin, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.7	3.2	6.8	11.9	9.2	10.7	20.7	16.2	18.3	19.0	12.3	15.0
2	15.8	0.8	6.4	10.8	8.2	9.1	18.8	17.4	18.0	26.4	11.0	18.0
3	9.5	0.7	4.7	9.6	8.2	8.9	20.6	16.6	18.4	29.2	14.8	20.9
4	6.1	4.0	5.1	12.4	9.3	10.3	19.3	16.2	17.5	28.2	15.8	21.0
5	9.1	2.8	5.5	15.7	8.8	11.9	19.0	15.1	16.1	31.2	16.2	22.7
6	14.0	0.5	5.3	14.1	10.3	12.2	19.7	13.5	16.3	32.4	18.4	24.0
7	15.8	-0.8	5.4	14.4	11.1	12.7	18.2	16.3	16.9	30.0	19.3	23.5
8	15.4	1.9	7.4	14.0	10.6	12.0	21.2	15.7	18.1	30.7	19.3	24.0
9	10.5	5.0	7.4	15.2	12.1	13.4	23.6	17.2	20.2	29.5	18.8	23.4
10	14.6	2.7	8.1	17.0	11.3	14.1	21.9	15.1	17.8	30.6	19.6	24.2
11	9.1	5.1	7.4	16.5	11.6	14.4	15.7	13.3	14.6	28.7	20.5	24.0
12	7.9	0.6	3.8	14.6	11.8	12.4	15.7	13.6	14.8	29.9	8.8	22.2
13	5.2	1.8	3.2	14.1	10.7	12.1	---	---	---	22.5	16.1	19.8
14	8.7	-0.2	3.5	14.1	12.9	13.5	---	---	---	---	14.2	---
15	5.9	1.7	3.7	17.2	12.5	14.6	---	---	---	---	---	---
16	13.2	3.6	7.1	17.4	12.0	15.3	28.1	---	---	---	---	---
17	13.9	3.1	7.8	19.8	13.8	17.1	27.6	20.4	23.9	30.7	---	---
18	14.0	5.8	9.5	20.9	15.0	18.3	24.3	20.6	22.3	32.8	19.6	25.2
19	14.2	8.3	10.8	23.8	17.3	20.4	24.3	19.6	21.1	31.0	19.8	25.5
20	14.3	7.9	10.6	24.8	19.3	21.4	27.0	19.0	22.6	27.4	19.9	23.3
21	14.7	6.2	10.1	19.3	15.5	17.0	26.8	17.5	21.8	25.3	20.4	22.7
22	16.5	7.4	11.6	17.2	13.9	15.3	29.1	17.4	22.5	28.8	20.1	24.1
23	13.8	11.7	12.4	18.8	14.0	16.3	27.0	18.1	21.7	---	---	---
24	11.7	6.8	9.6	21.2	16.4	18.2	26.5	16.0	19.7	---	---	---
25	6.8	4.0	5.2	23.5	17.9	20.0	29.2	15.6	21.1	---	---	---
26	11.3	2.7	6.4	22.4	19.4	20.6	25.7	17.0	21.0	---	---	---
27	17.0	6.3	10.4	23.4	19.1	20.7	26.8	17.0	21.9	---	---	---
28	11.5	9.8	10.8	22.4	18.1	20.0	24.0	17.4	20.4	---	---	---
29	14.1	9.2	11.7	21.0	16.6	18.6	29.0	16.6	21.7	---	---	---
30	---	---	---	20.6	16.5	18.4	21.3	14.6	19.7	---	---	---
31	---	---	---	20.8	16.0	18.2	---	---	---	---	---	---
MONTH	17.0	-0.8	7.5	24.8	8.2	15.4	---	---	---	---	---	---
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	32.4	25.8	28.9	31.4	26.3	28.8	32.4	22.4	26.5
2	32.9	16.5	24.6	34.8	26.1	29.9	31.4	26.6	29.1	33.9	21.0	26.1
3	25.9	18.7	22.0	34.7	25.5	29.5	31.4	26.0	28.8	33.4	21.0	25.7
4	33.4	20.7	26.1	32.3	24.8	28.1	31.7	25.4	28.5	34.7	21.9	26.6
5	24.4	19.3	21.0	32.4	24.0	27.4	---	---	---	33.7	22.2	26.5
6	25.4	19.9	22.3	29.4	22.9	25.4	---	---	---	30.8	20.6	24.7
7	30.4	23.3	26.4	28.6	22.0	24.2	---	---	---	29.2	17.5	22.3
8	27.6	23.7	25.4	30.9	22.7	25.4	---	---	---	30.7	15.8	22.1
9	31.2	21.2	25.5	30.1	23.1	25.5	32.6	---	---	33.0	15.0	22.0
10	30.9	21.4	25.2	32.0	22.9	26.1	33.3	25.5	29.1	32.9	15.2	22.8
11	29.0	24.7	26.5	31.1	22.7	25.1	31.1	24.1	27.3	33.8	18.5	24.7
12	29.2	21.7	26.5	31.0	21.4	24.4	31.6	22.8	26.2	35.6	20.6	26.6
13	29.7	20.6	24.8	31.5	21.5	24.8	32.4	23.6	26.9	33.8	21.0	25.6
14	---	---	---	33.2	21.5	25.5	31.9	23.6	26.7	33.8	20.8	25.7
15	32.1	---	---	32.1	21.6	25.3	29.5	22.9	25.5	36.6	21.8	27.3
16	33.5	25.0	28.4	32.3	21.3	25.4	28.6	22.1	24.6	36.9	23.8	27.6
17	35.2	25.1	29.0	31.6	22.9	25.6	30.6	21.7	25.8	28.4	24.2	25.9
18	34.5	24.9	28.3	28.2	22.4	24.7	30.7	23.1	25.1	28.4	25.0	26.5
19	27.2	23.6	25.3	32.4	21.6	25.8	32.4	21.4	25.9	27.1	23.6	25.0
20	31.5	24.4	27.5	---	---	---	24.5	20.3	22.1	28.4	22.1	24.2
21	29.8	24.9	26.8	---	---	---	28.4	22.6	25.1	30.9	21.1	24.7
22	25.3	21.1	23.3	---	---	---	30.3	23.8	26.8	28.8	20.3	23.5
23	---	21.3	---	---	---	---	32.4	---	---	29.2	20.1	23.7
24	---	---	---	27.9	22.2	24.2	34.2	24.5	28.4	29.7	20.6	24.3
25	---	---	---	22.8	21.3	21.9	33.1	25.1	28.1	28.9	18.4	23.5
26	34.3	21.8	25.7	29.4	20.1	24.1	34.7	24.8	28.7	28.1	18.8	22.9
27	29.2	20.6	24.8	25.1	23.0	23.8	35.2	24.7	28.7	28.2	18.1	22.7
28	31.6	24.5	26.7	23.6	20.7	21.9	32.4	24.9	27.1	26.3	18.0	21.7
29	26.5	21.4	23.8	27.0	22.8	24.6	34.8	23.0	27.5	24.5	14.5	19.5
30	31.3	23.7	27.0	30.8	24.3	27.1	35.2	22.7	27.2	23.9	16.8	19.1
31	---	---	---	32.6	25.8	28.9	33.4	22.6	26.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	36.9	14.5	24.3

07311800 South Wichita River near Benjamin, TX—Continued



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07311900 Wichita River near Seymour, TX

LOCATION.--Lat 33°42'01", long 99°23'18", Baylor County, Hydrologic Unit 11130206, on left bank at downstream side of bridge on Farm Road 1919, 6.0 mi upstream from the head of Lake Kemp (station 07312000), 10.0 mi downstream from the confluence of the North and South Forks of the Wichita River, and 10.5 mi northwest of Seymour.

DRAINAGE AREA.--1,874 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1952 to Sept. 1957 (miscellaneous low-flow measurements made 4.0 mi downstream), Dec. 1959 to Sept. 1979, Oct. 1996 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,152.7 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good. There are low flow diversions upstream on the South Wichita River at low flow dam near Guthrie (station 07311782) to Truscott Brine Lake.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	0.86	3.5	6.0	8.8	190	3.1	42	0.41	400	684	28
2	2.9	0.92	3.5	6.4	8.1	77	3.5	25	0.61	183	259	26
3	2.7	0.93	3.6	6.7	7.1	32	6.2	21	105	121	164	24
4	2.5	0.91	3.4	5.7	7.8	1,110	9.6	17	41	95	123	23
5	2.7	1.4	3.3	5.0	9.4	1,430	6.3	14	538	77	102	22
6	2.6	2.4	3.5	5.8	8.0	1,280	98	13	1,480	64	91	45
7	2.6	117	4.2	6.0	6.8	560	95	12	1,820	54	309	41
8	2.4	62	4.6	6.0	7.6	291	81	11	972	46	1,890	23
9	81	23	4.6	5.6	7.1	133	67	9.4	479	39	946	18
10	46	14	4.5	6.0	7.2	88	90	8.5	915	35	198	16
11	24	13	5.0	6.4	10	64	70	7.4	e616	30	108	15
12	16	9.4	5.8	6.2	10	51	50	6.7	e651	26	90	14
13	11	5.7	7.1	7.4	7.4	44	43	6.5	e488	23	77	13
14	6.6	6.3	7.3	7.2	10	38	36	17	e328	20	67	13
15	4.6	7.0	9.0	7.9	11	42	30	7.8	204	18	68	12
16	3.6	5.5	6.0	13	10	45	27	2.6	123	15	141	11
17	2.6	5.3	5.3	329	8.4	30	23	2.0	101	12	99	18
18	2.3	5.1	5.0	339	7.5	23	20	1.8	137	13	66	19
19	2.1	4.1	4.6	126	6.1	18	19	1.6	153	11	70	24
20	1.9	3.9	4.7	62	4.5	14	19	1.3	202	8.1	853	13
21	1.7	3.5	4.8	38	4.3	10	16	1.2	153	5.7	380	9.8
22	1.6	4.0	5.1	26	4.6	8.7	15	1.1	119	3.9	219	8.4
23	1.5	3.0	4.8	20	69	7.7	15	0.89	122	1.0	103	11
24	1.3	2.5	5.0	17	216	6.9	22	0.80	81	7.9	71	10
25	1.0	2.6	5.3	15	484	6.6	18	0.71	69	467	55	7.4
26	0.97	2.9	5.6	12	101	13	100	0.71	103	245	46	5.9
27	0.97	2.8	6.1	10	45	15	45	0.67	101	110	40	5.5
28	0.96	2.7	5.9	10	25	7.0	27	0.69	86	4,320	35	4.9
29	0.99	2.9	4.7	9.5	253	4.3	26	0.59	149	5,910	33	4.7
30	0.85	3.3	4.3	8.4	---	3.8	58	0.48	424	2,750	30	6.1
31	0.80	---	4.9	8.8	---	3.3	---	0.42	---	1,240	29	---
TOTAL	235.54	318.92	155.0	1,138.0	1,364.7	5,646.3	1,138.7	235.86	10,761.02	16,350.6	7,446	491.7
MEAN	7.60	10.6	5.00	36.7	47.1	182	38.0	7.61	359	527	240	16.4
MAX	81	117	9.0	339	484	1,430	100	42	1,820	5,910	1,890	45
MIN	0.80	0.86	3.3	5.0	4.3	3.3	3.1	0.42	0.41	1.0	29	4.7
AC-FT	467	633	307	2,260	2,710	11,200	2,260	468	21,340	32,430	14,770	975

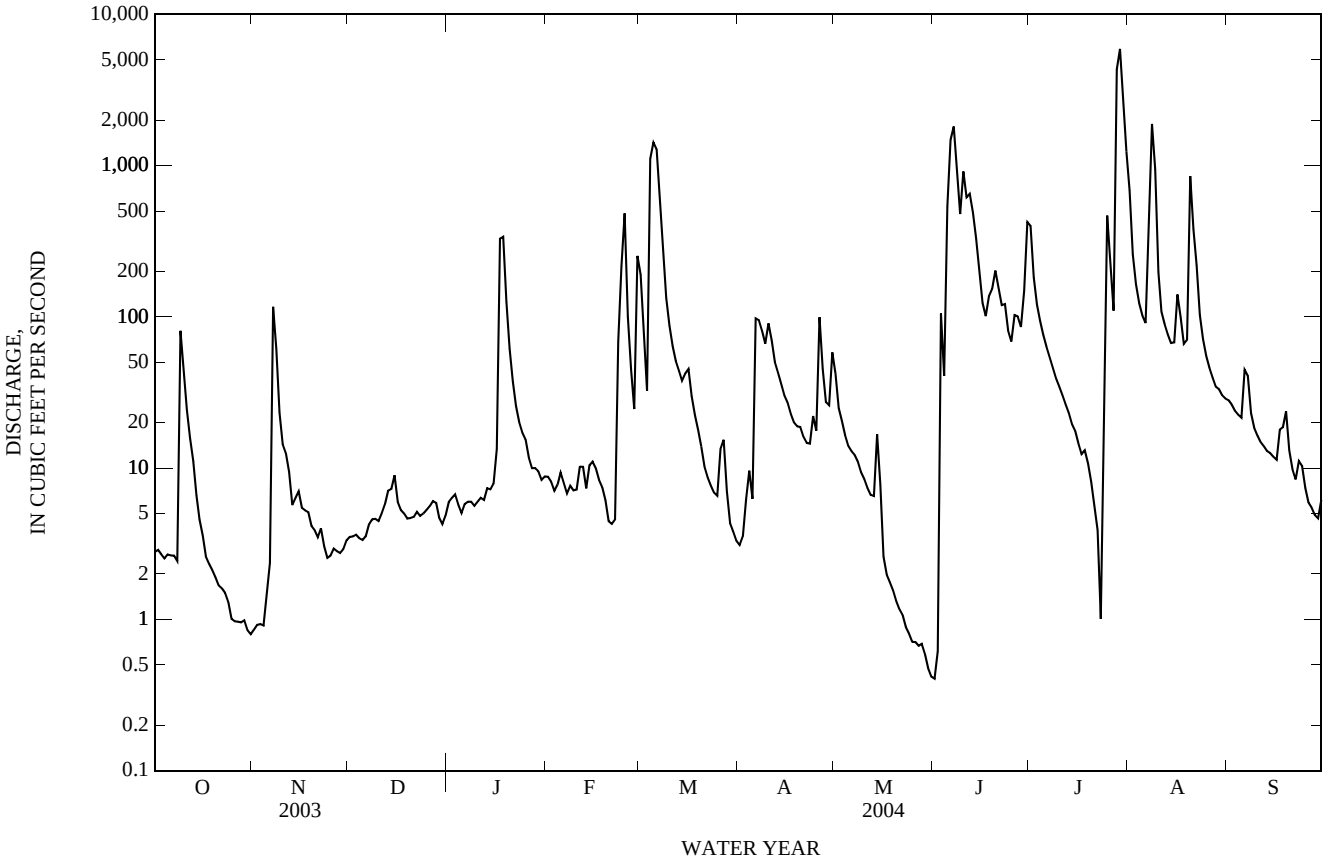
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004h, BY WATER YEAR (WY)

MEAN	199	99.9	49.5	50.5	61.2	124	148	233	263	166	159	282
MAX	1,464	342	222	375	299	486	664	778	979	853	1,353	1,492
(WY)	(1961)	(2001)	(1960)	(1968)	(1998)	(2000)	(1967)	(1999)	(1967)	(2002)	(1966)	(1966)
MIN	2.89	9.29	5.00	11.5	12.5	8.10	7.36	7.61	8.82	0.23	0.56	0.00
(WY)	(1964)	(1971)	(2004)	(1964)	(1971)	(1965)	(1964)	(2004)	(2001)	(2001)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004h	
ANNUAL TOTAL	18,654.35		45,282.34			
ANNUAL MEAN	51.1		124		153	
HIGHEST ANNUAL MEAN					389	1966
LOWEST ANNUAL MEAN					71.6	1976
HIGHEST DAILY MEAN	1,500	Jun 6	5,910	Jul 29	16,100	Oct 19, 1965
LOWEST DAILY MEAN	0.00	Aug 1	0.41	Jun 1	0.00	Jul 18, 1964
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 1	0.55	May 27	0.00	Jul 18, 1964
MAXIMUM PEAK FLOW			7,870	Jul 29	23,100	Sep 20, 1965
MAXIMUM PEAK STAGE			16.80	Jul 29	17.75	Sep 20, 1965
ANNUAL RUNOFF (AC-FT)	37,000		89,820		110,500	
10 PERCENT EXCEEDS	79		208		224	
50 PERCENT EXCEEDS	16		12		30	
90 PERCENT EXCEEDS	0.85		2.2		5.4	

h See Period of Record paragraph.
e Estimated

07311900 Wichita River near Seymour, TX—Continued



07311900 Wichita River near Seymour, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1967 to Sept. 1979, Oct. 1996 to current year.
PESTICIDE DATA: Oct. 1996 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct. 1967 to Sept. 1979, Oct. 1996 to current year.
WATER TEMPERATURE: Oct. 1967 to Sept. 1979, Oct. 1996 to current year.

INSTRUMENTATION.--Water-quality monitor Aug. 1968 to Sept. 1979, Oct. 1996 to current year.

REMARKS.--Temperature records fair. Specific conductance records poor. Interruptions in the record were caused by malfunctions of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. New regression equations were developed based on data from water years 1998 to 2004. The standard error of estimate for dissolved solids is 6%, chloride is 15%, sulfate is 13% and for hardness is 15%. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 30,800 microsiemens/cm, Feb. 12, 1969; minimum, 160 microsiemens/cm, Sept. 19, 2002.
WATER TEMPERATURE: Maximum, 39.4°C, July 13-14, 1998; minimum, -0.8°C, Jan. 6, 2004.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 26,200 microsiemens/cm, Jan. 6; minimum, 354 microsiemens/cm, July 28.
WATER TEMPERATURE: Maximum, 38.8°C, July 15, 19; minimum, -0.8°C, Jan. 6.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
OCT													
07...	1050	2.6	8.5	100	7.9	12,000	21.9	2,000	1,900	573d	149d	12.6d	19
NOV													
12...	1110	8.7	8.9	95	8.0	13,000	16.9	2,000	1,900	573d	135d	11.7d	22
DEC													
17...	1100	6.7	12.8	101	7.7	20,600	2.6	3,200	3,000	920d	214d	16.8d	28
JAN													
28...	1045	9.6	12.8	103	7.9	16,700	3.9	2,500	2,400	723d	167d	14.0d	26
FEB													
18...	1315	9.8	10.2	105	8.1	18,800	14.1	2,700	2,600	775d	189	18.0	29
MAR													
01...	1300	149	11.0	103	7.8	2,190	12.2	290	240	83.4	19.2	3.63	6
APR													
20...	1040	20	8.5	104	7.9	12,100	22.9	1,900	1,800	556d	130d	13.8d	19
MAY													
13...	1155	6.5	7.4	100	7.9	18,800	24.4	2,900	2,800	800d	214d	18.9d	27
JUN													
01...	1040	.43	8.0	118	7.8	17,700	30.2	2,900	2,800	804d	220d	17.6d	26
JUL													
01...	1115	446	7.2	92	7.6	1,990	25.1	510	440	157	27.6	6.15	4
AUG													
31...	1055	29	7.2	93	7.8	11,400	24.9	2,200	2,000	599d	160d	13.2d	17
SEP													
27...	1120	6.2	7.5	97	7.8	12,000	24.6	3,100	3,000	845d	244d	17.9d	15

07311900 Wichita River near Seymour, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium, water, fltrd, mg/L (00930)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
OCT													
07...	1950dc	123	3250dc	.3	6.4	1660dc	7,680	13	.18	E.03n	--	<.06	<.008
NOV													
12...	2260d	93	3560d	.3	3.8	1530d	8,130	90d	.27	.04	--	<.06	<.008
DEC													
17...	3670d	135	6060d	.4	3.9	2570d	13,500	<10	E.07n	.08	--	<.06	<.008
JAN													
28...	2990d	141	4800d	.4	4.8	2090d	10,900	17	.18	.05	--	.09	<.008
FEB													
18...	3500d	139	5500d	.5	3.5	2310d	12,400	26	.18	.07	--	.09	<.008
MAR													
01...	251	46	385d	.2	4.5	261d	1,040	1840d	4.1	.05	.41	.42	.010
APR													
20...	1930d	115	3240d	.4	4.7	1650d	7,590	31	.21	<.08d	--	<.06	<.008
MAY													
13...	3320d	121	5370d	.4	4.0	2400d	12,200	25	.32	.07	--	<.06	<.008
JUN													
01...	3190d	106	5140d	.4	3.8	2330d	11,800	<10	.20	.05	--	<.06	<.008
JUL													
01...	202	62	310d	.2	9.4	442d	1,190	1240d	2.1	<.04	--	.08	<.008
AUG													
31...	1840d	130	3010d	.3	9.9	1540d	7,250	25	.24	E.04n	--	<.06	<.008
SEP													
27...	1970d	129	3210d	.3	7.4	1660d	8,030	25	.24	.05	--	<.06	<.008

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)
OCT													
07...	--	<.02	<.04	<.04	--	4.6d	8dc	74d	81d	<.20d	<.20d	<1.6d	E1.0nd
NOV													
12...	.23	<.02	<.04	.05	--	2.9d	2	132d	146d	<.24d	<.24d	<1.6d	1.9d
DEC													
17...	--	<.02	<.04	<.04	--	<1.8d	<11dc	39d	34d	<.36d	.14	<2.4d	<2.4d
JAN													
28...	.13	<.02	<.04	<.04	.27	2.3d	E3nd	67d	66d	<.28d	<.28d	<1.6d	<1.6d
FEB													
18...	.11	<.02	<.04	E.03n	.27	E1.5nd	E4nd	36d	37d	<.32d	<.32d	<1.6d	<1.6d
MAR													
01...	4.1	<.02	<.04	3.44d	4.5	3.1	23	115	1020d	<.04	.12	<.8	52.9d
APR													
20...	--	<.02	<.04	<.04	--	2.9d	E2nd	64d	71d	<.20d	<.20d	<1.6d	<1.6d
MAY													
13...	.25	<.02	<.04	E.03n	--	3.1d	5d	64d	59d	<.32d	<.32d	<.8	E1.2nd
JUN													
01...	.15	<.02	<.04	<.04	--	2.3d	E2nd	52d	49d	<.32d	<.32d	<1.6d	<1.6d
JUL													
01...	--	<.02	<.04	1.45	2.2	4.4	19	88	622	<.04	.10	<.8	30.6
AUG													
31...	--	<.02	<.04	<.04	--	.9	6d	23	109d	<.04	<.20d	<1.6d	2.2d
SEP													
27...	.20	<.02	<.04	<.04	--	4.4d	4d	68d	69d	<.20d	<.20d	<1.6d	E.9nd

07311900 Wichita River near Seymour, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen- ium, water, fltrd, ug/L (01145)
OCT													
07...	15.8d	20.1d	<64d	260d	<.40d	<.30d	123d	142d	<.02	<.02	15.5d	24.5d	5.1d
NOV													
12...	4.5d	20.8d	<64d	1100d	<.48d	.88d	57.7d	94d	<.02	<.02	7.36d	21.4d	1
DEC													
17...	27.5d	35.7d	E78nd	<90d	<.72d	<.54d	105d	95d	<.02	<.02	28.9d	37.8d	3
JAN													
28...	27.3d	35.6d	<64d	210d	<.56d	<.42d	101d	108d	<.02	<.02	13.9d	29.6d	6
FEB													
18...	9.6d	13.5d	<6	320d	E.46nd	<.48d	63.3d	68d	<.02	<.02	12.5d	25.5d	4
MAR													
01...	2.0	18.8	<6	38000d	.09	47.1	1.2	1490d	<.02	.02	1.96	118d	<1
APR													
20...	7.1d	12.9d	<96d	440d	<.40d	<.30d	39.5d	52d	<.02	.02	11.8d	18.7d	5
MAY													
13...	16.5d	16.8d	<64d	350d	E.54nd	<.48d	165dr	152dr	<.02	<.02	8.78d	21.2d	2
JUN													
01...	23.0d	21.3d	<6	90d	<.64d	<.48d	291d	298d	<.02	<.02	21.8d	22.3d	<1
JUL													
01...	4.1	26.6	<6	19400d	<.08	20.2	.4	1130d	<.02	E.01n	2.33	59.7	<1
AUG													
31...	1.3	21.0d	<64d	230d	<.08	<.30d	8.6	49d	<.02	<.02	1.09	29.6d	<1
SEP													
27...	10.1d	23.4d	<32d	590d	<.40d	<.30d	90.2d	108d	<.02	<.02	17.5d	16.6d	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Selen- ium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha- Endo- sulfan, water, unfltrd ug/L (34361)	alpha- HCH, water, unfltrd ug/L (39337)	alpha- HCH-d6, surrog, Sch1608 water, unfltrd pct rcv (99778)	Aroclor 1016 + 1242, water, unfltrd ug/L (81648)	Aroclor 1221, water, unfltrd ug/L (39488)	Aroclor 1232, water, unfltrd ug/L (39492)	Aroclor 1248, water, unfltrd ug/L (39500)
OCT													
07...	2.2d	<1.0d	<.80d	5.4d	E9nd	--	--	--	--	--	--	--	--
NOV													
12...	1	<1.2d	<.96d	3.8d	13d	--	--	--	--	--	--	--	--
DEC													
17...	3	3.0d	<.16	11.1d	E17nd	--	--	--	--	--	--	--	--
JAN													
28...	7	<1.4d	<1.12d	14.3d	15d	--	--	--	--	--	--	--	--
FEB													
18...	4	<1.6d	<1.28d	7.5d	<16d	--	--	--	--	--	--	--	--
MAR													
01...	1	<.2	<.16	1.3	109	--	--	--	--	--	--	--	--
APR													
20...	1	<1.0d	<.80d	5.4d	15d	<.04	<.1	<.03	E98.8	<.1	<1	<.1	<.1
MAY													
13...	<1	<1.6d	<1.28d	6.7	17d	--	--	--	--	--	--	--	--
JUN													
01...	<1	<1.6d	<1.28d	10.9d	E11nd	<.04	<.1	<.03	E20.7	<.1	<1	<.1	<.1
JUL													
01...	1	<.2	<.16	1.8	74	--	--	--	--	--	--	--	--
AUG													
31...	<1	<.2	<.80d	.7	E7nd	--	--	--	--	--	--	--	--
SEP													
27...	<1	<1.0d	<.80d	23.8d	E10nd	--	--	--	--	--	--	--	--

07311900 Wichita River near Seymour, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Aroclor 1254, water, unfltrd ug/L (39504)	Aroclor 1260, water, unfltrd ug/L (39508)	beta-Endo-sulfan, water, unfltrd ug/L (34356)	beta-HCH, water, unfltrd ug/L (39338)	Chlor-dane, tech-nical, water, unfltrd ug/L (39350)	cis-Chlor-dane, water, unfltrd ug/L (39062)	delta-HCH, water, unfltrd ug/L (34259)	Diel-drin, water, unfltrd ug/L (39380)	Endo-sulfan sulfate water unfltrd ug/L (34351)	Endrin alde-hyde, water, unfltrd ug/L (34366)	Endrin, water, unfltrd ug/L (39390)	Hepta-chlor epoxide water unfltrd ug/L (39420)	Hepta-chlor, water, unfltrd ug/L (39410)
OCT													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
20...	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8	<.03
MAY													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
01...	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8	<.03
JUL													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
27...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Lindane water, unfltrd ug/L (39340)	p,p'-DDD, water, unfltrd ug/L (39310)	p,p'-DDE, water, unfltrd ug/L (39320)	p,p'-DDT, water, unfltrd ug/L (39300)	PCB 207, surrog, Sch1608 water, unfltrd pct rcv (99781)	Toxa-phene, water, unfltrd ug/L (39400)	trans-Chlor-dane, water, unfltrd ug/L (39065)
OCT							
07...	--	--	--	--	--	--	--
NOV							
12...	--	--	--	--	--	--	--
DEC							
17...	--	--	--	--	--	--	--
JAN							
28...	--	--	--	--	--	--	--
FEB							
18...	--	--	--	--	--	--	--
MAR							
01...	--	--	--	--	--	--	--
APR							
20...	<.03	<.1	<.04	<.1	E101	<2	<.1
MAY							
13...	--	--	--	--	--	--	--
JUN							
01...	<.03	<.1	<.04	<.1	E24.9	<2	<.1
JUL							
01...	--	--	--	--	--	--	--
AUG							
31...	--	--	--	--	--	--	--
SEP							
27...	--	--	--	--	--	--	--

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

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL
r -- Value verified by rerun, same method

07311900 Wichita River near Seymour, TX—Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 2003 TO SEPTEMBER 2004

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.	2003	235.54	12490	8300	5280	3400	2180	1900	1180	2200
NOV.	2003	318.92	10460	6940	5980	2800	2440	1600	1360	1900
DEC.	2003	155	20370	13620	5700	6100	2540	2500	1060	3000
JAN.	2004	1138	9110	6050	18600	2500	7640	1400	4190	1600
FEB.	2004	1364.7	6250	4150	15290	1700	6210	960	3520	1100
MAR.	2004	5646.3	4960	3270	49920	1200	18770	860	13150	1000
APR.	2004	1138.7	10730	7120	21880	2900	8770	1700	5170	2000
MAY	2004	235.86	13860	9220	5870	3900	2460	2000	1270	2400
JUNE	2004	10761.02	2540	1680	48680	610	17650	470	13540	550
JULY	2004	16350.6	1620	1070	47020	390	17050	300	13080	350
AUG.	2004	7446	3140	2070	41600	760	15350	560	11280	660
SEPT	2004	491.7	11250	7460	9910	3000	3990	1700	2320	2100
TOTAL		45282.34	**	**	275700	**	105000	**	71130	**
WTD.AVG.		124	3410	2260	**	860	**	580	**	680

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	11,000	10,500	10,800	14,900	13,900	14,500	20,800	19,500	20,200	20,900	20,300	20,600
2	12,200	10,500	11,400	14,700	13,800	14,200	20,300	18,400	19,700	20,800	20,100	20,400
3	12,000	10,800	11,400	15,000	13,800	14,600	20,100	18,500	19,600	21,100	20,400	20,800
4	11,600	11,100	11,300	15,500	14,600	15,000	20,300	18,800	19,700	23,200	21,000	22,000
5	11,800	11,500	11,600	15,900	13,700	15,200	21,000	18,900	20,200	24,700	22,900	23,600
6	12,600	11,800	12,200	16,600	13,300	15,100	21,400	19,400	20,800	26,200	24,000	25,000
7	12,900	10,700	12,500	13,800	2,010	7,150	21,100	19,400	20,400	25,400	22,100	24,300
8	13,100	12,500	12,900	8,350	5,110	7,020	20,500	19,700	20,200	25,100	23,100	24,200
9	22,300	13,100	17,000	10,300	6,180	9,070	20,900	18,200	20,200	26,100	22,800	24,900
10	14,000	8,300	10,100	10,100	9,080	9,540	21,100	20,200	20,700	26,000	23,300	24,800
11	8,300	8,040	8,150	11,400	10,000	10,800	21,000	19,700	20,500	25,200	23,200	24,400
12	9,010	8,270	8,660	15,800	11,400	13,300	20,600	19,800	20,200	24,700	23,300	24,100
13	9,800	8,870	9,340	17,300	15,800	16,800	20,500	19,400	20,100	24,100	22,200	23,300
14	10,400	9,350	10,000	17,100	16,000	16,600	20,500	18,900	20,000	23,800	21,900	23,000
15	10,700	10,400	10,500	16,700	16,000	16,400	20,300	19,600	20,100	23,200	22,100	22,700
16	10,900	10,600	10,700	17,000	12,500	15,800	20,800	20,000	20,500	22,100	18,500	20,600
17	11,400	---	e11,200	18,100	15,000	17,100	21,300	20,000	20,900	19,200	2,260	9,250
18	11,500	11,300	11,400	19,200	17,000	18,200	21,400	19,500	20,900	9,610	2,460	3,680
19	11,600	11,200	11,500	19,600	18,400	19,200	21,300	20,300	20,900	5,100	2,650	3,690
20	11,900	11,500	11,700	19,800	18,800	19,500	21,100	20,000	20,700	10,800	5,100	8,500
21	12,100	11,700	11,900	---	---	e19,600	20,700	19,500	20,400	14,400	9,680	11,400
22	12,200	11,800	12,000	19,800	17,800	19,300	20,800	20,000	20,400	16,500	13,000	15,300
23	12,300	11,900	12,200	20,900	18,700	19,900	21,000	20,300	20,700	17,800	14,800	16,400
24	12,700	12,300	12,400	21,100	19,000	20,300	21,200	20,300	20,800	16,200	14,300	15,400
25	13,000	11,900	12,600	20,100	19,200	19,800	20,600	17,800	19,900	15,800	13,500	14,700
26	13,100	11,700	12,600	20,100	18,900	19,900	20,100	18,400	19,700	16,900	14,800	15,500
27	13,100	11,900	12,700	20,700	18,500	19,900	20,500	18,800	19,900	17,400	15,600	16,700
28	13,300	12,200	13,100	21,100	19,000	20,600	21,000	20,300	20,600	17,000	16,100	16,500
29	14,100	12,200	13,500	21,200	19,300	20,700	21,300	20,500	21,000	17,300	16,100	16,500
30	14,400	13,800	14,100	21,300	19,500	20,600	21,500	19,900	21,000	18,800	17,300	18,000
31	14,800	14,200	14,500	---	---	---	21,400	20,400	20,900	19,200	18,200	18,700
MONTH	22,300	---	11,800	---	---	16,200	21,500	17,800	20,400	26,200	2,260	18,400

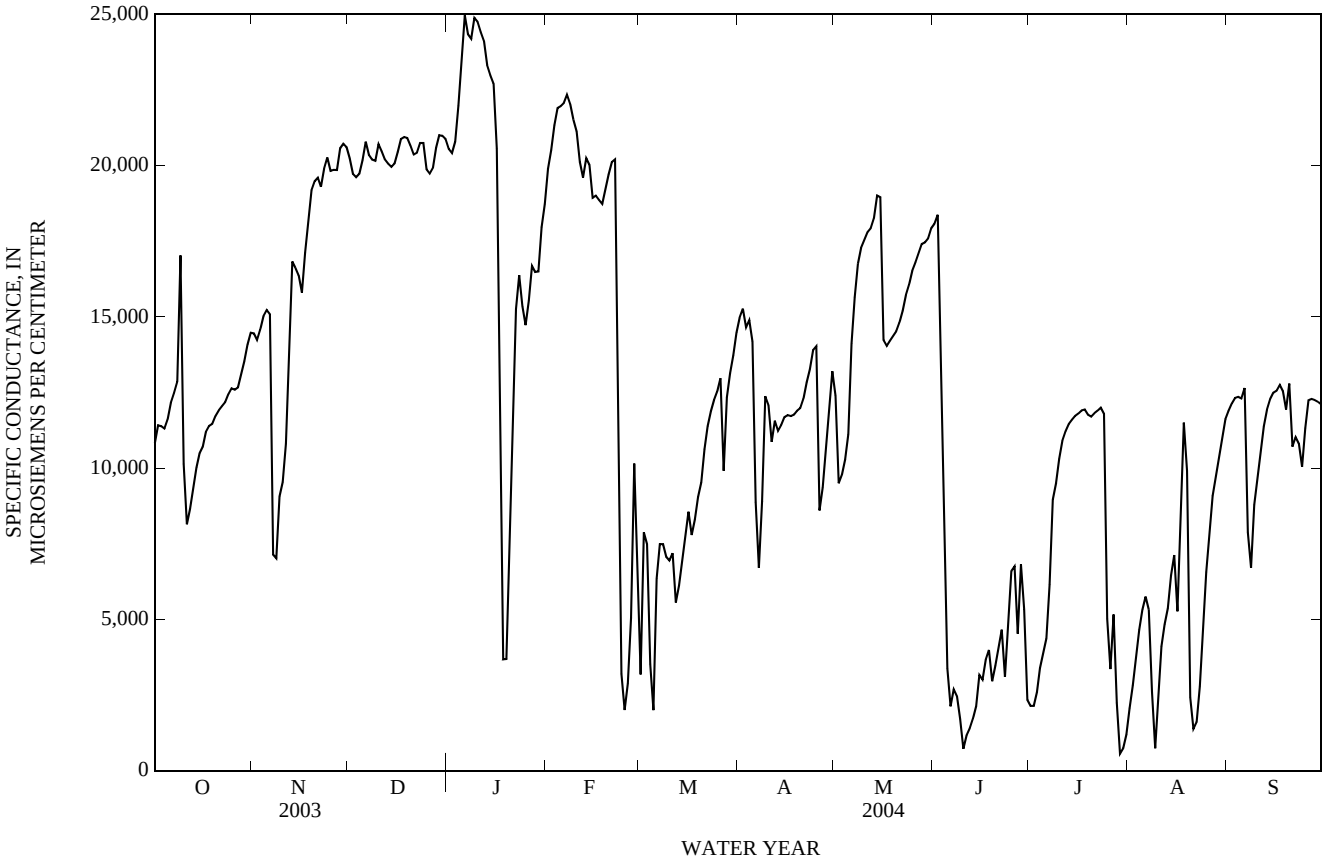
07311900 Wichita River near Seymour, TX—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	20,900	19,200	19,900	5,550	1,990	3,180	15,200	14,700	15,000	16,600	10,200	12,400
2	21,400	19,100	20,500	8,460	5,550	7,870	15,400	15,200	15,300	10,200	9,000	9,500
3	21,900	20,700	21,300	7,590	7,370	7,490	15,300	13,900	14,700	10,400	9,520	9,780
4	22,100	21,800	21,900	7,690	715	3,520	15,500	12,900	14,900	10,500	9,950	10,300
5	22,200	21,500	22,000	---	---	e2,000	15,000	12,800	14,200	12,800	10,500	11,100
6	23,200	20,800	22,100	---	---	e6,340	14,300	4,530	8,880	15,400	12,800	14,100
7	23,600	20,700	22,300	---	---	e7,490	9,410	4,430	6,710	16,400	15,400	15,600
8	23,300	20,800	22,000	---	---	e7,490	14,000	5,240	8,910	17,200	16,400	16,800
9	21,900	20,300	21,500	---	---	e7,070	14,900	9,930	12,400	17,500	17,100	17,300
10	22,000	20,200	21,100	---	---	e6,950	15,000	10,100	12,100	17,800	17,300	17,500
11	20,900	18,800	20,100	---	---	e7,190	11,800	10,500	10,900	18,000	17,600	17,800
12	20,000	18,900	19,600	---	---	e5,560	11,800	11,300	11,600	18,100	17,700	17,900
13	20,500	20,000	20,200	6,540	---	e6,120	11,400	11,100	11,200	18,800	17,900	18,300
14	20,500	19,400	20,000	7,380	6,540	6,930	11,500	11,300	11,400	20,500	18,300	19,000
15	20,000	18,300	18,900	8,530	7,380	7,790	11,800	11,500	11,700	21,200	16,000	19,000
16	19,600	18,300	19,000	9,060	7,490	8,560	11,800	11,600	11,800	16,000	13,400	14,200
17	19,700	17,900	18,900	8,010	7,380	7,790	11,800	11,600	11,700	14,300	13,900	14,000
18	19,300	18,000	18,700	8,960	7,910	8,300	11,900	11,700	11,800	14,400	14,000	14,200
19	19,700	18,800	19,200	9,380	8,850	9,050	11,900	11,900	11,900	14,500	14,200	14,400
20	20,100	19,500	19,700	10,000	9,270	9,530	12,100	11,700	12,000	14,800	14,300	14,500
21	20,400	19,800	20,100	11,200	10,000	10,600	12,700	12,100	12,300	15,100	14,600	14,800
22	20,500	19,800	20,200	11,700	11,200	11,400	13,100	12,600	12,800	15,600	15,000	15,200
23	20,000	3,760	13,800	12,100	11,700	11,900	13,500	13,100	13,300	15,900	15,600	15,700
24	6,010	1,320	3,200	12,500	12,100	12,300	14,700	13,500	13,900	16,400	15,900	16,100
25	2,790	1,220	2,010	12,800	12,400	12,500	14,900	11,200	14,000	16,700	16,400	16,500
26	3,510	2,550	2,880	13,600	12,300	13,000	11,200	---	8,600	17,000	16,700	16,800
27	7,560	3,510	5,050	12,300	7,720	9,910	---	---	e9,360	17,300	17,000	17,100
28	12,000	7,560	10,100	13,300	11,300	12,300	---	---	e10,500	17,600	17,100	17,400
29	12,300	1,760	6,510	13,500	12,700	13,100	---	---	e11,800	17,600	17,300	17,500
30	---	---	---	14,300	13,300	13,700	16,500	---	e13,200	17,700	17,500	17,600
31	---	---	---	14,900	14,300	14,500	---	---	---	18,100	17,700	17,900
MONTH	23,600	1,220	17,000	---	---	8,760	---	---	12,000	21,200	9,000	15,500
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18,500	17,700	18,100	2,240	2,030	2,140	2,390	1,670	2,060	12,100	11,800	11,900
2	18,700	17,700	18,400	2,140	2,140	2,140	3,200	2,390	2,810	12,300	12,000	12,100
3	17,700	8,650	11,000	3,070	2,140	2,600	4,220	3,200	3,710	12,400	12,200	12,300
4	8,650	5,430	7,050	3,690	3,070	3,400	5,040	4,220	4,650	12,500	12,200	12,400
5	5,430	1,200	3,380	4,110	3,690	3,870	5,570	5,030	5,320	12,400	12,200	12,300
6	6,780	889	2,130	4,730	4,110	4,370	5,890	5,570	5,750	14,000	12,300	12,600
7	3,710	1,590	2,690	8,800	4,630	6,150	6,220	4,320	5,320	14,100	5,250	7,880
8	3,710	1,990	2,470	9,330	8,800	8,960	4,630	579	2,600	8,370	5,250	6,700
9	2,090	1,080	1,700	9,750	9,330	9,490	1,390	580	742	9,180	8,370	8,790
10	1,080	575	722	10,800	9,750	10,300	3,510	1,390	2,640	10,200	9,180	9,680
11	---	---	e1,160	11,100	10,800	10,900	4,630	3,510	4,100	11,000	10,200	10,600
12	---	---	e1,390	11,400	11,100	11,200	5,030	4,630	4,840	11,700	11,000	11,400
13	---	---	e1,720	11,600	11,300	11,500	5,790	5,030	5,370	12,300	11,700	11,900
14	---	---	e2,130	11,800	11,500	11,600	7,090	5,790	6,450	12,600	12,100	12,300
15	4,110	2,070	3,160	11,900	11,500	11,700	7,640	6,550	7,120	12,600	12,300	12,500
16	3,390	2,780	3,010	12,000	11,600	11,800	8,070	2,810	5,270	12,700	12,400	12,600
17	4,010	3,390	3,660	12,000	11,800	11,900	12,900	2,810	7,920	12,800	12,600	12,800
18	4,520	2,570	3,990	12,100	11,700	11,900	12,500	10,600	11,500	12,800	12,100	12,600
19	3,900	1,860	2,960	11,900	11,600	11,800	10,600	7,760	9,910	13,400	11,200	11,900
20	5,440	2,370	3,470	11,800	11,500	11,700	7,760	905	2,420	13,900	11,200	12,800
21	5,240	3,600	4,060	11,900	11,700	11,800	1,810	1,010	1,380	11,200	10,400	10,700
22	5,450	2,980	4,660	12,000	11,800	11,900	1,820	1,310	1,610	11,300	10,800	11,000
23	3,590	2,460	3,100	12,100	---	e12,000	3,590	1,820	2,790	11,500	10,100	10,800
24	6,070	2,980	4,700	---	---	e11,800	6,110	3,590	4,760	11,000	9,530	10,000
25	6,900	6,070	6,600	10,600	947	5,020	7,240	6,110	6,560	11,900	11,000	11,300
26	7,220	5,560	6,750	4,120	2,480	3,360	8,630	7,240	7,930	12,400	11,900	12,200
27	6,390	3,380	4,530	6,420	4,010	5,160	9,470	8,630	9,080	12,400	12,000	12,300
28	7,630	5,660	6,820	6,420	354	2,240	10,100	9,470	9,740	12,400	12,100	12,200
29	6,700	3,380	5,340	658	455	562	10,700	10,100	10,400	12,300	12,000	12,200
30	3,380	1,930	2,340	860	658	742	11,400	10,700	11,000	12,400	10,700	12,100
31	---	---	---	1,670	860	1,190	11,800	11,400	11,600	---	---	---
MONTH	---	---	4,770	---	---	7,590	12,900	579	5,720	14,100	5,250	11,400

e Estimated

07311900 Wichita River near Seymour, TX—Continued



TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

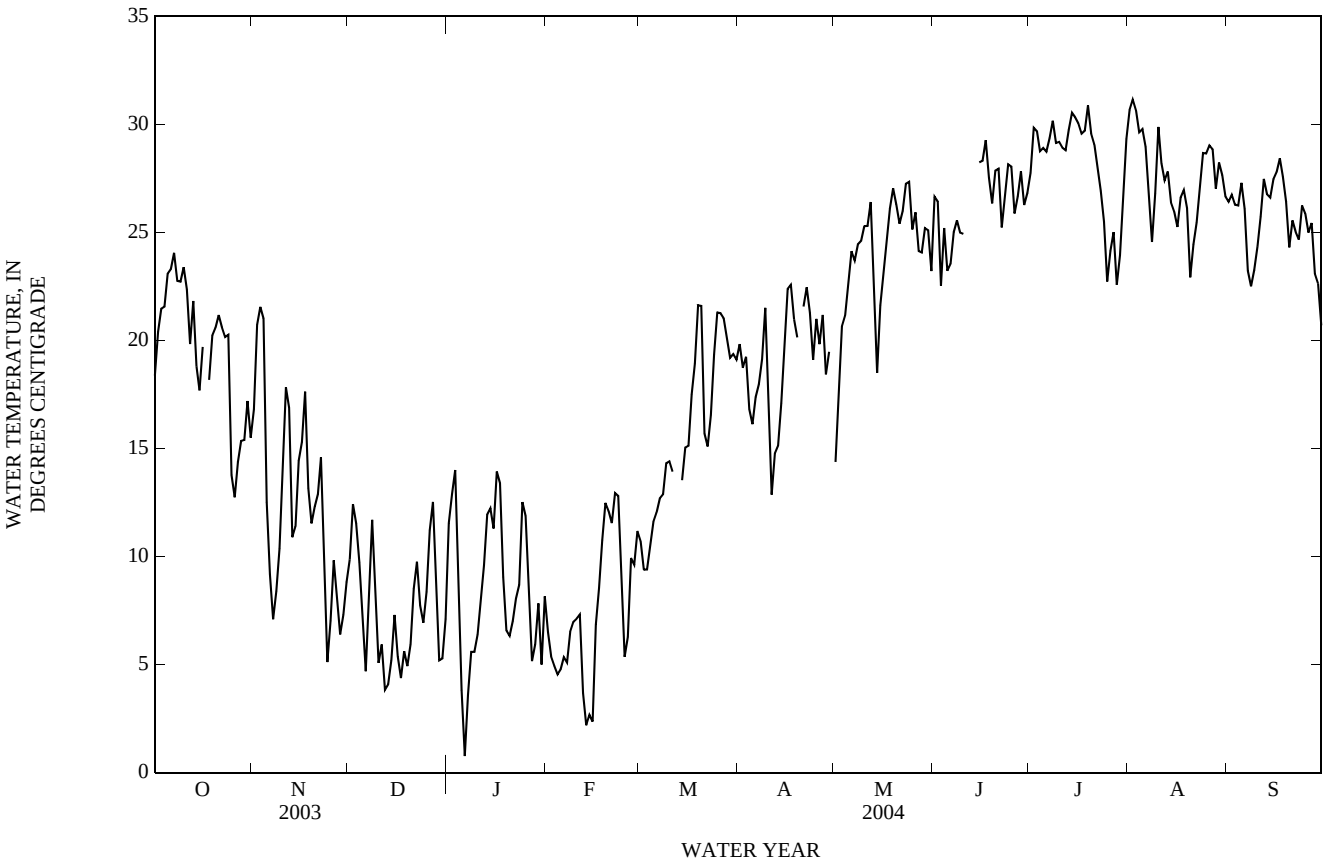
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	21.1	16.4	18.4	22.0	12.9	16.8	14.5	5.8	9.9	16.4	8.4	11.6
2	26.9	16.0	20.4	24.1	18.2	20.7	16.2	9.6	12.4	17.8	9.5	12.9
3	27.1	16.8	21.5	25.8	19.3	21.6	16.0	8.3	11.5	19.3	10.0	14.0
4	23.7	19.4	21.6	26.5	15.4	21.0	15.6	5.4	9.7	14.8	4.7	9.4
5	29.0	19.0	23.1	15.4	10.2	12.5	11.5	3.9	7.2	8.3	0.7	3.8
6	25.5	21.8	23.3	10.9	7.8	9.2	9.9	0.2	4.7	4.1	-0.8	0.8
7	29.3	20.7	24.1	8.0	5.7	7.1	13.6	3.0	7.8	8.8	0.1	3.6
8	26.5	19.7	22.8	9.3	7.7	8.4	17.1	7.4	11.7	10.2	2.4	5.6
9	25.0	20.6	22.7	11.5	9.3	10.4	12.4	3.4	8.1	11.2	1.1	5.6
10	28.0	20.7	23.4	18.9	11.0	14.4	10.6	1.2	5.1	12.3	1.4	6.4
11	25.2	19.8	22.4	22.5	14.6	17.8	11.5	1.8	5.9	12.9	3.8	7.9
12	23.6	17.4	19.8	20.7	12.8	16.9	5.6	3.1	3.8	13.1	6.6	9.6
13	27.6	17.7	21.8	12.8	9.9	10.9	9.1	0.3	4.1	16.9	8.6	11.9
14	24.9	14.0	18.8	13.7	9.9	11.4	10.6	0.3	5.2	17.6	8.5	12.2
15	23.6	12.9	17.7	19.0	11.4	14.4	11.9	5.1	7.3	12.3	10.0	11.3
16	26.8	14.8	19.7	21.5	10.1	15.3	10.0	2.3	5.4	15.5	12.1	13.9
17	23.9	---	---	19.5	15.3	17.6	9.8	0.0	4.4	14.8	10.7	13.4
18	25.1	12.5	18.2	16.6	9.7	13.2	10.7	2.2	5.6	10.7	7.5	9.1
19	27.2	14.6	20.2	18.0	6.6	11.5	10.5	0.7	4.9	9.0	4.3	6.6
20	26.0	15.9	20.6	17.8	8.0	12.3	11.5	1.7	5.9	9.7	3.7	6.3
21	27.6	16.1	21.2	18.4	8.8	12.9	14.0	4.3	8.5	11.2	4.0	7.0
22	26.8	15.6	20.6	18.8	11.0	14.6	14.0	7.4	9.8	13.0	4.4	8.1
23	26.7	14.7	20.2	14.9	4.3	9.1	12.3	4.3	7.7	13.0	4.7	8.7
24	25.3	16.2	20.3	10.6	0.8	5.1	12.2	2.7	6.9	15.7	10.0	12.5
25	18.8	10.2	13.8	11.1	3.9	7.0	13.2	4.5	8.4	15.5	9.2	11.9
26	19.2	8.8	12.7	15.2	6.4	9.8	16.6	7.3	11.2	10.5	4.8	8.1
27	21.2	8.9	14.4	12.0	5.2	8.1	14.2	9.8	12.5	10.5	1.1	5.2
28	19.9	12.2	15.3	12.5	1.8	6.4	11.2	5.4	8.5	11.0	1.9	5.9
29	21.3	10.2	15.4	12.7	3.2	7.3	10.1	1.0	5.2	14.0	4.4	7.8
30	22.5	13.6	17.2	14.8	4.1	8.8	10.5	1.4	5.3	9.2	2.2	5.0
31	18.5	13.7	15.5	---	---	---	12.7	2.4	7.1	13.8	4.0	8.2
MONTH	29.3	---	---	26.5	0.8	12.4	17.1	0.0	7.5	19.3	-0.8	8.5

07311900 Wichita River near Seymour, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.6	3.5	6.5	13.5	7.6	10.7	27.8	13.5	19.8	16.9	12.4	14.4
2	11.5	0.9	5.4	11.6	8.6	9.4	22.2	15.6	18.7	26.0	10.9	17.8
3	7.8	2.1	4.9	10.0	8.9	9.4	24.2	15.8	19.2	28.7	14.1	20.6
4	5.0	4.3	4.6	11.5	9.8	10.5	19.6	14.1	16.8	28.2	15.6	21.1
5	6.0	4.0	4.8	13.0	10.2	11.6	19.3	14.0	16.1	30.4	16.5	22.6
6	10.4	1.8	5.3	13.3	10.5	12.1	20.6	14.4	17.4	31.2	18.5	24.1
7	11.3	0.4	5.1	14.0	11.3	12.7	19.9	16.4	18.0	28.7	19.6	23.7
8	12.0	1.9	6.5	15.8	10.0	12.9	23.8	14.7	19.1	30.6	19.6	24.4
9	8.6	6.0	7.0	17.8	11.2	14.3	26.2	17.3	21.5	30.7	19.7	24.6
10	10.5	3.9	7.1	18.3	10.5	14.4	22.3	12.4	16.3	31.6	20.8	25.3
11	8.1	6.1	7.3	16.5	11.4	13.9	16.1	9.9	12.9	29.8	21.6	25.3
12	6.1	1.9	3.7	---	11.6	---	17.9	12.6	14.8	33.6	21.4	26.4
13	3.1	1.1	2.2	14.5	---	---	19.6	11.9	15.1	25.6	15.6	22.0
14	5.8	0.2	2.7	15.3	12.5	13.5	22.5	12.7	17.1	25.6	13.4	18.5
15	3.9	0.8	2.4	18.5	12.6	15.0	25.8	14.6	19.7	29.6	16.1	21.6
16	14.2	2.1	6.8	19.3	11.5	15.1	28.1	17.9	22.4	29.1	17.9	23.0
17	15.4	3.0	8.5	22.8	13.0	17.5	27.5	19.0	22.6	31.8	18.9	24.5
18	16.8	5.8	10.8	24.6	13.7	18.9	22.8	19.5	21.0	32.7	21.2	26.1
19	18.3	8.9	12.5	27.5	17.4	21.6	22.2	18.6	20.1	34.1	21.9	27.0
20	17.6	8.2	12.1	27.5	17.4	21.6	---	---	---	32.4	21.7	26.3
21	17.4	7.0	11.6	18.6	12.9	15.7	27.6	16.6	21.6	30.2	21.6	25.4
22	18.6	8.2	12.9	19.9	12.0	15.1	31.1	16.1	22.5	32.2	21.3	26.0
23	14.2	11.9	12.8	21.0	12.3	16.6	25.6	17.8	21.3	34.3	22.2	27.3
24	11.9	6.1	8.9	24.7	15.9	19.4	24.8	15.7	19.1	33.4	22.9	27.3
25	6.2	4.4	5.4	27.3	17.7	21.3	29.4	14.8	21.0	27.1	23.4	25.1
26	11.2	2.0	6.3	25.1	18.9	21.3	25.3	15.4	19.8	30.9	22.5	25.9
27	16.0	5.1	9.9	25.4	18.7	21.0	26.4	16.6	21.2	26.5	21.6	24.1
28	10.2	8.9	9.6	25.3	16.6	20.2	20.4	16.2	18.4	29.9	18.7	24.1
29	13.9	9.0	11.2	26.5	13.3	19.2	25.8	14.7	19.5	28.8	22.3	25.2
30	---	---	---	26.0	13.9	19.4	21.8	---	---	29.0	22.7	25.1
31	---	---	---	26.4	13.4	19.1	---	---	---	27.2	18.8	23.2
MONTH	18.6	0.2	7.4	---	---	---	---	---	---	34.3	10.9	23.8
		JUNE			JULY			AUGUST			SEPTEMBER	
1	34.2	20.5	26.7	30.8	25.6	27.8	33.7	28.5	30.7	30.0	23.3	26.4
2	35.3	21.2	26.4	34.4	26.1	29.8	34.2	28.3	31.2	31.8	22.6	26.7
3	26.0	20.5	22.5	35.0	25.0	29.7	34.1	27.6	30.7	31.4	22.1	26.3
4	30.1	21.2	25.2	33.4	24.6	28.8	33.0	26.9	29.6	31.0	22.4	26.2
5	25.4	20.7	23.2	35.4	24.5	28.9	33.0	27.0	29.8	31.5	23.2	27.3
6	24.8	22.0	23.5	35.6	23.8	28.7	32.4	26.3	29.0	28.9	23.2	26.1
7	26.7	23.4	25.0	35.6	24.4	29.4	28.8	24.9	26.7	26.6	20.1	23.2
8	26.4	24.6	25.6	37.2	25.0	30.2	26.3	23.0	24.6	27.9	18.1	22.5
9	26.6	23.5	25.0	35.6	25.1	29.1	29.9	24.4	26.8	29.6	17.6	23.3
10	28.1	22.5	24.9	35.4	24.3	29.2	33.5	26.8	29.9	30.7	18.7	24.3
11	---	24.6	---	35.8	23.7	28.9	30.5	25.7	28.2	31.2	21.0	25.7
12	---	---	---	35.8	23.4	28.8	31.6	24.2	27.4	33.7	22.8	27.5
13	---	---	---	37.3	24.1	29.8	31.8	24.8	27.8	32.7	22.5	26.8
14	32.0	---	---	38.5	24.0	30.5	29.3	23.8	26.4	32.0	22.5	26.6
15	31.0	25.7	28.2	38.8	24.1	30.3	28.8	23.8	26.0	33.4	23.1	27.5
16	33.4	24.4	28.3	38.0	23.5	30.0	27.2	23.2	25.3	33.2	25.2	27.8
17	34.8	25.1	29.3	35.7	25.4	29.6	30.6	23.6	26.6	33.5	24.6	28.4
18	32.8	24.0	27.5	37.2	24.8	29.7	30.7	24.1	27.0	31.5	24.4	27.6
19	31.2	23.5	26.3	38.8	24.7	30.9	28.8	24.3	26.1	30.4	23.8	26.4
20	31.3	24.6	27.9	36.7	24.2	29.6	25.7	21.7	22.9	28.2	21.2	24.3
21	31.3	25.2	28.0	36.1	23.9	29.1	27.0	22.9	24.4	31.4	22.0	25.6
22	27.6	22.3	25.2	34.1	23.7	28.0	28.4	23.0	25.5	29.4	21.7	25.0
23	31.9	22.6	26.7	30.6	25.1	26.9	31.0	23.7	27.0	28.7	22.1	24.7
24	34.8	22.6	28.2	27.9	23.8	25.5	33.3	24.9	28.7	31.8	22.8	26.2
25	33.1	24.5	28.0	23.8	22.1	22.7	31.9	26.0	28.7	31.2	22.1	25.9
26	30.1	23.8	25.9	28.0	21.2	24.1	33.8	25.2	29.0	29.2	21.6	25.0
27	32.1	22.4	26.7	27.7	23.4	25.0	33.1	25.2	28.8	31.7	20.8	25.4
28	33.0	24.6	27.8	24.6	21.6	22.6	30.1	25.0	27.0	25.7	20.5	23.1
29	30.2	23.7	26.3	25.9	22.6	23.9	33.3	24.4	28.2	30.1	17.2	22.6
30	29.7	24.6	26.8	27.9	25.8	26.7	32.0	24.0	27.7	22.5	19.4	20.7
31	---	---	---	31.3	27.4	29.3	31.3	22.9	26.7	---	---	---
MONTH	---	---	---	38.8	21.2	28.2	34.2	21.7	27.6	33.7	17.2	25.5

07311900 Wichita River near Seymour, TX—Continued



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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 mi^2.

PERIOD OF RECORD.--Oct. 1922 to Sept. 2002 (daily mean contents), Oct. 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1972, nonrecording gage at same site and at datum 2.40 ft higher. Satellite telemeter at station.

REMARKS.--Records good. 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 Nov. 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 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 regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	1,183.0
Crest of spillway	1,160.0
Top of flood-control pool	1,156.0
Top of conservation pool	1,147.1
Lowest gated outlet (invert)	1,090.0

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.

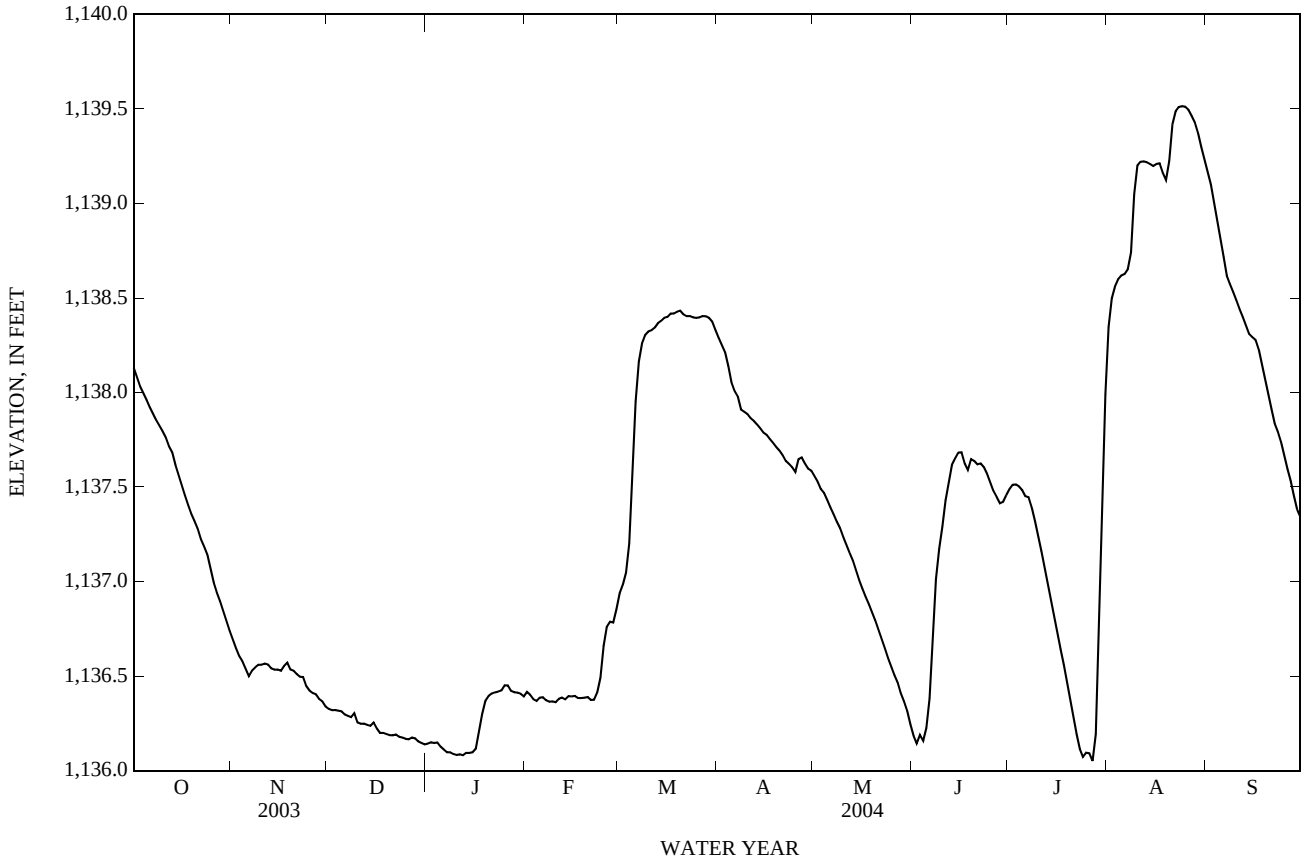
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,139.54 ft, Aug 24; minimum elevation, 1,136.01 ft, July 28.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,138.13	1,136.69	1,136.33	1,136.14	1,136.42	1,136.94	1,138.29	1,137.56	1,136.18	1,137.49	1,138.35	1,139.17
2	1,138.08	1,136.65	1,136.32	1,136.15	1,136.40	1,136.98	1,138.25	1,137.53	1,136.14	1,137.51	1,138.50	1,139.10
3	1,138.03	1,136.61	1,136.32	1,136.15	1,136.38	1,137.05	1,138.21	1,137.49	1,136.19	1,137.51	1,138.56	1,139.00
4	1,137.99	1,136.58	1,136.32	1,136.15	1,136.37	1,137.20	1,138.14	1,137.47	1,136.16	1,137.50	1,138.60	1,138.90
5	1,137.96	1,136.54	1,136.31	1,136.13	1,136.39	1,137.63	1,138.05	1,137.43	1,136.23	1,137.48	1,138.62	1,138.81
6	1,137.92	1,136.50	1,136.30	1,136.11	1,136.39	1,137.95	1,138.01	1,137.39	1,136.38	1,137.45	1,138.63	1,138.72
7	1,137.89	1,136.53	1,136.29	1,136.10	1,136.37	1,138.16	1,137.98	1,137.36	1,136.70	1,137.45	1,138.65	1,138.62
8	1,137.85	1,136.55	1,136.28	1,136.10	1,136.37	1,138.26	1,137.91	1,137.32	1,137.01	1,137.39	1,138.74	1,138.57
9	1,137.82	1,136.56	1,136.30	1,136.09	1,136.37	1,138.30	1,137.90	1,137.28	1,137.17	1,137.32	1,139.05	1,138.53
10	1,137.80	1,136.56	1,136.26	1,136.08	1,136.36	1,138.32	1,137.89	1,137.24	1,137.29	1,137.24	1,139.20	1,138.49
11	1,137.76	1,136.57	1,136.25	1,136.09	1,136.38	1,138.33	1,137.86	1,137.19	1,137.43	1,137.16	1,139.22	1,138.44
12	1,137.71	1,136.56	1,136.25	1,136.08	1,136.39	1,138.34	1,137.85	1,137.15	1,137.53	1,137.07	1,139.22	1,138.40
13	1,137.68	1,136.54	1,136.24	1,136.09	1,136.38	1,138.37	1,137.83	1,137.11	1,137.62	1,136.99	1,139.22	1,138.36
14	1,137.62	1,136.53	1,136.24	1,136.09	1,136.39	1,138.38	1,137.81	1,137.06	1,137.65	1,136.91	1,139.21	1,138.31
15	1,137.57	1,136.54	1,136.26	1,136.10	1,136.39	1,138.39	1,137.79	1,137.01	1,137.68	1,136.82	1,139.20	1,138.29
16	1,137.51	1,136.53	1,136.22	1,136.12	1,136.39	1,138.40	1,137.78	1,136.96	1,137.68	1,136.73	1,139.21	1,138.28
17	1,137.46	1,136.55	1,136.20	1,136.21	1,136.38	1,138.42	1,137.75	1,136.92	1,137.62	1,136.64	1,139.21	1,138.23
18	1,137.41	1,136.57	1,136.20	1,136.30	1,136.38	1,138.42	1,137.73	1,136.88	1,137.59	1,136.56	1,139.16	1,138.15
19	1,137.36	1,136.54	1,136.19	1,136.37	1,136.39	1,138.43	1,137.71	1,136.84	1,137.65	1,136.47	1,139.12	1,138.08
20	1,137.32	1,136.53	1,136.19	1,136.39	1,136.39	1,138.43	1,137.69	1,136.80	1,137.64	1,136.38	1,139.22	1,138.00
21	1,137.28	1,136.51	1,136.19	1,136.41	1,136.37	1,138.41	1,137.67	1,136.74	1,137.62	1,136.29	1,139.42	1,137.91
22	1,137.22	1,136.50	1,136.19	1,136.41	1,136.38	1,138.40	1,137.64	1,136.69	1,137.62	1,136.19	1,139.49	1,137.84
23	1,137.19	1,136.49	1,136.18	1,136.42	1,136.41	1,138.40	1,137.62	1,136.65	1,137.61	1,136.12	1,139.51	1,137.79
24	1,137.14	1,136.45	1,136.17	1,136.42	1,136.49	1,138.40	1,137.61	1,136.60	1,137.57	1,136.07	1,139.51	1,137.74
25	1,137.07	1,136.42	1,136.17	1,136.45	1,136.66	1,138.39	1,137.58	1,136.55	1,137.52	1,136.10	1,139.51	1,137.67
26	1,137.00	1,136.41	1,136.17	1,136.45	1,136.76	1,138.40	1,137.65	1,136.51	1,137.48	1,136.09	1,139.50	1,137.60
27	1,136.94	1,136.40	1,136.17	1,136.42	1,136.79	1,138.40	1,137.66	1,136.47	1,137.45	1,136.05	1,139.46	1,137.53
28	1,136.90	1,136.38	1,136.17	1,136.41	1,136.78	1,138.40	1,137.62	1,136.41	1,137.41	1,136.19	1,139.43	1,137.45
29	1,136.84	1,136.37	1,136.15	1,136.41	1,136.85	1,138.39	1,137.60	1,136.37	1,137.42	1,136.79	1,139.37	1,137.38
30	1,136.79	1,136.34	1,136.15	1,136.41	---	1,138.38	1,137.59	1,136.32	1,137.46	1,137.41	1,139.30	1,137.34
31	1,136.74	---	1,136.14	1,136.39	---	1,138.33	---	1,136.25	---	1,137.99	1,139.23	---
MEAN	1,137.48	1,136.52	1,136.23	1,136.25	1,136.45	1,138.16	1,137.82	1,136.95	1,137.22	1,136.88	1,139.12	1,138.22
MAX	1,138.13	1,136.69	1,136.33	1,136.45	1,136.85	1,138.43	1,138.29	1,137.56	1,137.68	1,137.99	1,139.51	1,139.17
MIN	1,136.74	1,136.34	1,136.14	1,136.08	1,136.36	1,136.94	1,137.58	1,136.25	1,136.14	1,136.05	1,138.35	1,137.34

CAL YR 2003 MEAN 1,139.87 MAX 1,142.20 MIN 1,136.14
WTR YR 2004 MEAN 1,137.28 MAX 1,139.51 MIN 1,136.05

07312000 Lake Kemp near Mabelle, TX—Continued



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 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,062.72 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in Oct. 1959, at least 10% of contributing drainage area has been regulated. Water is released from Lake Kemp (station 07312000) to supply Lake Diversion, 12.5 mi downstream. Water from Lake Diversion is released for mining, recreation, and for irrigation in the vicinity of Wichita Falls.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

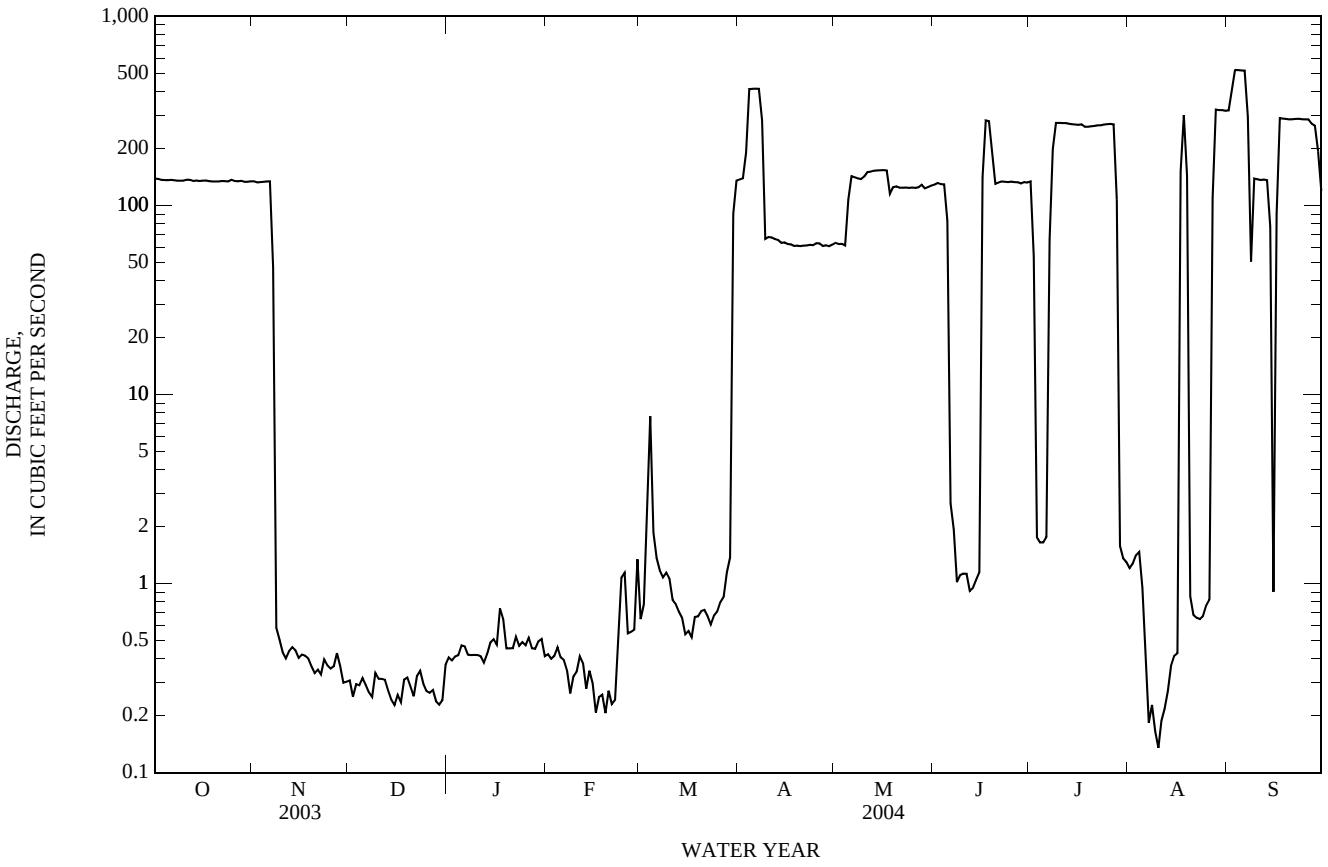
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	134	0.31	0.41	0.42	0.65	137	63	129	134	1.2	318
2	138	132	0.25	0.39	0.40	0.78	139	63	131	54	1.3	404
3	137	133	0.29	0.41	0.41	2.6	190	63	129	1.8	1.4	521
4	136	133	0.29	0.42	0.46	7.7	413	61	129	1.7	1.5	520
5	136	134	0.32	0.47	0.41	1.9	414	107	83	1.7	0.95	517
6	136	134	0.29	0.47	0.39	1.4	414	143	2.7	1.8	0.42	516
7	136	47	0.27	0.42	0.35	1.2	413	141	1.9	66	0.18	295
8	135	0.58	0.25	0.42	0.26	1.1	282	139	1.0	199	0.23	51
9	135	0.51	0.34	0.42	0.32	1.1	67	138	1.1	273	0.17	139
10	135	0.43	0.31	0.42	0.34	1.1	68	142	1.1	273	0.14	138
11	137	0.40	0.31	0.41	0.41	0.82	68	150	1.1	273	0.19	136
12	136	0.44	0.31	0.38	0.38	0.78	66	151	0.91	273	0.22	137
13	135	0.46	0.27	0.42	0.28	0.71	66	152	0.95	270	0.27	136
14	135	0.44	0.24	0.49	0.35	0.66	63	153	1.0	269	0.37	77
15	135	0.41	0.23	0.51	0.30	0.54	64	154	1.1	268	0.41	0.90
16	135	0.42	0.26	0.47	0.21	0.56	62	154	141	267	0.43	91
17	135	0.42	0.24	0.74	0.25	0.52	62	153	281	269	151	289
18	135	0.40	0.31	0.65	0.26	0.67	61	115	279	261	301	288
19	134	0.37	0.32	0.45	0.21	0.67	61	125	187	261	144	287
20	134	0.34	0.29	0.45	0.27	0.71	61	126	130	262	0.86	285
21	134	0.35	0.25	0.46	0.23	0.73	61	124	132	264	0.68	286
22	135	0.33	0.32	0.52	0.24	0.67	61	124	134	265	0.66	287
23	135	0.40	0.35	0.47	0.55	0.61	62	124	133	265	0.65	288
24	134	0.37	0.30	0.49	1.1	0.68	62	124	133	268	0.67	286
25	137	0.36	0.27	0.47	1.1	0.71	63	124	134	269	0.77	285
26	135	0.37	0.26	0.52	0.54	0.80	63	124	133	270	0.82	285
27	134	0.43	0.27	0.46	0.55	0.85	61	125	133	268	110	271
28	135	0.37	0.24	0.45	0.57	1.1	62	129	131	107	321	264
29	133	0.30	0.23	0.49	1.3	1.4	61	123	133	1.6	320	193
30	133	0.30	0.24	0.51	---	90	62	125	132	1.4	319	120
31	134	---	0.37	0.41	---	135	---	127	---	1.3	317	---
TOTAL	4,193	856.20	8.80	14.47	12.86	258.72	3,789	3,866	2,959.86	5,659.3	1,997.49	7,710.90
MEAN	135	28.5	0.28	0.47	0.44	8.35	126	125	98.7	183	64.4	257
MAX	139	134	0.37	0.74	1.3	135	414	154	281	273	321	521
MIN	133	0.30	0.23	0.38	0.21	0.52	61	61	0.91	1.3	0.14	0.90
AC-FT	8,320	1,700	17	29	26	513	7,520	7,670	5,870	11,230	3,960	15,290

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004, BY WATER YEAR (WY)

MEAN	132	92.0	36.8	57.8	59.9	129	156	162	280	302	275	176
MAX	952	1,271	247	648	769	659	659	1,246	1,810	923	1,742	915
(WY)	(1987)	(1987)	(1987)	(1992)	(1992)	(1968)	(1968)	(1990)	(1992)	(1967)	(1995)	(1986)
MIN	0.66	0.39	0.24	0.34	0.44	0.50	0.23	0.64	1.71	51.8	30.9	1.66
(WY)	(1985)	(1974)	(1997)	(2001)	(2004)	(1989)	(2001)	(2001)	(2003)	(2002)	(1978)	(1974)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004	
ANNUAL TOTAL	29,397.67		31,326.60			
ANNUAL MEAN	80.5		85.6		155	
HIGHEST ANNUAL MEAN					522	1987
LOWEST ANNUAL MEAN					59.9	1981
HIGHEST DAILY MEAN	386	Apr 5	521	Sep 3	3,530	Jun 24, 1992
LOWEST DAILY MEAN	0.20	Sep 15	0.14	Aug 10	0.05	Apr 3, 2001
ANNUAL SEVEN-DAY MINIMUM	0.22	Sep 13	0.20	Aug 7	0.07	Apr 2, 2001
MAXIMUM PEAK FLOW			527	Sep 3	4,290	Mar 24, 1976
MAXIMUM PEAK STAGE			3.63	Sep 3	10.47	Mar 24, 1976
ANNUAL RUNOFF (AC-FT)	58,310		62,140		112,500	
10 PERCENT EXCEEDS	250		269		378	
50 PERCENT EXCEEDS	2.1		5.2		12	
90 PERCENT EXCEEDS	0.31		0.30		0.63	

07312100 Wichita River near Mabelle, TX—Continued



07312100 Wichita River near Mabelle, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Dec. 1965 to May 1993, Oct. 1994 to current year.
PESTICIDE DATA: Oct. 1996 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1968 to May 1993 (local observer), Oct. 1994 to current year.
WATER TEMPERATURE: July 1968 to May 1993 (local observer), Oct. 1994 to current year.

INSTRUMENTATION.--Water-quality monitor since Oct. 1994.

REMARKS.--Records fair. Interruptions in the water temperature record were caused by malfunctions of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. New regression equations were developed based on data from water years 1995 to 2004. The standard error of estimate for dissolved solids is 2%, chloride is 3%, sulfate is 8% and for hardness is 5%. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 7,110 microsiemens/cm, May 13, 14, 1980; minimum daily, 561 microsiemens/cm, May 28, 1975.
WATER TEMPERATURE: Maximum, 36.2°C, June 27, 2001; minimum daily, 0.0°C, Dec. 20, 1973, Feb. 9, 17, 1980.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 5,520 microsiemens/cm, Dec. 16; minimum, 897 microsiemens/cm, Mar. 4.
WATER TEMPERATURE: Maximum, 35.1°C, Aug. 2; minimum, 2.2°C, Jan. 6.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
OCT													
29...	1140	132	9.8	106	8.3	4,760	18.5	800	710	219	62.3	7.98	11
NOV													
12...	1310	.40	11.2	120	7.9	4,950	19.1	930	730	249d	74.7d	6.38d	10
DEC													
18...	1145	.28	11.3	98	7.8	5,010	9.3	1,100	850	280d	85.1d	6.58d	10
JAN													
28...	1355	.43	12.1	123	8.2	4,950	15.5	930	720	247c	76.2c	6.24c	10
FEB													
17...	1020	.23	9.9	85	7.5	4,990	8.9	920	720	246	74.5	7.33	12
MAR													
16...	1135	.53	11.2	114	7.7	4,930	15.8	970	770	258d	78.7d	5.99d	11
APR													
08...	1135	411	10.2	108	8.3	4,810	17.5	840	750	233d	62.9d	8.32d	11
MAY													
04...	1030	60	9.8	112	8.1	4,890	19.3	820	740	224d	64.2d	7.94d	11
JUN													
03...	1055	129	8.1	101	8.0	5,010	24.1	860	770	237d	64.5d	8.62d	11
JUL													
26...	1130	267	8.0	105	8.0	4,950	27.0	820	730	222d	63.8d	8.01d	11
AUG													
10...	1055	.12	7.1	93	7.4	5,050	25.9	920	730	243d	77.1d	6.33d	10
SEP													
28...	1040	265	8.1	101	8.0	4,550	24.4	770	690	212d	59.5d	7.61d	11

07312100 Wichita River near Mabelle, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium, water, fltrd, mg/L (00930)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)
OCT													
29...	701d	93	1100d	.3	5.3	717d	2,870	<10	.35	<.04	<.06	<.008	--
NOV													
12...	697d	197	1150d	.4	10.9	672d	2,980	10	.43	.28	E.04n	E.005n	.15
DEC													
18...	757d	203	1150d	.4	10.2	690d	3,110	<10	.45	.31	E.04n	<.008	.13
JAN													
28...	717d	208	1150d	.4	11.2	694d	3,030	<10	.45	.30	<.06	<.008	.15
FEB													
17...	804d	206	1140d	.4	10.4	682d	3,090	15	.47	.33	E.04n	<.008	.14
MAR													
16...	757d	202	1140d	.4	9.0	678d	3,050	<10	.35	.23	E.05n	<.008	.12
APR													
08...	731d	88	1120d	.3	5.0	708d	2,920	<10	.40	<.04	<.06	<.008	--
MAY													
04...	720d	85	1140d	.4	4.9	708d	2,920	<10	.42	<.04	<.06	<.008	--
JUN													
03...	738d	84	1170d	.3	4.8	725d	3,000	<10	.41	<.04	<.06	<.008	--
JUL													
26...	711d	83	1150d	.4	5.8	733d	2,940	<10	.36	<.04	<.06	<.008	--
AUG													
10...	702d	199	1160d	.4	12.2	683d	3,000	<10	.30	.10	<.06	<.008	.21
SEP													
28...	718d	89	1030d	.4	6.6	668d	2,760	<10	.38	<.04	<.06	<.008	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
OCT													
29...	<.02	<.04	<.04	3.0d	3	141d	144d	<.08d	<.08d	<.8	<.8	6.0d	8.7d
NOV													
12...	<.02	<.04	<.04	3.3d	3	30d	33d	<.08d	<.08d	<.8	9.5	2.2d	8.2d
DEC													
18...	<.02	<.04	<.04	2.8d	4c	23d	21d	<.12d	.14	<.8	<.8	1.9d	3.4
JAN													
28...	<.02	<.04	<.04	3.5d	E4nd	21d	21d	<.08d	<.08d	<.8	<.8	9.2d	10.8d
FEB													
17...	<.02	<.04	E.03n	3.4d	5	20d	20d	<.08d	<.08d	<.8	<.8	3.1d	3.9d
MAR													
16...	<.02	<.04	<.04	3.5d	4	22d	23d	<.08d	<.08d	<.8	<.8	3.6d	5.7d
APR													
08...	<.02	<.04	E.02n	2.2d	2	135d	131d	<.08d	<.08d	<.8	<.8	3.7d	5.8d
MAY													
04...	<.02	<.04	<.04	2.6d	2	125d	122d	<.08d	<.08d	<.8	<.8	4.8d	5.6d
JUN													
03...	<.02	<.04	<.04	2.1d	E2n	129dr	113dr	<.12d	<.12d	<.8	<.8	7.8d	7.0d
JUL													
26...	<.02	<.04	<.04	2.6d	E1n	134d	43dr	<.08d	.27d	<.8	<.8	4.7d	19.9d
AUG													
10...	<.02	<.04	<.04	5.9d	7	35d	35d	<.12d	<.12d	<.8	<.8	4.2d	5.1d
SEP													
28...	<.02	<.04	E.02n	3.7d	3	148d	145d	<.08d	<.08d	<.8	E.5n	4.3d	9.4d

07312100 Wichita River near Mabelle, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)
OCT 29...	<19d	90	<.16d	.43d	2.0d	15d	<.02	<.02	3.14d	E6.42d	<1	<1	<.4d
NOV 12...	21d	290	<.16d	E.10nd	168d	193d	<.02	<.02	3.08d	8.08d	<1	2	<.4d
DEC 18...	E12nd	300d	<.24d	<.18d	286d	284d	<.02	<.02	.91d	3.35	2	<1	.7d
JAN 28...	E22nd	360d	<.16d	<.12d	190d	215d	<.02	<.02	3.87d	8.54d	<1	1	<.4d
FEB 17...	E4n	660d	E.15nd	<.12d	353d	328d	<.02	<.02	3.79d	7.76d	1	<1	<.4d
MAR 16...	21d	380d	.18d	<.12d	247d	274d	<.02	<.02	5.13d	6.17d	<1	<1	<.4d
APR 08...	<19d	20	<.16d	<.12d	1.1d	4d	<.02	<.02	2.05d	6.17d	<1	<1	<.4d
MAY 04...	<19d	30d	<.16d	<.12d	4.1d	8d	<.02	<.02	6.65d	5.75d	<1	<1	<.4d
JUN 03...	<6	60d	<.24d	<.18d	1.7d	15d	<.02	<.02	5.98d	6.38d	<1	<1	<.6d
JUL 26...	<19d	210d	1.01d	.18d	1.5d	28d	<.02	<.02	4.93d	40.0d	<1	2	69.0d
AUG 10...	53d	160d	<.24d	<.18d	109d	113d	<.02	<.02	7.38d	11.5d	<1	<1	<.6d
SEP 28...	E13nd	40	<.16d	E.08nd	1.4d	15d	<.02	<.02	6.83d	5.87d	<1	<1	<.4d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Silver, water, unfltrd recover -able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha- Endo- sulfan, water, unfltrd ug/L (34361)	alpha- HCH, water, unfltrd ug/L (39337)	alpha- HCH-d6, surrog, Sch1608 water, unfltrd pct rcv (99778)	Aroclor 1016 + 1242, water, unfltrd ug/L (81648)	Aroclor 1221, water, unfltrd ug/L (39488)	Aroclor 1232, water, unfltrd ug/L (39492)	Aroclor 1248, water, unfltrd ug/L (39500)	Aroclor 1254, water, unfltrd ug/L (39504)	Aroclor 1260, water, unfltrd ug/L (39508)
OCT 29...	<.32d	2.9d	5d	--	--	--	--	--	--	--	--	--	--
NOV 12...	<.32d	1.7d	E4nd	--	--	--	--	--	--	--	--	--	--
DEC 18...	<.16	3.0d	E2n	--	--	--	--	--	--	--	--	--	--
JAN 28...	<.32d	4.5d	5d	--	--	--	--	--	--	--	--	--	--
FEB 17...	<.32d	3.4d	<4d	--	--	--	--	--	--	--	--	--	--
MAR 16...	<.32d	2.7d	<4d	--	--	--	--	--	--	--	--	--	--
APR 08...	<.32d	1.7d	E4nd	<.04	<.1	<.03	E72.6	<.1	<1	<.1	<.1	<.1	<.1
MAY 04...	<.32d	3.0d	E2nd	--	--	--	--	--	--	--	--	--	--
JUN 03...	<.48d	3.8d	E3nd	<.04	<.1	<.03	E16.9	<.1	<1	<.1	<.1	<.1	<.1
JUL 26...	<.32dr	6.0d	8d	--	--	--	--	--	--	--	--	--	--
AUG 10...	<.48d	2.1d	<6d	--	--	--	--	--	--	--	--	--	--
SEP 28...	<.32d	4.4d	E3nd	--	--	--	--	--	--	--	--	--	--

07312100 Wichita River near Mabelle, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	beta-Endosulfan, water, unfltrd ug/L (34356)	beta-HCH, water, unfltrd ug/L (39338)	Chlordane, technical, water, unfltrd ug/L (39350)	cis-Chlordane, water, unfltrd ug/L (39062)	delta-HCH, water, unfltrd ug/L (34259)	Dieldrin, water, unfltrd ug/L (39380)	Endosulfan sulfate water unfltrd ug/L (34351)	Endrin aldehyde, water, unfltrd ug/L (34366)	Endrin, water, unfltrd ug/L (39390)	Heptachlor epoxide water unfltrd ug/L (39420)	Heptachlor, water, unfltrd ug/L (39410)	Lindane water, unfltrd ug/L (39340)	p,p'-DDD, water, unfltrd ug/L (39310)
OCT													
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
08...	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8	<.03	<.03	<.1
MAY													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
03...	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8	<.03	<.03	<.1
JUL													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
28...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	p,p'-DDE, water, unfltrd ug/L (39320)	p,p'-DDT, water, unfltrd ug/L (39300)	PCB 207, surrog, Sch1608 water, unfltrd pct rcv (99781)	Toxaphene, water, unfltrd ug/L (39400)	trans-Chlordane, water, unfltrd ug/L (39065)
OCT					
29...	--	--	--	--	--
NOV					
12...	--	--	--	--	--
DEC					
18...	--	--	--	--	--
JAN					
28...	--	--	--	--	--
FEB					
17...	--	--	--	--	--
MAR					
16...	--	--	--	--	--
APR					
08...	<.04	<.1	E87.9	<2	<.1
MAY					
04...	--	--	--	--	--
JUN					
03...	<.04	<.1	E21.2	<2	<.1
JUL					
26...	--	--	--	--	--
AUG					
10...	--	--	--	--	--
SEP					
28...	--	--	--	--	--

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

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL
r -- Value verified by rerun, same method

07312100 Wichita River near Mabelle, TX—Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 2003 TO SEPTEMBER 2004

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.	2003	4193	4660	2850	32300	1100	11920	730	8240	870
NOV.	2003	856.2	4790	2930	6780	1100	2510	750	1720	900
DEC.	2003	8.8	5080	3110	73.9	1200	27.5	780	18.6	950
JAN.	2004	14.47	4610	2820	110	1000	40.7	720	28.2	860
FEB.	2004	12.86	4590	2810	97.7	1000	36.1	720	24.9	860
MAR.	2004	258.72	4770	2920	2040	1100	755	740	518	890
APR.	2004	3789	4860	2980	30440	1100	11270	750	7720	910
MAY	2004	3866	4930	3020	31540	1100	11700	760	7980	920
JUNE	2004	2959.86	4920	3010	24060	1100	8920	760	6090	920
JULY	2004	5659.3	4980	3050	46580	1100	17290	770	11770	930
AUG.	2004	1997.49	4580	2810	15140	1000	5580	720	3870	860
SEPT	2004	7710.9	4490	2750	57270	1000	21070	710	14680	840
TOTAL		31326.6	**	**	246400	**	91120	**	62660	**
WTD.AVG.		86	4760	2910	**	1100	**	740	**	890

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	4,650	4,550	4,570	4,820	4,800	4,800	5,200	5,070	5,130	4,830	4,690	4,770
2	4,560	4,540	4,550	4,800	4,790	4,800	5,210	5,100	5,170	4,830	4,550	4,780
3	4,570	4,550	4,560	4,790	4,770	4,780	5,270	5,090	5,200	4,770	4,500	4,650
4	4,590	4,560	4,570	4,790	4,770	4,780	5,320	5,050	5,170	4,750	4,590	4,710
5	4,590	4,570	4,580	4,790	4,770	4,780	5,310	4,970	5,260	4,790	4,730	4,760
6	4,640	4,580	4,590	4,790	4,770	4,780	5,330	5,170	5,260	4,820	4,750	4,790
7	4,620	4,590	4,600	4,940	4,690	4,810	5,360	5,020	5,190	4,800	4,690	4,760
8	4,600	4,580	4,600	4,960	4,910	4,930	5,320	4,960	5,140	4,790	4,700	4,750
9	4,610	4,590	4,600	4,940	4,900	4,920	5,410	5,170	5,320	4,750	4,640	4,720
10	4,610	4,590	4,600	4,950	4,850	4,920	5,400	5,200	5,340	4,730	4,480	4,690
11	4,660	4,590	4,610	4,940	4,860	4,910	5,440	5,280	5,370	4,590	4,140	4,520
12	4,630	4,600	4,610	4,970	4,910	4,940	5,420	5,300	5,370	4,670	4,110	4,440
13	4,640	4,600	4,620	4,980	4,950	4,970	5,460	5,330	5,410	4,690	4,380	4,500
14	4,630	4,600	4,620	4,980	4,790	4,910	5,460	5,230	5,420	4,660	4,160	4,420
15	4,640	4,620	4,630	4,970	4,880	4,930	5,370	5,010	5,230	4,470	3,800	4,170
16	4,640	4,620	4,630	4,960	4,860	4,920	5,520	5,170	5,270	4,660	3,720	4,420
17	4,670	4,630	4,640	4,940	4,760	4,880	5,510	5,040	5,280	4,550	3,340	4,100
18	4,660	4,640	4,640	5,030	4,940	5,000	5,180	4,940	5,020	4,620	3,970	4,440
19	4,660	4,640	4,650	5,030	4,900	4,990	4,970	4,820	4,920	4,680	3,880	4,250
20	4,670	4,650	4,660	5,070	5,000	5,040	4,940	4,840	4,910	4,680	4,030	4,310
21	4,680	4,660	4,670	5,120	4,940	5,040	4,940	4,830	4,910	4,690	3,820	4,560
22	4,680	4,650	4,680	5,060	4,980	5,020	4,930	4,800	4,880	4,660	4,220	4,400
23	4,730	4,670	4,690	5,130	5,060	5,100	4,910	4,770	4,870	4,760	4,140	4,520
24	4,730	4,690	4,710	5,160	5,030	5,100	4,900	4,730	4,840	4,740	4,510	4,690
25	4,740	4,650	4,710	5,180	5,100	5,130	4,880	4,790	4,850	4,880	4,660	4,760
26	4,770	4,740	4,760	5,150	5,080	5,120	4,860	4,750	4,810	4,870	4,710	4,780
27	4,810	4,770	4,790	5,170	5,040	5,140	4,790	4,670	4,740	4,860	4,750	4,830
28	4,840	4,800	4,820	5,210	5,040	5,140	4,930	4,700	4,800	5,030	4,780	4,910
29	4,850	4,810	4,830	5,280	5,180	5,220	4,860	4,710	4,820	5,040	4,930	5,000
30	4,820	4,800	4,810	5,230	5,120	5,180	4,870	4,520	4,710	5,030	4,950	5,000
31	4,810	4,800	4,810	---	---	---	4,850	4,570	4,780	5,000	4,880	4,950
MONTH	4,850	4,540	4,660	5,280	4,690	4,970	5,520	4,520	5,080	5,040	3,340	4,620

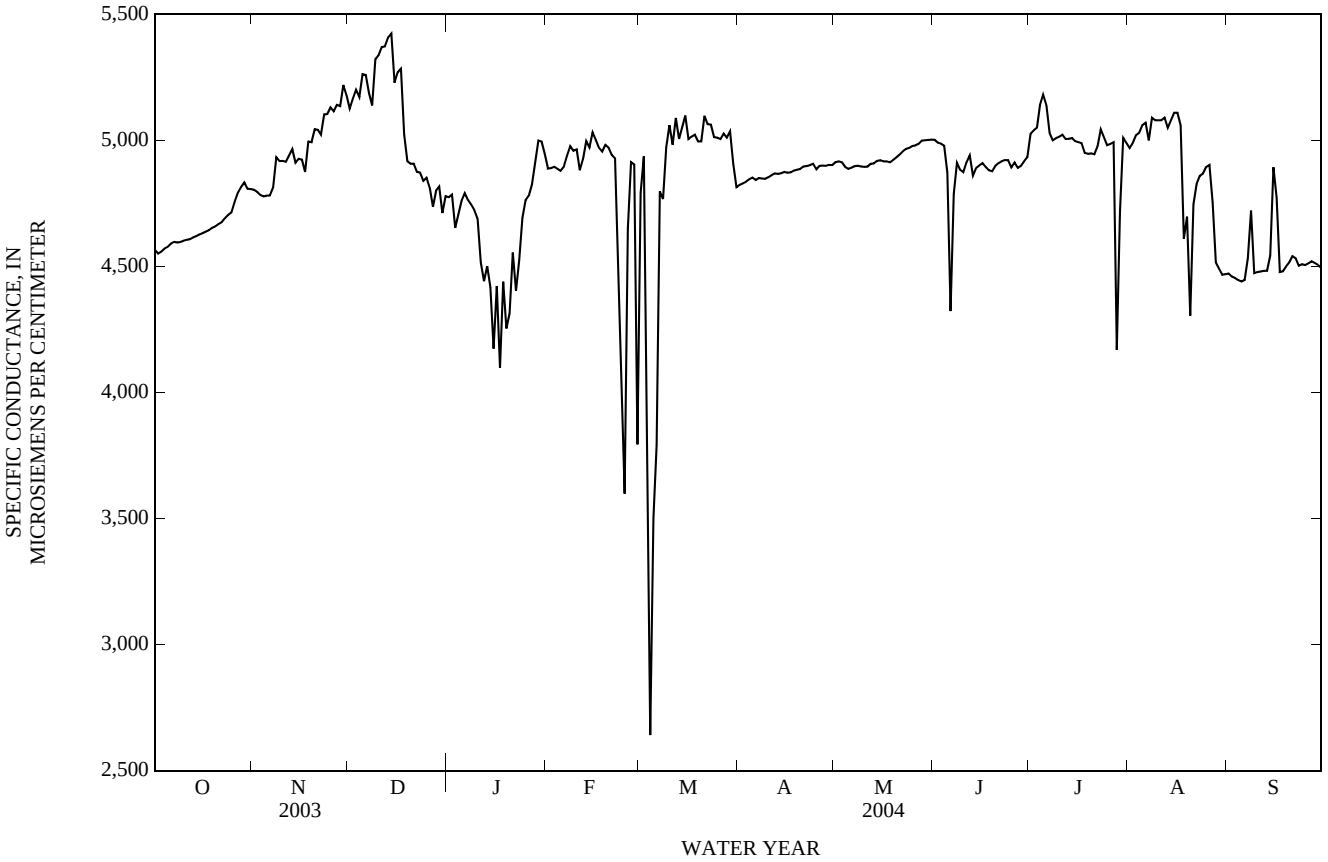
07312100 Wichita River near Mabelle, TX—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4,940	4,800	4,890	4,930	4,490	4,790	4,840	4,820	4,820	4,920	4,910	4,910
2	4,950	4,790	4,890	4,980	4,840	4,940	4,840	4,820	4,830	4,930	4,900	4,920
3	4,920	4,870	4,900	4,900	1,840	3,950	4,850	4,820	4,840	4,920	4,900	4,910
4	4,940	4,800	4,890	4,140	897	2,640	4,860	4,830	4,850	4,920	4,860	4,900
5	4,900	4,850	4,880	4,540	2,340	3,500	4,870	4,840	4,850	4,910	4,880	4,890
6	4,930	4,850	4,900	4,450	3,140	3,790	4,850	4,830	4,840	4,900	4,880	4,890
7	4,970	4,910	4,940	4,980	4,380	4,800	4,860	4,840	4,850	4,920	4,890	4,900
8	5,010	4,920	4,980	4,930	4,600	4,770	4,870	4,840	4,850	4,920	4,890	4,900
9	4,980	4,940	4,960	5,060	4,890	4,970	4,860	4,840	4,850	4,900	4,880	4,900
10	4,990	4,930	4,960	5,110	4,990	5,060	4,860	4,840	4,850	4,900	4,890	4,900
11	4,950	4,780	4,880	5,120	4,510	4,980	4,880	4,860	4,860	4,910	4,870	4,900
12	5,010	4,810	4,930	5,120	5,050	5,090	4,880	4,850	4,870	4,920	4,900	4,910
13	5,010	4,970	5,000	5,070	4,820	5,010	4,870	4,860	4,870	4,930	4,850	4,910
14	5,060	4,870	4,970	5,080	5,010	5,050	4,880	4,860	4,870	4,930	4,910	4,920
15	5,060	5,000	5,030	5,140	5,060	5,100	4,880	4,870	4,870	4,940	4,900	4,920
16	5,040	4,920	5,000	5,160	4,540	5,000	4,880	4,870	4,870	4,930	4,910	4,920
17	5,010	4,890	4,970	5,080	4,920	5,020	4,920	4,840	4,870	4,930	4,910	4,920
18	4,990	4,900	4,960	5,060	4,940	5,020	4,900	4,870	4,880	4,930	4,840	4,910
19	5,060	4,900	4,980	5,040	4,930	5,000	4,890	4,870	4,880	4,930	4,910	4,920
20	5,070	4,900	4,970	5,090	4,900	5,000	4,900	4,880	4,890	4,940	4,910	4,930
21	4,970	4,900	4,940	5,140	5,060	5,100	4,900	4,890	4,900	4,960	4,930	4,940
22	4,980	4,850	4,930	5,080	5,030	5,060	4,950	4,890	4,900	4,960	4,940	4,960
23	5,000	4,030	4,490	5,080	5,020	5,060	4,910	4,880	4,900	4,980	4,960	4,970
24	4,700	2,960	4,030	5,060	4,970	5,010	4,930	4,900	4,910	4,980	4,960	4,970
25	4,540	2,720	3,600	5,060	4,950	5,010	4,910	4,450	4,880	4,980	4,960	4,980
26	4,900	4,040	4,650	5,050	4,940	5,000	4,920	4,860	4,900	5,010	4,960	4,980
27	4,950	4,860	4,910	5,080	4,990	5,030	4,950	4,890	4,900	5,000	4,970	4,990
28	4,940	4,870	4,900	5,080	4,800	5,010	4,910	4,890	4,900	5,010	4,990	5,000
29	4,870	1,820	3,790	5,100	4,960	5,040	4,910	4,880	4,900	5,010	4,990	5,000
30	---	---	---	5,100	4,800	4,910	4,920	4,900	4,900	5,020	4,990	5,000
31	---	---	---	4,820	4,800	4,810	---	---	---	5,010	4,990	5,000
MONTH	5,070	1,820	4,800	5,160	897	4,790	4,950	4,450	4,870	5,020	4,840	4,930
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5,030	4,990	5,000	5,040	5,010	5,030	5,030	4,920	4,970	4,490	4,450	4,470
2	5,020	4,650	4,990	5,060	4,990	5,040	5,030	4,940	4,990	4,480	4,440	4,460
3	5,020	4,960	4,990	5,170	4,820	5,050	---	---	e5,020	4,470	4,440	4,450
4	4,990	4,960	4,980	5,220	4,960	5,140	---	---	e5,030	4,460	4,430	4,450
5	4,980	4,740	4,870	5,240	5,100	5,180	5,100	5,000	5,060	4,450	4,420	4,440
6	4,900	3,720	4,320	5,260	4,950	5,140	---	---	e5,070	4,450	4,440	4,450
7	4,900	4,610	4,790	5,270	4,910	5,030	---	---	e5,000	4,780	4,420	4,530
8	4,970	4,850	4,910	5,060	4,880	5,000	---	---	e5,090	4,930	4,470	4,720
9	4,960	4,750	4,880	5,050	4,860	5,010	---	5,030	e5,080	4,490	4,460	4,470
10	4,910	4,800	4,870	5,040	4,890	5,010	5,180	4,990	5,080	4,490	4,470	4,480
11	4,990	4,820	4,910	5,040	5,010	5,020	---	---	e5,080	4,490	4,460	4,480
12	5,020	4,840	4,940	5,030	4,850	5,010	5,170	5,020	5,090	4,490	4,480	4,480
13	4,930	4,800	4,860	5,020	4,940	5,010	---	---	e5,050	4,500	4,470	4,480
14	4,940	4,810	4,890	5,020	4,990	5,010	---	---	e5,080	4,810	4,470	4,540
15	4,980	4,840	4,900	5,020	4,990	5,000	---	---	e5,110	5,090	4,800	4,890
16	4,980	4,880	4,910	5,010	4,980	4,990	5,180	5,030	5,110	5,020	4,480	4,770
17	4,910	4,880	4,890	5,010	4,960	4,990	5,260	---	e5,060	4,490	4,470	4,480
18	4,900	4,780	4,880	4,980	4,920	4,950	4,630	4,590	4,610	4,520	4,460	4,480
19	4,890	4,860	4,880	4,960	4,930	4,950	4,900	4,590	4,700	4,520	4,460	4,500
20	4,920	4,870	4,900	4,970	4,920	4,950	4,880	2,890	4,310	4,550	4,490	4,520
21	4,940	4,890	4,910	4,970	4,920	4,940	4,860	4,640	4,750	4,560	4,530	4,540
22	4,940	4,790	4,920	5,070	4,920	4,980	4,870	4,770	4,830	4,550	4,520	4,530
23	4,930	4,910	4,920	5,060	5,020	5,040	4,920	4,800	4,860	4,550	4,450	4,500
24	4,940	4,910	4,920	5,040	4,930	5,010	4,920	4,820	4,870	4,520	4,490	4,510
25	4,950	4,820	4,890	4,990	4,960	4,980	4,920	4,850	4,890	4,520	4,480	4,510
26	4,950	4,840	4,910	5,000	4,970	4,990	4,950	4,850	4,900	4,530	4,480	4,510
27	4,940	4,840	4,890	5,000	4,980	4,990	4,960	4,490	4,750	4,540	4,500	4,520
28	4,960	4,840	4,900	4,990	2,780	4,170	4,520	4,490	4,520	4,560	4,460	4,510
29	4,970	4,840	4,920	---	4,220	e4,720	4,520	4,470	4,490	4,530	4,500	4,510
30	5,020	4,840	4,930	5,050	---	e5,010	4,480	4,450	4,470	4,510	4,430	4,490
31	---	---	---	---	---	e4,990	4,480	4,460	4,470	---	---	---
MONTH	5,030	3,720	4,890	---	---	4,980	---	---	4,880	5,090	4,420	4,520

e Estimated

07312100 Wichita River near Mabelle, TX—Continued



TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

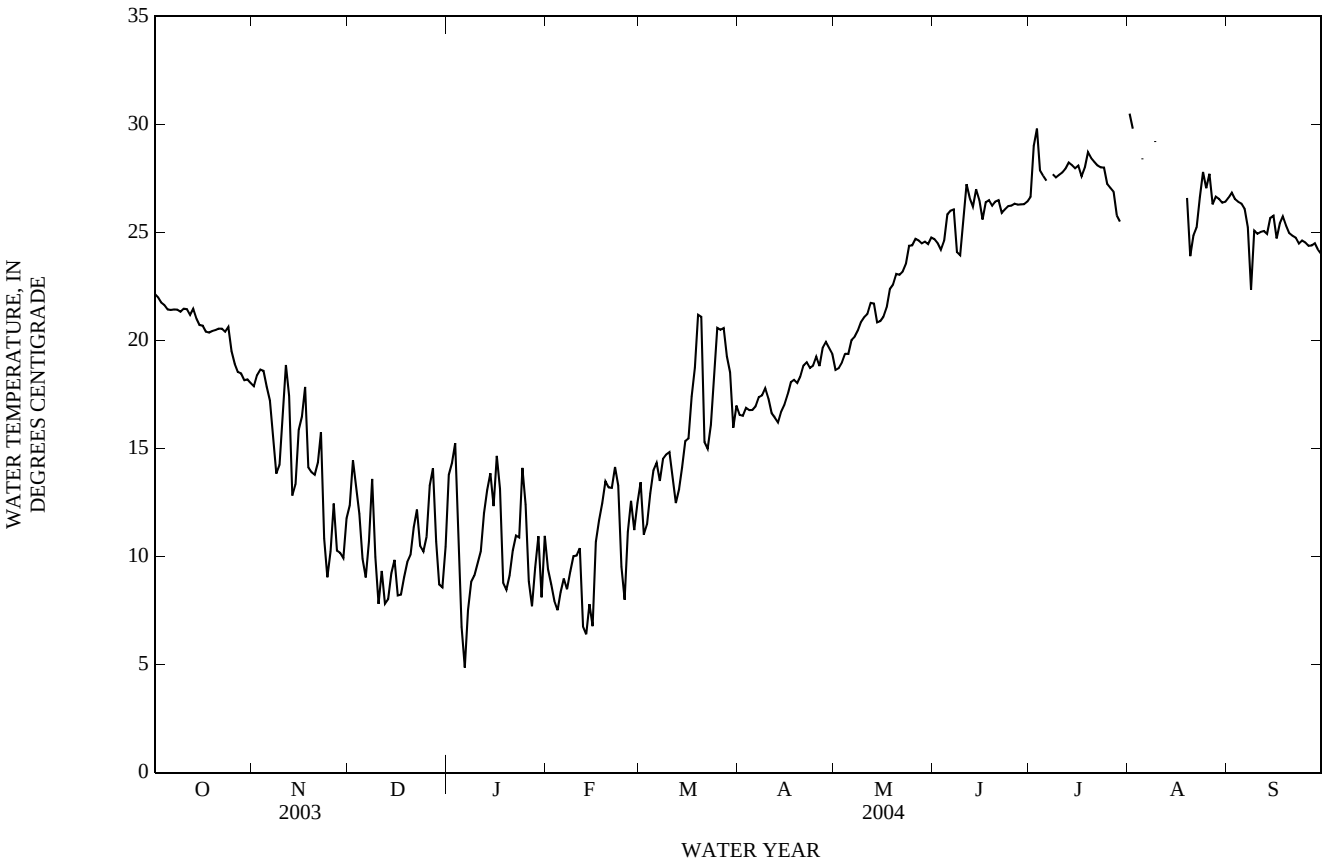
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	22.4	22.0	22.2	18.2	17.6	17.9	15.6	10.1	12.4	17.8	10.8	13.8
2	22.3	21.8	22.0	18.7	18.1	18.4	17.6	12.2	14.5	18.2	11.5	14.3
3	22.1	21.4	21.8	19.0	18.4	18.7	17.3	11.0	13.2	20.0	11.4	15.2
4	21.9	21.4	21.6	19.0	18.2	18.6	17.5	8.6	12.0	15.3	7.8	10.9
5	21.7	21.2	21.4	18.2	17.6	17.9	13.2	7.9	9.9	9.6	4.7	6.7
6	21.6	21.3	21.4	17.6	16.9	17.2	14.3	5.8	9.0	7.9	2.2	4.9
7	21.8	21.2	21.4	16.9	13.8	15.4	15.9	7.2	10.7	12.5	5.0	7.5
8	21.6	21.1	21.4	14.4	13.2	13.8	19.5	9.7	13.6	12.3	6.6	8.8
9	21.6	21.1	21.3	15.1	13.5	14.2	14.0	5.8	10	13.9	6.4	9.1
10	21.8	21.2	21.5	20.2	14.1	16.6	13.0	4.6	7.8	15.7	5.8	9.7
11	21.7	21.1	21.5	22.8	16.2	18.9	15.4	5.9	9.3	14.4	7.2	10.2
12	21.5	20.9	21.2	18.9	14.6	17.4	8.7	7.1	7.8	15.7	9.4	12.0
13	22.0	21.1	21.5	14.6	12.3	12.8	13.7	4.8	8.0	16.2	11.0	13.1
14	21.4	20.7	21.0	15.4	12.1	13.3	14.9	5.4	9.2	20.1	10.8	13.9
15	21.1	20.3	20.7	19.6	13.5	15.9	13.7	7.8	9.8	13.2	11.4	12.3
16	21.2	20.3	20.7	22.0	12.4	16.5	11.8	6.0	8.2	16.0	12.9	14.7
17	20.7	20.2	20.4	19.5	16.0	17.9	12.8	4.1	8.2	15.0	9.9	13.1
18	20.8	19.8	20.4	16.0	12.2	14.1	12.0	7.2	9.1	9.9	7.7	8.8
19	20.7	20.2	20.4	20.8	9.7	13.9	16.1	6.3	9.8	12.3	5.9	8.5
20	20.9	20.1	20.5	18.7	10.3	13.8	15.4	6.8	10.1	14.6	6.2	9.1
21	20.8	20.3	20.5	20.2	10.5	14.4	15.7	8.4	11.4	15.9	7.2	10.3
22	21.0	20.2	20.5	19.2	13.2	15.8	16.4	10.4	12.2	16.8	7.5	11.0
23	21.0	20.2	20.4	15.9	7.8	10.8	15.5	7.3	10.5	14.9	7.5	10.9
24	21.2	20.2	20.6	13.8	6.0	9.0	16.6	6.6	10.2	18.8	11.6	14.1
25	20.2	18.9	19.5	13.3	7.9	10.2	15.7	8.0	10.9	15.6	10.0	12.4
26	19.3	18.5	18.9	17.2	9.8	12.5	18.4	10.2	13.3	10.7	6.1	8.9
27	18.9	18.2	18.5	11.8	8.7	10.3	16.2	11.9	14.1	13.2	4.4	7.7
28	18.9	17.9	18.5	16.2	6.5	10.2	14.2	8.5	10.7	16.0	5.8	9.5
29	18.7	17.8	18.2	14.2	6.8	9.9	14.1	5.5	8.7	17.6	8.2	10.9
30	18.6	17.9	18.2	18.0	8.0	11.8	12.8	5.7	8.6	11.8	6.0	8.1
31	18.2	17.8	18.0	---	---	---	15.9	6.6	10.5	16.9	7.0	11.0
MONTH	22.4	17.8	20.5	22.8	6.0	14.6	19.5	4.1	10.4	20.1	2.2	10.7

07312100 Wichita River near Mabelle, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	10.3	6.6	9.4	21.4	7.9	13.4	17.1	16.2	16.6	19.0	18.4	18.6
2	16.3	4.4	8.7	12.7	9.4	11.0	16.9	16.2	16.5	19.5	18.1	18.7
3	10.0	5.9	7.9	12.6	10.9	11.5	17.2	16.6	16.9	19.8	18.3	19.0
4	8.0	7.1	7.5	16.8	10.9	12.9	17.0	16.6	16.8	20.1	18.6	19.4
5	10.1	7.4	8.4	20.9	9.8	14.0	16.9	16.7	16.8	20.1	18.6	19.4
6	13.4	6.1	9.0	20.0	9.7	14.3	17.4	16.5	17.0	20.8	19.4	20.0
7	13.9	5.0	8.5	17.8	10.4	13.5	17.5	17.3	17.4	20.5	19.8	20.2
8	14.1	5.1	9.3	20.9	9.6	14.5	18.3	17.2	17.5	21.2	19.9	20.5
9	10.4	9.6	10.0	20.8	11.0	14.7	18.5	17.2	17.8	21.4	20.4	20.9
10	13.4	7.5	10.0	21.4	9.8	14.8	18.2	16.7	17.3	21.5	20.7	21.1
11	11.0	8.9	10.4	17.9	10.2	13.7	17.3	16.3	16.6	21.7	20.9	21.2
12	8.9	5.1	6.8	13.5	11.6	12.5	17.2	16.0	16.4	22.4	21.1	21.7
13	7.9	5.1	6.4	15.9	11.5	13.1	17.0	15.7	16.2	22.3	20.9	21.7
14	12.4	5.0	7.8	16.5	13.0	14.1	17.5	16.1	16.7	21.3	20.5	20.8
15	8.3	5.6	6.8	20.0	13.2	15.3	17.8	16.4	17.0	21.3	20.6	20.9
16	19.1	6.4	10.7	22.5	10.5	15.5	18.4	16.8	17.5	21.6	20.6	21.1
17	19.1	7.4	11.7	23.6	12.3	17.4	18.8	17.5	18.1	22.1	21.0	21.5
18	18.5	8.2	12.5	25.7	13.2	18.7	18.8	17.9	18.2	27.4	21.3	22.4
19	18.2	10.9	13.5	28.3	16.1	21.2	18.6	17.7	18.0	23.4	21.8	22.6
20	18.7	10.0	13.2	29.4	16.1	21.1	19.1	17.8	18.3	23.9	22.6	23.1
21	18.4	9.3	13.2	18.9	12.2	15.3	19.6	18.3	18.8	23.5	22.6	23.0
22	20.3	10.1	14.1	19.5	11.7	15.0	19.8	18.4	19.0	23.8	22.6	23.2
23	14.6	12.3	13.3	21.6	12.3	16.1	19.9	18.3	18.7	25.1	22.9	23.5
24	12.3	7.2	9.5	22.6	15.8	18.5	19.5	18.5	18.8	25.1	23.6	24.4
25	11.2	6.1	8.0	26.4	17.2	20.6	20.1	18.6	19.2	24.7	24.1	24.4
26	20.0	5.2	11.1	24.0	18.1	20.5	19.6	18.3	18.8	25.2	24.2	24.7
27	19.7	7.9	12.6	24.8	18.2	20.6	20.4	18.7	19.7	24.9	24.4	24.6
28	12.1	10.3	11.2	23.7	16.0	19.3	20.5	19.2	19.9	24.9	24.1	24.5
29	16.0	9.5	12.5	26.3	12.8	18.5	20.6	19.0	19.6	25.2	24.1	24.6
30	---	---	---	17.1	12.9	16.0	20.2	18.8	19.4	24.8	24.1	24.5
31	---	---	---	17.5	16.4	17.0	---	---	---	25.2	24.5	24.8
MONTH	20.3	4.4	10.1	29.4	7.9	16.0	20.6	15.7	17.9	27.4	18.1	22.0
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.5	24.2	24.7	27.0	26.3	26.6	34.9	25.6	30.5	27.0	26.4	26.6
2	25.4	23.9	24.5	34.2	26.4	29.0	35.1	26.4	29.8	27.3	26.5	26.8
3	24.7	23.9	24.2	33.8	24.5	29.8	---	---	---	26.9	26.2	26.5
4	25.1	24.3	24.6	32.5	23.7	27.9	---	---	---	26.9	26.0	26.4
5	29.6	24.1	25.8	32.6	23.9	27.6	32.8	23.7	28.4	26.7	25.9	26.3
6	31.7	20.8	26.0	33.0	22.5	27.4	---	---	---	26.4	25.8	26.1
7	31.1	21.9	26.1	---	24.2	---	---	---	---	26.7	21.2	25.2
8	26.4	21.9	24.1	28.2	27.2	27.7	---	---	---	26.5	18.3	22.4
9	27.0	21.9	23.9	28.0	27.1	27.5	34.0	22.8	29.2	25.5	24.7	25.1
10	30.7	21.5	25.5	28.6	27.0	27.7	---	23.6	---	25.3	24.6	24.9
11	33.2	22.9	27.2	28.5	27.2	27.8	---	---	---	25.4	24.7	25.0
12	31.6	22.9	26.6	28.7	27.4	28.0	31.3	---	---	25.4	24.6	25.1
13	32.0	21.2	26.2	28.7	27.9	28.2	---	---	---	25.4	24.5	24.9
14	33.5	23.1	27.0	28.6	27.7	28.1	---	---	---	28.2	24.0	25.7
15	29.6	23.6	26.5	28.6	27.6	28.0	---	---	---	31.1	21.8	25.8
16	27.0	22.8	25.6	28.9	27.7	28.1	28.1	---	---	30.6	22.4	24.7
17	27.1	25.7	26.4	27.8	27.4	27.6	---	19.8	---	25.9	25.0	25.4
18	26.9	26.1	26.5	28.7	27.5	28.0	26.7	---	---	26.3	25.3	25.7
19	26.6	26.1	26.2	29.0	28.3	28.7	29.1	24.9	26.6	25.6	25.0	25.3
20	27.0	26.1	26.4	29.0	28.0	28.4	25.7	21.4	23.9	25.3	24.6	25.0
21	26.8	26.1	26.5	29.0	27.8	28.3	29.6	21.3	24.9	25.3	24.5	24.9
22	26.1	25.6	25.9	28.6	27.7	28.1	30.0	21.1	25.2	25.0	24.5	24.8
23	26.4	25.8	26.1	28.9	27.6	28.0	32.0	22.2	26.6	24.7	24.3	24.5
24	26.6	25.9	26.2	28.4	27.6	28.0	33.2	23.5	27.8	24.8	24.4	24.6
25	26.7	26.0	26.2	27.7	26.9	27.2	30.4	24.3	27.0	24.7	24.4	24.5
26	26.8	26.0	26.3	27.4	26.8	27.1	32.8	23.8	27.7	24.6	24.2	24.4
27	26.7	26.1	26.3	27.1	26.6	26.9	30.6	23.8	26.3	24.7	24.1	24.4
28	26.7	26.1	26.3	26.8	23.8	25.8	27.2	26.5	26.7	24.8	24.3	24.5
29	26.6	26.0	26.3	29.4	23.4	25.5	26.8	26.4	26.5	24.5	23.9	24.2
30	26.9	26.1	26.4	---	---	---	26.8	26.2	26.4	24.2	23.7	24.0
31	---	---	---	---	---	---	26.9	26.0	26.4	---	---	---
MONTH	33.5	20.8	25.9	---	---	---	---	---	---	31.1	18.3	25.1

07312100 Wichita River near Mabelle, TX—Continued



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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.

DRAINAGE AREA.--Not applicable.

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

GAGE.--Water-stage recorder. Datum of gage is 1,039.70 ft above NGVD of 1929 (Wichita County Water Improvement District benchmark). Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Records of discharge are of water released from Lake Diversion into a canal system for mining, industrial, recreation, and irrigation use. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

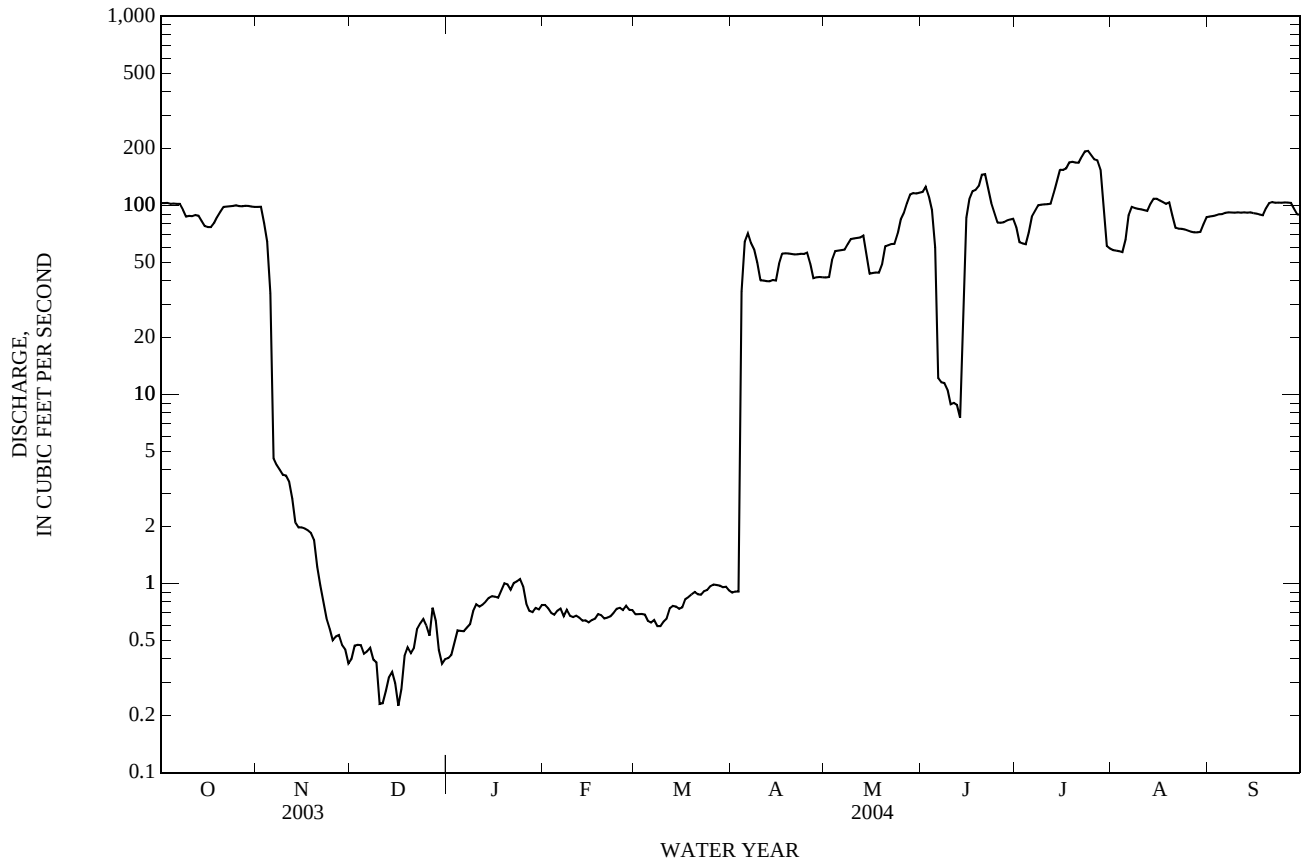
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	98	0.40	0.40	0.77	0.69	0.90	42	118	77	58	87
2	103	98	0.47	0.42	0.74	0.69	0.91	42	126	64	58	88
3	103	81	0.47	0.49	0.70	0.69	0.91	52	111	63	57	89
4	102	64	0.47	0.57	0.68	0.69	35	57	95	62	57	90
5	102	34	0.43	0.56	0.72	0.64	64	58	60	72	66	90
6	102	4.6	0.44	0.56	0.74	0.62	71	58	12	87	89	91
7	102	4.2	0.46	0.59	0.67	0.64	63	58	12	94	98	92
8	95	4.0	0.40	0.61	0.72	0.60	58	63	11	100	97	92
9	87	3.8	0.38	0.72	0.67	0.60	50	66	11	101	96	92
10	88	3.7	0.23	0.78	0.66	0.63	40	67	8.9	101	95	92
11	88	3.5	0.23	0.76	0.68	0.65	40	67	9.0	102	95	92
12	89	2.8	0.27	0.77	0.66	0.74	40	68	8.8	102	94	92
13	88	2.1	0.32	0.80	0.64	0.76	40	69	7.5	116	102	92
14	83	2.0	0.34	0.84	0.64	0.76	40	55	26	135	108	92
15	78	2.0	0.30	0.86	0.62	0.74	40	44	86	154	108	91
16	77	2.0	0.23	0.85	0.64	0.75	49	44	108	154	106	91
17	77	1.9	0.28	0.84	0.65	0.83	56	44	119	157	104	89
18	81	1.9	0.41	0.92	0.69	0.85	56	44	121	169	102	89
19	87	1.7	0.46	1.0	0.68	0.88	56	49	127	170	104	97
20	93	1.2	0.43	0.99	0.65	0.90	55	61	145	169	89	103
21	98	0.98	0.46	0.93	0.66	0.88	55	62	147	168	76	104
22	99	0.79	0.58	1.0	0.67	0.87	55	63	123	181	75	103
23	99	0.66	0.61	1.0	0.70	0.91	55	63	103	193	75	104
24	99	0.58	0.65	1.1	0.74	0.93	55	71	91	194	75	103
25	100	0.50	0.60	0.97	0.74	0.97	56	84	81	185	74	104
26	99	0.52	0.53	0.78	0.72	0.99	49	91	81	175	73	104
27	99	0.53	0.75	0.72	0.76	0.98	41	103	81	173	72	103
28	100	0.47	0.64	0.71	0.73	0.97	42	114	83	154	72	96
29	99	0.45	0.45	0.74	0.72	0.96	42	116	84	101	72	90
30	99	0.38	0.38	0.73	---	0.96	42	116	85	61	79	90
31	98	---	0.40	0.77	---	0.92	---	117	---	59	87	---
TOTAL	2,917	422.26	13.47	23.78	20.06	24.69	1,347.72	2,108	2,281.2	3,893	2,613	2,832
MEAN	94.1	14.1	0.43	0.77	0.69	0.80	44.9	68.0	76.0	126	84.3	94.4
MAX	103	98	0.75	1.1	0.77	0.99	71	117	147	194	108	104
MIN	77	0.38	0.23	0.40	0.62	0.60	0.90	42	7.5	59	57	87
AC-FT	5,790	838	27	47	40	49	2,670	4,180	4,520	7,720	5,180	5,620

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004, BY WATER YEAR (WY)

MEAN	78.3	10.5	12.7	17.9	10.2	24.2	57.5	78.2	120	192	179	122
MAX	141	41.0	76.3	66.1	52.2	127	150	218	240	344	282	219
(WY)	(1978)	(1978)	(1978)	(1989)	(1975)	(1996)	(1972)	(1984)	(1984)	(1974)	(1980)	(1983)
MIN	3.10	0.00	0.00	0.00	0.00	0.00	1.38	17.6	20.1	90.5	50.8	3.39
(WY)	(1977)	(1985)	(1985)	(1985)	(1985)	(1985)	(2002)	(1982)	(1982)	(2002)	(1989)	(1996)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1972 - 2004	
ANNUAL TOTAL	18,384.68		18,496.18			
ANNUAL MEAN	50.4		50.5		75.6	
HIGHEST ANNUAL MEAN					120	1984
LOWEST ANNUAL MEAN					46.6	1989
HIGHEST DAILY MEAN	167	Aug 30	194	Jul 24	374	Jul 22, 1974
LOWEST DAILY MEAN	0.14	Jan 6	0.23	Dec 10	0.00	Oct 20, 1973
ANNUAL SEVEN-DAY MINIMUM	0.18	Jan 4	0.27	Dec 10	0.00	Oct 20, 1973
MAXIMUM PEAK FLOW			201	Jul 24	374	Jul 22, 1974
MAXIMUM PEAK STAGE			7.09	Jul 24	8.31	Jul 22, 1974
ANNUAL RUNOFF (AC-FT)	36,470		36,690		54,780	
10 PERCENT EXCEEDS	148		104		194	
50 PERCENT EXCEEDS	37		55		52	
90 PERCENT EXCEEDS	0.47		0.57		0.37	

07312110 South Side Canal near Dundee, TX—Continued



07312180 Lake Electra near Electra, TX

LOCATION.--Lat 33°58'30", long 99°01'24", Wilbarger County, Hydrologic Unit 11130207, on northern bank near left end of dam on Camp Creek, 8.0 mi west of Electra.

DRAINAGE AREA.--14.5 mi^2.

PERIOD OF RECORD.--Oct. 1998 to Sept. 2002 (mean daily contents), Oct. 2002 to current year.

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

REMARKS.--Records good except those for the period of Aug. 11 to 18, which are fair. The lake is formed by a rolled earthfill dam. The dam was completed in 1950, and storage began shortly thereafter. The lake is owned by the city of Electra, which uses the water for their municipal supply. Conservation pool storage is 8,055 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	1,121.00
Lowest gated outlet (invert)	1,110.00

COOPERATION.--City of Electra.

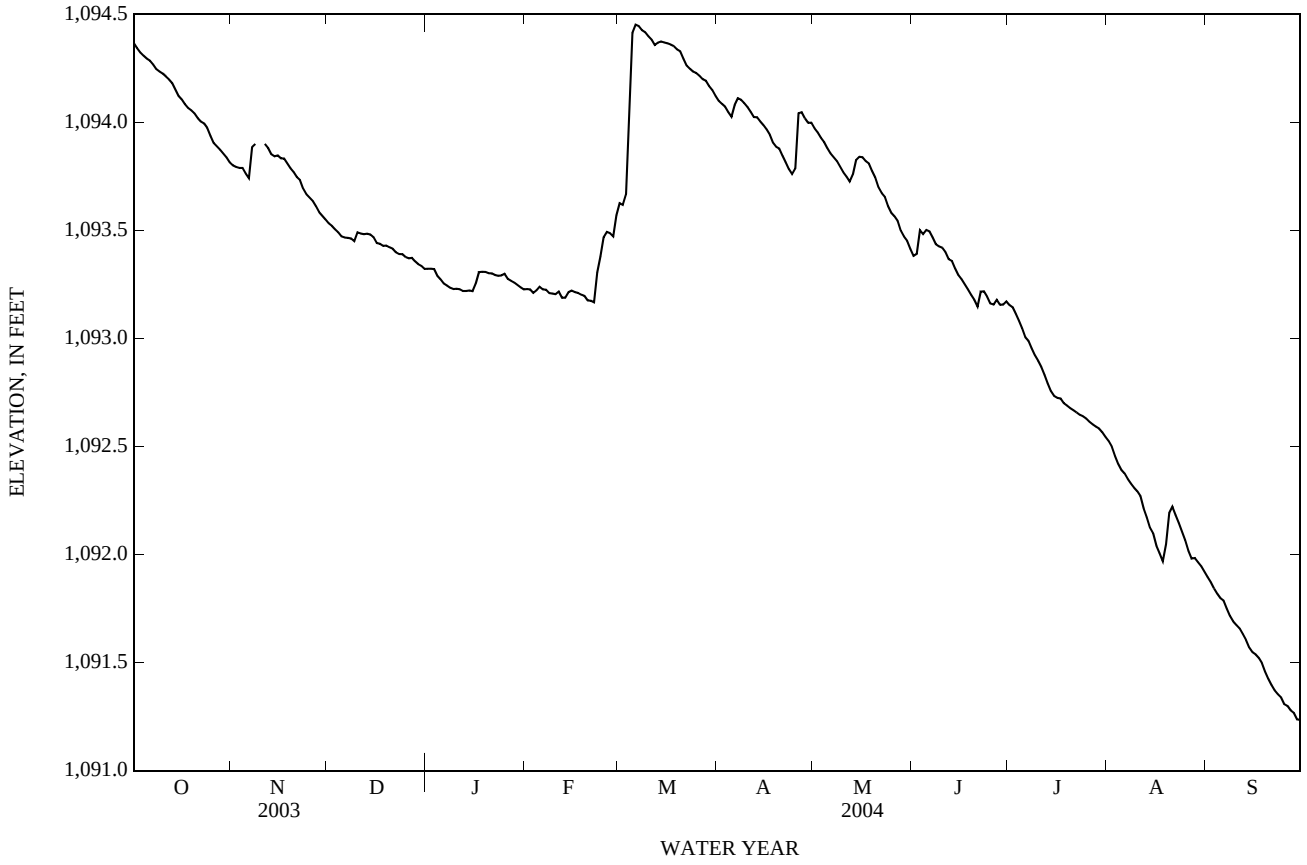
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,960 acre-ft, Oct. 2, 1998, elevation, 1,103.52 ft; minimum estimated daily contents, 235 acre-ft, Oct. 15, 2000; minimum elevation 1,091.22 ft, Sept. 30, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,094.47 ft, Mar 6; minimum elevation, 1,091.22 ft, Sept. 30.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,094.37	1,093.80	1,093.53	1,093.32	1,093.23	1,093.63	1,094.10	1,093.97	1,093.38	1,093.15	1,092.53	1,091.90
2	1,094.34	1,093.79	1,093.52	1,093.32	1,093.23	1,093.62	1,094.09	1,093.95	1,093.39	1,093.14	1,092.50	1,091.87
3	1,094.32	1,093.79	1,093.51	1,093.32	1,093.21	1,093.67	1,094.07	1,093.93	1,093.50	1,093.11	1,092.46	1,091.84
4	1,094.31	1,093.79	1,093.49	1,093.29	1,093.22	1,093.97	1,094.05	1,093.91	1,093.48	1,093.08	1,092.42	1,091.82
5	1,094.30	1,093.76	1,093.47	1,093.27	1,093.24	1,094.41	1,094.03	1,093.88	1,093.50	1,093.05	1,092.39	1,091.80
6	1,094.29	1,093.74	1,093.47	1,093.26	1,093.23	1,094.45	1,094.08	1,093.86	1,093.49	1,093.01	1,092.38	1,091.79
7	1,094.27	1,093.89	1,093.47	1,093.24	1,093.23	1,094.44	1,094.11	1,093.84	1,093.47	1,092.99	1,092.35	1,091.75
8	1,094.25	1,093.90	1,093.46	1,093.23	1,093.21	1,094.43	1,094.11	1,093.82	1,093.44	1,092.95	1,092.33	1,091.72
9	1,094.24	---	1,093.45	1,093.23	1,093.21	1,094.42	1,094.09	1,093.80	1,093.43	1,092.92	1,092.31	1,091.69
10	1,094.23	---	1,093.49	1,093.23	1,093.20	1,094.40	1,094.07	1,093.77	1,093.42	1,092.90	1,092.29	1,091.67
11	1,094.21	1,093.90	1,093.49	1,093.23	1,093.22	1,094.38	1,094.05	1,093.75	1,093.40	1,092.87	1,092.27	1,091.66
12	1,094.20	1,093.88	1,093.48	1,093.22	1,093.19	1,094.36	1,094.03	1,093.73	1,093.37	1,092.83	1,092.21	1,091.63
13	1,094.18	1,093.85	1,093.48	1,093.22	1,093.19	1,094.37	1,094.02	1,093.76	1,093.36	1,092.79	1,092.17	1,091.61
14	1,094.15	1,093.84	1,093.48	1,093.22	1,093.21	1,094.37	1,094.01	1,093.83	1,093.32	1,092.76	1,092.12	1,091.57
15	1,094.12	1,093.85	1,093.47	1,093.22	1,093.22	1,094.37	1,093.99	1,093.84	1,093.29	1,092.73	1,092.10	1,091.55
16	1,094.11	1,093.83	1,093.44	1,093.26	1,093.21	1,094.37	1,093.97	1,093.84	1,093.28	1,092.72	1,092.04	1,091.54
17	1,094.09	1,093.83	1,093.44	1,093.31	1,093.21	1,094.36	1,093.94	1,093.82	1,093.25	1,092.72	1,092.01	1,091.52
18	1,094.07	1,093.81	1,093.43	1,093.31	1,093.20	1,094.35	1,093.91	1,093.81	1,093.23	1,092.70	1,091.97	1,091.50
19	1,094.06	1,093.79	1,093.43	1,093.31	1,093.20	1,094.34	1,093.89	1,093.78	1,093.20	1,092.69	1,092.05	1,091.46
20	1,094.04	1,093.77	1,093.42	1,093.30	1,093.18	1,094.33	1,093.88	1,093.74	1,093.18	1,092.68	1,092.19	1,091.43
21	1,094.02	1,093.75	1,093.41	1,093.30	1,093.17	1,094.30	1,093.85	1,093.70	1,093.15	1,092.67	1,092.22	1,091.40
22	1,094.00	1,093.73	1,093.40	1,093.29	1,093.17	1,094.26	1,093.82	1,093.67	1,093.22	1,092.66	1,092.18	1,091.37
23	1,093.99	1,093.69	1,093.39	1,093.29	1,093.31	1,094.25	1,093.78	1,093.65	1,093.22	1,092.65	1,092.15	1,091.35
24	1,093.97	1,093.67	1,093.39	1,093.29	1,093.38	1,094.23	1,093.76	1,093.61	1,093.19	1,092.64	1,092.11	1,091.34
25	1,093.94	1,093.65	1,093.38	1,093.30	1,093.47	1,094.23	1,093.79	1,093.58	1,093.16	1,092.63	1,092.07	1,091.31
26	1,093.90	1,093.64	1,093.37	1,093.28	1,093.49	1,094.22	1,094.04	1,093.57	1,093.16	1,092.62	1,092.02	1,091.30
27	1,093.89	1,093.61	1,093.37	1,093.27	1,093.49	1,094.20	1,094.05	1,093.54	1,093.18	1,092.60	1,091.98	1,091.28
28	1,093.87	1,093.59	1,093.36	1,093.26	1,093.47	1,094.19	1,094.02	1,093.50	1,093.16	1,092.59	1,091.98	1,091.27
29	1,093.86	1,093.57	1,093.34	1,093.25	1,093.57	1,094.17	1,094.00	1,093.47	1,093.16	1,092.58	1,091.96	1,091.24
30	1,093.84	1,093.55	1,093.34	1,093.24	---	1,094.15	1,094.00	1,093.45	1,093.17	1,092.57	1,091.95	1,091.23
31	1,093.82	---	1,093.32	1,093.23	---	1,094.12	---	1,093.41	---	1,092.55	1,091.92	---
MEAN	1,094.11	---	1,093.43	1,093.27	1,093.27	1,094.24	1,093.99	1,093.73	1,093.31	1,092.79	1,092.18	1,091.55
MAX	1,094.37	---	1,093.53	1,093.32	1,093.57	1,094.45	1,094.11	1,093.97	1,093.50	1,093.15	1,092.53	1,091.90
MIN	1,093.82	---	1,093.32	1,093.22	1,093.17	1,093.62	1,093.76	1,093.41	1,093.15	1,092.55	1,091.92	1,091.23

07312180 Lake Electra near Electra, TX—Continued



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, 8.0 mi upstream from Wichita River, and 9.0 mi south of Electra.

DRAINAGE AREA.--652 mi^2.

PERIOD OF RECORD.--Feb. 1960 to current year. Water-quality records: Chemical data: Oct. 1968 to June 1970 (local observer), June 1996 to Sept. 2002. Sediment data: Apr. 1966 to Sept. 1975. Specific conductance: Oct. 1968 to June 1970 (local observer), June 1996 to Sept. 2002. Water temperature: Oct. 1968 to June 1970 (local observer), June 1996 to Sept. 2002.

GAGE.--Water-stage recorder. Datum of gage is 991.3 ft above NGVD of 1929 (Texas Department of Transportation reference point). Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in Feb. 1960, at least 10% of contributing drainage area has been regulated. There are several diversions above station. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

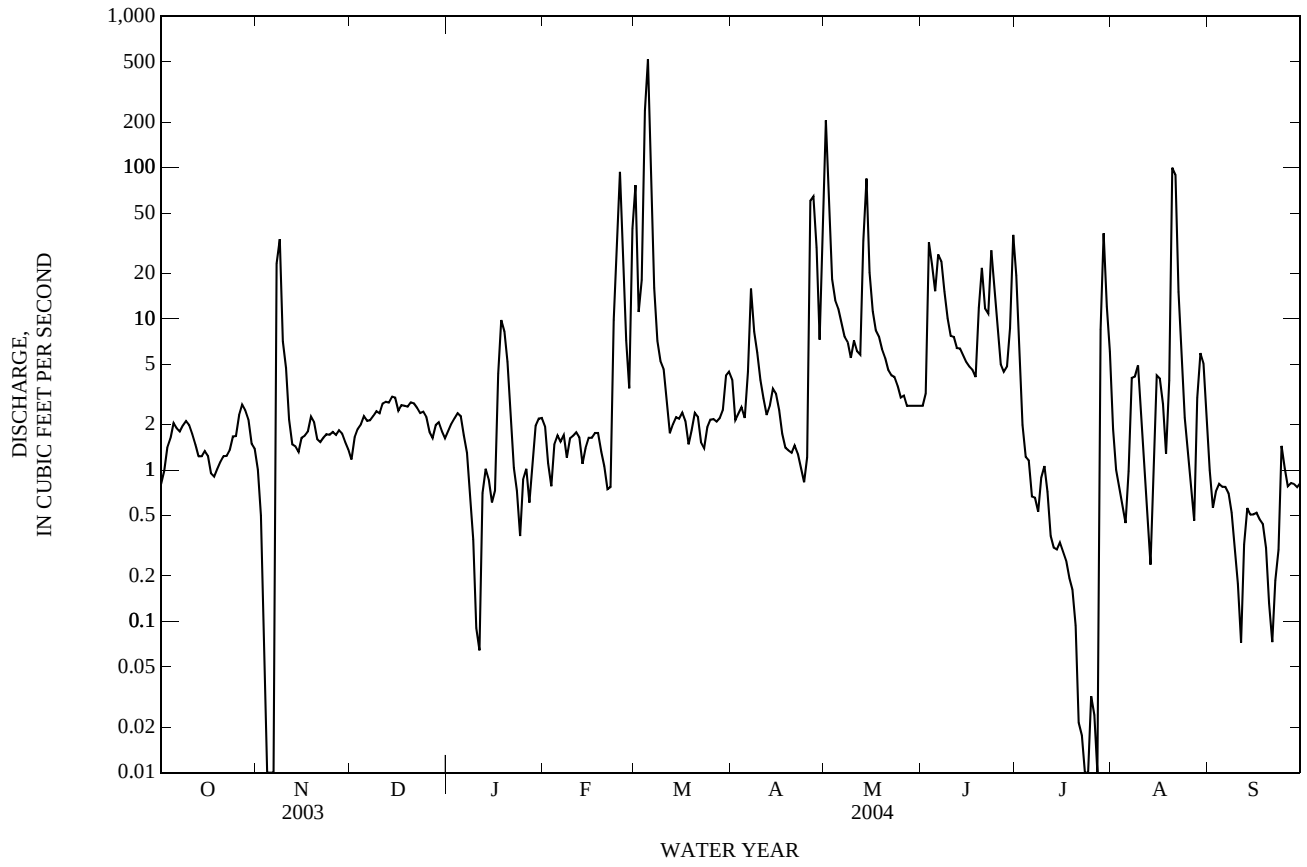
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.81	1.0	1.2	1.8	1.9	77	4.0	205	2.7	19	1.9	1.00
2	0.99	0.50	1.6	2.0	1.1	11	2.1	58	3.2	6.2	1.0	0.56
3	1.4	0.10	1.9	2.2	0.78	18	2.4	18	32	2.0	0.76	0.72
4	1.6	0.01	2.0	2.4	1.5	238	2.6	13	23	1.2	0.58	0.81
5	2.0	0.00	2.3	2.3	1.7	520	2.2	12	15	1.2	0.45	0.78
6	1.9	0.00	2.1	1.7	1.5	69	4.5	9.4	27	0.67	0.98	0.78
7	1.8	23	2.1	1.3	1.7	16	16	7.6	24	0.66	4.1	0.70
8	2.0	34	2.3	0.66	1.2	7.2	8.2	7.0	15	0.53	4.2	0.52
9	2.1	7.1	2.5	0.35	1.6	5.3	6.0	5.5	10	0.89	4.9	0.30
10	2.0	4.7	2.4	0.09	1.7	4.7	3.9	7.2	7.7	1.1	2.6	0.18
11	1.7	2.2	2.8	0.06	1.8	3.0	3.0	6.1	7.6	0.72	1.2	0.07
12	1.5	1.5	2.8	0.70	1.7	1.8	2.3	5.8	6.4	0.37	0.50	0.32
13	1.2	1.4	2.8	1.0	1.1	2.0	2.6	33	6.4	0.31	0.24	0.56
14	1.2	1.3	3.1	0.87	1.4	2.2	3.5	85	5.8	0.30	0.90	0.51
15	1.3	1.6	3.0	0.61	1.6	2.2	3.2	20	5.2	0.33	4.2	0.51
16	1.2	1.7	2.5	0.73	1.6	2.4	2.5	11	4.8	0.29	4.0	0.52
17	0.95	1.8	2.7	4.3	1.8	2.1	1.7	8.4	4.6	0.25	2.7	0.47
18	0.90	2.3	2.7	9.8	1.8	1.5	1.4	7.6	4.1	0.19	1.3	0.44
19	1.0	2.1	2.6	8.3	1.3	1.8	1.3	6.3	12	0.16	3.9	0.31
20	1.1	1.6	2.8	5.2	1.1	2.4	1.3	5.5	22	0.09	100	0.13
21	1.2	1.5	2.8	2.5	0.75	2.3	1.5	4.6	12	0.02	90	0.07
22	1.2	1.6	2.6	1.0	0.77	1.5	1.3	4.2	11	0.02	15	0.19
23	1.4	1.7	2.4	0.73	9.8	1.4	1.0	4.1	28	0.00	6.3	0.30
24	1.7	1.7	2.4	0.37	29	1.9	0.83	3.6	15	0.00	2.2	1.4
25	1.7	1.8	2.2	0.87	94	2.2	1.2	3.0	8.4	0.03	1.3	1.0
26	2.3	1.7	1.8	1.0	30	2.2	60	3.1	5.0	0.02	0.77	0.78
27	2.7	1.8	1.6	0.61	7.2	2.1	65	2.7	4.5	0.00	0.46	0.82
28	2.5	1.7	2.0	1.2	3.5	2.2	29	2.7	4.9	8.5	3.0	0.81
29	2.2	1.5	2.1	2.0	39	2.5	7.3	2.7	8.7	37	5.9	0.77
30	1.5	1.4	1.8	2.2	---	4.2	40	2.7	36	12	5.1	0.82
31	1.4	---	1.6	2.2	---	4.5	---	2.7	---	6.1	2.2	---
TOTAL	48.45	104.31	71.5	61.05	243.90	1,014.6	281.83	567.5	372.0	100.15	272.64	17.15
MEAN	1.56	3.48	2.31	1.97	8.41	32.7	9.39	18.3	12.4	3.23	8.79	0.57
MAX	2.7	34	3.1	9.8	94	520	65	205	36	37	100	1.4
MIN	0.81	0.00	1.2	0.06	0.75	1.4	0.83	2.7	2.7	0.00	0.24	0.07
AC-FT	96	207	142	121	484	2,010	559	1,130	738	199	541	34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004, BY WATER YEAR (WY)

MEAN	102	40.0	27.8	21.5	51.0	78.9	57.2	130	134	65.3	63.3	96.3
MAX	1,108	319	385	185	553	592	760	921	1,435	727	1,324	1,108
(WY)	(1987)	(1973)	(1992)	(1985)	(1993)	(1961)	(1990)	(1987)	(1995)	(1975)	(1995)	(1986)
MIN	0.14	0.82	0.71	0.27	0.84	0.65	0.89	2.26	3.37	1.84	0.87	0.57
(WY)	(1964)	(1966)	(1971)	(1966)	(1963)	(1965)	(1982)	(1996)	(1966)	(1964)	(1998)	(2004)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004	
ANNUAL TOTAL	7,245.13		3,155.08			
ANNUAL MEAN	19.8		8.62		72.9	
HIGHEST ANNUAL MEAN					300	1995
LOWEST ANNUAL MEAN					8.62	2004
HIGHEST DAILY MEAN	939	May 25	520	Mar 5	11,000	May 29, 1987
LOWEST DAILY MEAN	0.00	Aug 21	0.00	Nov 5	0.00	Jun 23, 1960
ANNUAL SEVEN-DAY MINIMUM	0.02	Aug 20	0.01	Jul 21	0.00	May 11, 1962
MAXIMUM PEAK FLOW			741	Mar 5	11,700	Mar 17, 1961
MAXIMUM PEAK STAGE			17.89	Mar 5	34.94	May 29, 1987
ANNUAL RUNOFF (AC-FT)	14,370		6,260		52,800	
10 PERCENT EXCEEDS	19		15		102	
50 PERCENT EXCEEDS	3.3		2.0		5.5	
90 PERCENT EXCEEDS	0.44		0.46		0.70	

07312200 Beaver Creek near Electra, TX—Continued



07312380 North Fork Buffalo Creek Reservoir near Iowa Park, TX

LOCATION.--Lat 33°59'12", long 98°45'06", Wichita County, Hydrologic Unit 11130206, on south bank near right end of dam on North Fork Buffalo Creek, 5.0 mi northwest of Iowa park.

DRAINAGE AREA.--33.0 mi^2.

PERIOD OF RECORD.--Oct. 1998 to Sept. 2002 (daily mean contents), Oct. 2002 to current year.

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

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 4,452 feet long. The dam was completed in Nov. 1964 and storage began shortly thereafter. The lake is owned by the city of Iowa Park, for municipal supply. The capacity curve was developed by Freese and Nichols Inc. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	1,056.3
Crest of spillway	1,048.0
Emergency spillway	1,051.7

COOPERATION.--Capacity curve is provided by the city of Iowa Park.

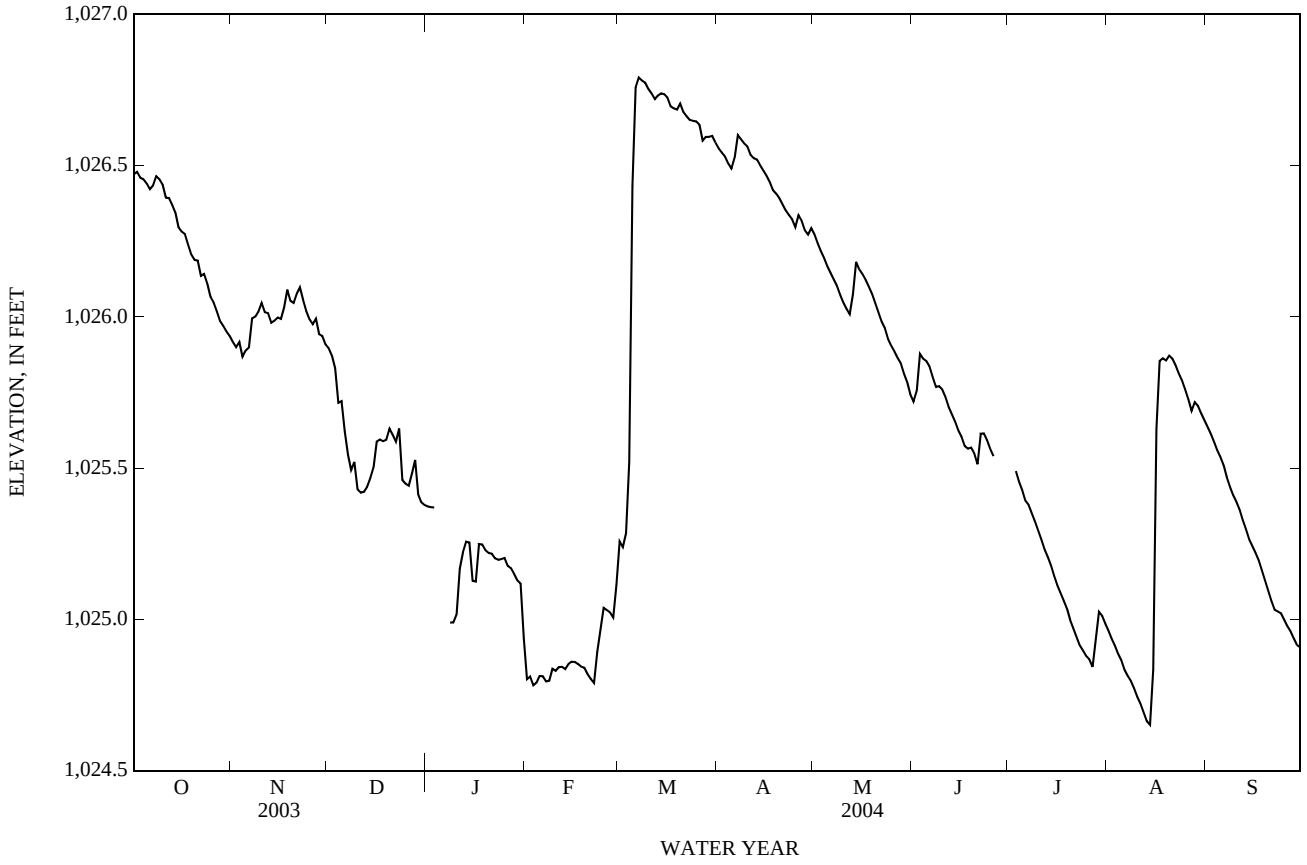
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,950 acre-ft, May 6, 7, 2001, elevation, 1,038.78 ft; minimum contents, 424 acre-ft, Aug 14, 2004, elevation, 1,024.63 ft; minimum elevation, 1,024.63 ft, Aug 14, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,026.80 ft, Mar 7; minimum elevation, 1,024.63 ft, Aug 14.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,026.47	1,025.92	1,025.90	1,025.37	1,024.80	1,025.26	1,026.56	1,026.27	1,025.72	---	1,024.96	1,025.64
2	1,026.48	1,025.90	1,025.87	1,025.37	1,024.81	1,025.24	1,026.54	1,026.24	1,025.76	---	1,024.94	1,025.61
3	1,026.46	1,025.92	1,025.83	1,025.37	1,024.78	1,025.29	1,026.53	1,026.22	1,025.88	1,025.49	1,024.91	1,025.59
4	1,026.45	1,025.87	1,025.72	---	1,024.79	1,025.52	1,026.51	1,026.19	1,025.86	1,025.46	1,024.89	1,025.56
5	1,026.44	1,025.89	1,025.72	---	1,024.81	1,026.43	1,026.49	1,026.17	1,025.85	1,025.43	1,024.87	1,025.54
6	1,026.42	1,025.90	1,025.62	---	1,024.81	1,026.76	1,026.53	1,026.15	1,025.84	1,025.39	1,024.83	1,025.51
7	1,026.43	1,025.99	1,025.55	---	1,024.80	1,026.79	1,026.60	1,026.12	1,025.80	1,025.38	1,024.81	1,025.47
8	1,026.46	1,026.00	1,025.49	1,024.99	1,024.80	1,026.78	1,026.59	1,026.10	1,025.77	1,025.35	1,024.80	1,025.44
9	1,026.45	1,026.02	1,025.52	1,024.99	1,024.84	1,026.77	1,026.57	1,026.07	1,025.77	1,025.32	1,024.77	1,025.41
10	1,026.44	1,026.05	1,025.43	1,025.02	1,024.83	1,026.75	1,026.56	1,026.05	1,025.76	1,025.29	1,024.74	1,025.39
11	1,026.39	1,026.02	1,025.42	1,025.17	1,024.84	1,026.74	1,026.54	1,026.03	1,025.73	1,025.26	1,024.72	1,025.36
12	1,026.39	1,026.01	1,025.42	1,025.22	1,024.84	1,026.72	1,026.52	1,026.01	1,025.70	1,025.23	1,024.69	1,025.33
13	1,026.37	1,025.98	1,025.44	1,025.26	1,024.84	1,026.73	1,026.52	1,026.07	1,025.68	1,025.21	1,024.66	1,025.30
14	1,026.34	1,025.99	1,025.47	1,025.25	1,024.85	1,026.74	1,026.50	1,026.18	1,025.65	1,025.18	1,024.65	1,025.27
15	1,026.30	1,026.00	1,025.50	1,025.13	1,024.86	1,026.74	1,026.48	1,026.16	1,025.62	1,025.14	1,024.84	1,025.24
16	1,026.28	1,025.99	1,025.59	1,025.12	1,024.86	1,026.72	1,026.47	1,026.14	1,025.60	1,025.11	1,025.63	1,025.22
17	1,026.27	1,026.03	1,025.60	1,025.25	1,024.85	1,026.70	1,026.44	1,026.12	1,025.57	1,025.09	1,025.85	1,025.19
18	1,026.24	1,026.09	1,025.59	1,025.25	1,024.84	1,026.69	1,026.42	1,026.10	1,025.56	1,025.06	1,025.86	1,025.16
19	1,026.21	1,026.05	1,025.59	1,025.23	1,024.84	1,026.68	1,026.41	1,026.08	1,025.57	1,025.04	1,025.86	1,025.13
20	1,026.19	1,026.05	1,025.63	1,025.22	1,024.82	1,026.70	1,026.39	1,026.05	1,025.55	1,025.00	1,025.87	1,025.10
21	1,026.19	1,026.08	1,025.61	1,025.22	1,024.80	1,026.68	1,026.37	1,026.01	1,025.51	1,024.97	1,025.86	1,025.06
22	1,026.14	1,026.10	1,025.59	1,025.20	1,024.79	1,026.66	1,026.35	1,025.98	1,025.61	1,024.94	1,025.84	1,025.03
23	1,026.14	1,026.06	1,025.63	1,025.20	1,024.89	1,026.65	1,026.34	1,025.96	1,025.62	1,024.91	1,025.81	1,025.03
24	1,026.11	1,026.02	1,025.46	1,025.20	1,024.97	1,026.65	1,026.32	1,025.93	1,025.59	1,024.90	1,025.79	1,025.02
25	1,026.07	1,025.99	1,025.45	1,025.20	1,025.04	1,026.65	1,026.30	1,025.90	1,025.56	1,024.88	1,025.76	1,025.00
26	1,026.05	1,025.98	1,025.44	1,025.18	1,025.03	1,026.63	1,026.34	1,025.88	1,025.54	1,024.87	1,025.73	1,024.98
27	1,026.02	1,025.99	1,025.48	1,025.17	1,025.02	1,026.58	1,026.32	1,025.86	---	1,024.84	1,025.69	1,024.96
28	1,025.99	1,025.94	1,025.53	1,025.15	1,025.01	1,026.60	1,026.29	1,025.85	---	1,024.94	1,025.72	1,024.94
29	1,025.97	1,025.94	1,025.41	1,025.13	1,025.11	1,026.60	1,026.27	1,025.81	---	1,025.03	1,025.71	1,024.91
30	1,025.95	1,025.91	1,025.39	1,025.12	---	1,026.60	1,026.29	1,025.79	---	1,025.01	1,025.68	1,024.91
31	1,025.94	---	1,025.38	1,024.94	---	1,026.58	---	1,025.74	---	1,024.99	1,025.66	---
MEAN	1,026.26	1,025.99	1,025.56	---	1,024.87	1,026.50	1,026.44	1,026.04	---	---	1,025.30	1,025.24
MAX	1,026.48	1,026.10	1,025.90	---	1,025.11	1,026.79	1,026.60	1,026.27	---	---	1,025.87	1,025.64
MIN	1,025.94	1,025.87	1,025.38	---	1,024.78	1,025.24	1,026.27	1,025.74	---	---	1,024.65	1,024.91

07312380 North Fork Buffalo Creek Reservoir near Iowa Park, TX—Continued



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, 4.0 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 mi^2 of which 2,086 mi^2 probably is noncontributing.of which 2,086 mi^2 is above Lake Kemp Dam.

PERIOD OF RECORD.--Feb. 1901 to Jan. 1902 (monthly discharge only, published in WSP 1311), Oct. 1910 to Dec. 1911 (gage heights only), Mar. 1938 to current year. Water-quality records: Chemical data: Apr. 1966 to July 1975, Oct. 1981 to Sept. 1989, June 1996 to Sept. 1997. Biochemical data: Nov. 1981 to Aug. 1989, June 1996 to Sept. 1997. Sediment data: Apr. 1966 to July 1975. Specific conductance: Oct. 1981 to Sept. 1989, June 1996 to Sept. 2002. Water temperature: Oct. 1981 to Sept. 1989, June 1996 to Sept. 2002.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 924.26 ft above NGVD of 1929. Feb. 1901 to Jan. 1902 and Oct. 1, 1910, to Dec. 31, 1911, nonrecording gages at site 4.0 mi downstream at different datum. Mar. 30, 1938, to Dec. 1, 1959, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--Records good. Since installation of gage in Mar. 1938, at least 10% of contributing drainage area has been regulated. Since completion of Lake Kemp (station 07312000) in 1923, no outflow has passed over the spillway. Water is diverted from Lake Diversion (conservation pool storage 40,000 acre-ft) 41 mi upstream for the irrigation of 42,000 acres under permit in the vicinity of Wichita Falls. The Wichita County Water Improvement District No. 2 diverts water from Lake Diversion for mining, industrial, irrigation, and recreational uses.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 50,000 ft^3/s June 8, 1915, computed by Vernon L. Sullivan, engineer for Big Wichita River Irrigation Co.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	36	16	12	14	111	16	25	33	154	50	32
2	30	40	16	12	14	132	19	150	49	108	32	38
3	28	38	16	11	14	98	19	104	135	66	24	53
4	32	35	15	13	15	274	16	44	131	36	21	36
5	29	24	15	11	16	753	15	32	136	22	19	29
6	28	30	15	11	14	704	19	24	115	77	18	34
7	27	59	15	11	14	208	63	24	82	29	18	42
8	29	58	15	11	13	97	93	24	52	23	22	31
9	30	71	15	11	13	60	68	21	38	21	24	23
10	36	45	14	11	14	43	55	19	30	19	27	28
11	34	43	14	11	15	37	45	17	23	20	27	33
12	32	33	15	11	15	31	34	20	19	19	27	33
13	30	27	16	12	15	31	30	68	17	22	29	34
14	28	24	15	12	18	29	30	196	16	19	29	28
15	26	24	15	11	17	27	25	245	15	15	58	25
16	22	22	14	13	15	26	25	116	14	19	159	24
17	21	21	14	18	15	26	23	65	17	21	147	26
18	23	21	14	19	14	25	27	34	18	21	62	23
19	22	26	14	22	15	22	28	23	28	28	60	26
20	22	28	14	22	14	22	26	22	29	35	122	27
21	26	27	14	22	13	20	27	18	40	43	184	28
22	30	25	14	19	13	19	20	21	235	35	200	28
23	26	25	14	16	64	18	20	19	174	28	106	32
24	24	23	13	15	133	18	21	e18	112	33	69	36
25	25	22	14	15	190	18	22	e17	87	52	54	38
26	27	21	13	13	199	17	31	e18	52	69	39	38
27	26	18	13	12	118	17	70	e27	61	70	34	35
28	24	17	13	12	59	18	85	33	62	221	43	35
29	21	16	12	13	68	16	68	31	56	289	53	42
30	28	16	12	12	---	17	35	29	123	233	48	45
31	29	---	12	12	---	14	---	29	---	120	40	---
TOTAL	844	915	441	426	1,151	2,948	1,075	1,533	1,999	1,967	1,845	982
MEAN	27.2	30.5	14.2	13.7	39.7	95.1	35.8	49.5	66.6	63.5	59.5	32.7
MAX	36	71	16	22	199	753	93	245	235	289	200	53
MIN	21	16	12	11	13	14	15	17	14	15	18	23
AC-FT	1,670	1,810	875	845	2,280	5,850	2,130	3,040	3,970	3,900	3,660	1,950

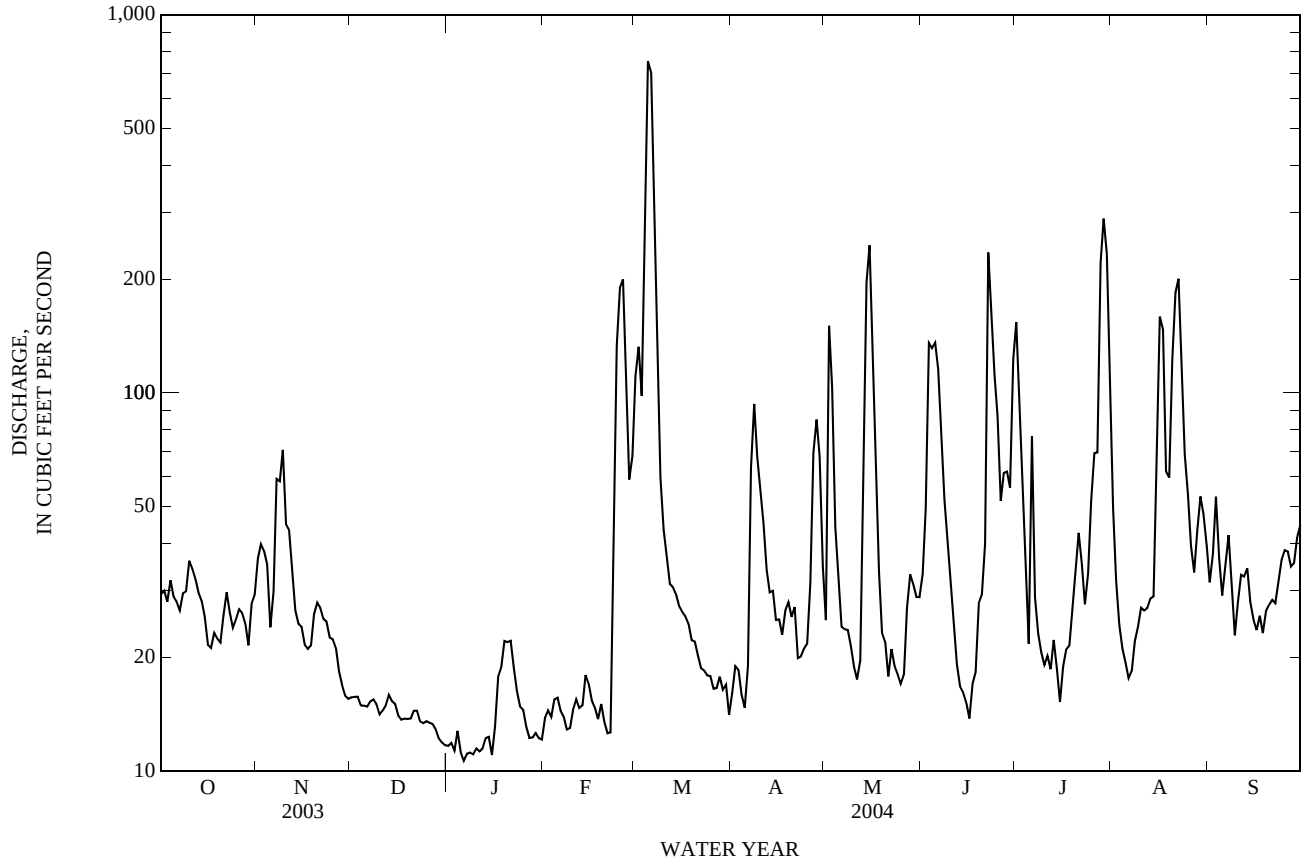
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2004, BY WATER YEAR (WY)

MEAN	384	204	112	88.2	148	195	220	529	488	231	248	300
MAX	4,017	1,784	1,091	859	1,252	1,412	1,450	4,105	4,475	1,201	2,791	2,619
(WY)	(1942)	(1973)	(1992)	(1992)	(1992)	(1993)	(1990)	(1941)	(1941)	(1975)	(1950)	(1950)
MIN	27.2	23.5	14.2	13.7	14.7	16.7	27.6	35.4	53.8	46.5	53.3	32.7
(WY)	(2004)	(1998)	(2004)	(2004)	(2002)	(2003)	(2003)	(2000)	(2001)	(2000)	(2000)	(2004)

07312500 Wichita River at Wichita Falls, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1938 - 2004	
ANNUAL TOTAL	20,871.5		16,126			
ANNUAL MEAN	57.2		44.1		259	
HIGHEST ANNUAL MEAN					977	1941
LOWEST ANNUAL MEAN					44.1	2004
HIGHEST DAILY MEAN	1,050	May 26	753	Mar 5	17,300	Oct 3, 1941
LOWEST DAILY MEAN	9.5	Apr 1	11	Jan 3	7.7	Apr 9, 1978
ANNUAL SEVEN-DAY MINIMUM	13	Dec 25	11	Jan 5	9.1	Mar 10, 2002
MAXIMUM PEAK FLOW			879	Mar 6	17,800	Oct 3, 1941
MAXIMUM PEAK STAGE			6.40	Mar 6	24.00	Oct 3, 1941
ANNUAL RUNOFF (AC-FT)	41,400		31,990		188,000	
10 PERCENT EXCEEDS	92		97		508	
50 PERCENT EXCEEDS	29		26		78	
90 PERCENT EXCEEDS	15		14		33	

e Estimated



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 mi^2.of which 2,086 mi^2 is above Lake Kemp Dam and 143 mi^2 is above Lake Wichita Dam.

PERIOD OF RECORD.--Oct. 1967 to current year. Water-quality records: Chemical data: Oct. 1967 to Sept. 1981. Biochemical data: Oct. 1967 to Sept. 1981, Oct. 1989 to Sept. 1997. Specific conductance: Oct. 1967 to SEpt. 1981 (local observer), June 1996 to Sept. 2002. Water temperature: Oct. 1967 to Sept. 1981 (local observer), June 1996 to Sept. 2002.

GAGE.--Water-stage recorder. Datum of gage is 872.71 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good. Since installation of gage in Oct. 1967, at least 10% of contributing drainage area has been regulated.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	58	33	29	30	356	37	189	55	292	151	76
2	65	65	33	30	34	171	e35	107	76	218	91	72
3	69	83	32	30	42	196	e36	226	873	190	71	67
4	64	84	33	30	33	396	e37	183	438	159	61	75
5	72	76	32	30	74	837	e36	105	232	93	53	65
6	81	69	32	29	51	1,120	e36	87	232	84	48	70
7	82	151	32	29	35	905	77	76	265	507	42	94
8	76	238	32	29	32	381	152	65	263	163	39	71
9	82	109	33	30	31	243	170	64	118	106	62	69
10	92	104	32	29	29	173	142	64	115	85	77	66
11	87	84	31	29	32	141	130	75	86	64	63	55
12	81	71	31	29	39	118	109	90	60	68	67	59
13	76	58	32	30	51	104	94	124	47	63	59	55
14	77	52	35	31	40	114	82	522	42	63	53	55
15	77	55	35	30	66	96	74	335	38	48	148	59
16	70	58	33	32	64	84	73	337	38	38	839	52
17	56	47	32	86	47	79	61	187	36	34	269	45
18	51	51	31	110	47	77	59	118	70	39	193	44
19	57	52	32	51	44	77	71	88	166	40	114	44
20	55	43	32	41	41	68	72	82	78	43	313	41
21	57	47	31	41	41	61	83	81	63	55	338	42
22	59	49	31	42	42	56	72	57	243	67	259	46
23	54	46	30	39	214	51	67	54	519	62	245	51
24	64	41	31	38	397	49	131	57	237	58	145	56
25	63	41	31	39	393	50	99	53	150	65	107	68
26	60	40	30	56	402	45	106	51	135	97	89	69
27	65	39	30	34	307	43	127	48	111	124	79	69
28	69	37	30	30	203	40	123	52	96	245	308	64
29	61	35	29	29	173	40	155	63	94	1,090	394	58
30	55	34	29	28	---	37	181	58	128	442	109	58
31	49	---	29	28	---	36	---	59	---	288	85	---
TOTAL	2,087	2,017	979	1,168	3,034	6,244	2,727	3,757	5,104	4,990	4,971	1,815
MEAN	67.3	67.2	31.6	37.7	105	201	90.9	121	170	161	160	60.5
MAX	92	238	35	110	402	1,120	181	522	873	1,090	839	94
MIN	49	34	29	28	29	36	35	48	36	34	39	41
AC-FT	4,140	4,000	1,940	2,320	6,020	12,380	5,410	7,450	10,120	9,900	9,860	3,600

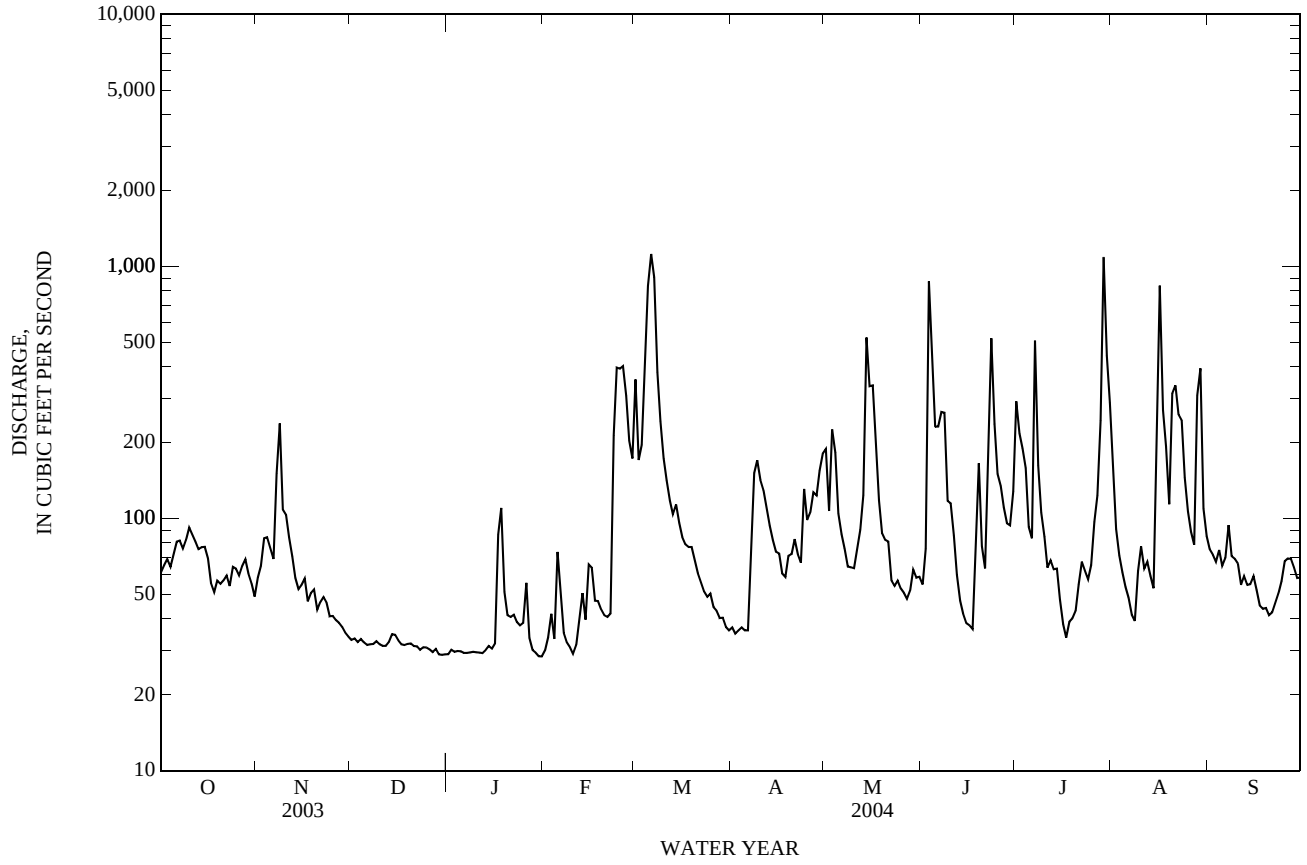
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2004, BY WATER YEAR (WY)

MEAN	338	298	183	163	263	386	319	519	611	281	290	376
MAX	2,032	2,194	1,556	1,005	1,411	1,832	2,377	3,094	2,815	1,330	2,766	2,598
(WY)	(1987)	(1973)	(1992)	(1992)	(1992)	(1993)	(1990)	(1990)	(1995)	(1992)	(1995)	(1986)
MIN	67.3	50.3	31.6	37.7	45.6	43.2	61.2	94.4	96.6	80.1	72.6	60.5
(WY)	(2004)	(1998)	(2004)	(2004)	(1995)	(2003)	(1989)	(2000)	(2001)	(2000)	(2000)	(2004)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1968 - 2004	
ANNUAL TOTAL	40,414		38,893			
ANNUAL MEAN	111		106		335	
HIGHEST ANNUAL MEAN					986	1987
LOWEST ANNUAL MEAN					90.2	2000
HIGHEST DAILY MEAN	1,180	May 26	1,120	Mar 6	7,740	May 7, 1990
LOWEST DAILY MEAN	29	Dec 29	28	Jan 30	21	Dec 19, 1997
ANNUAL SEVEN-DAY MINIMUM	30	Dec 25	29	Jan 6	24	Dec 13, 1997
MAXIMUM PEAK FLOW			1,480	Mar 6	7,760	May 7, 1990
MAXIMUM PEAK STAGE			8.28	Mar 6	25.80	May 7, 1990
ANNUAL RUNOFF (AC-FT)	80,160		77,140		242,900	
10 PERCENT EXCEEDS	187		234		765	
50 PERCENT EXCEEDS	70		63		132	
90 PERCENT EXCEEDS	39		32		58	

e Estimated

07312700 Wichita River near Charlie, TX—Continued



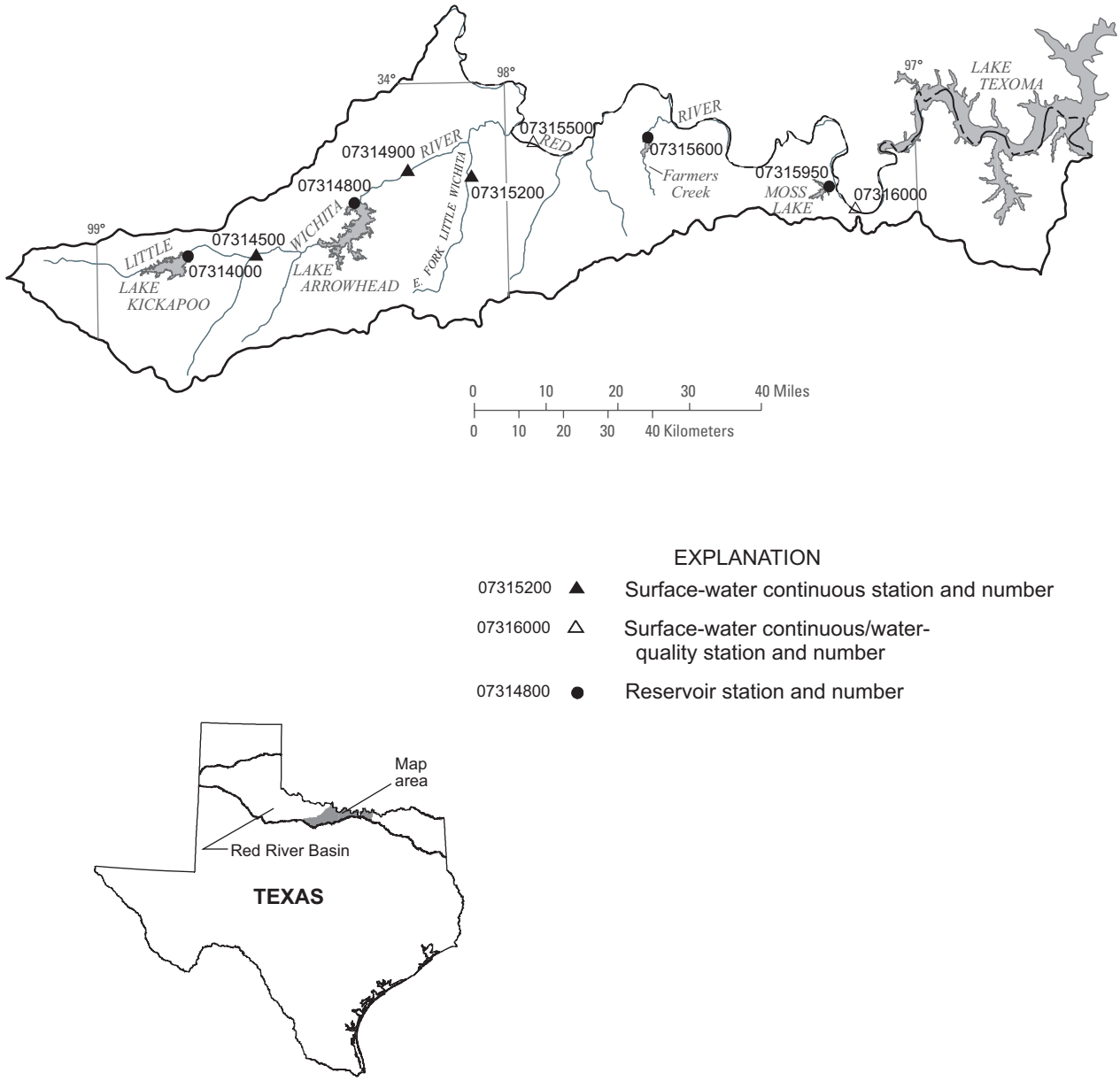


Figure 6.--Map showing location of gaging stations in the third section of the Red River Basin

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 mi^2.

PERIOD OF RECORD.--Feb. 1946 to Sept. 2002 (daily mean contents). Oct. 2002 to current year. Prior to Oct. 1965, end of month contents only. Water-quality records: Chemical data: Oct. 1969 to Sept. 1984.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by city of Wichita Falls). Oct. 8, 1946 to Mar. 3, 1999, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good. 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 U.S. Geological Survey topographic maps, dated 1929. The capacity curve, dated Nov. 1946, was entitled "Lake Kickapoo Area and Capacity Curve". Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	1,062.00
Design flood (2-foot freeboard)	1,060.00
Crest of spillway	1,045.00
Lowest gated outlet (invert)	1,000.92

COOPERATION.--Capacity curve was provided by the city of Wichita Falls.

EXTREMES 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.

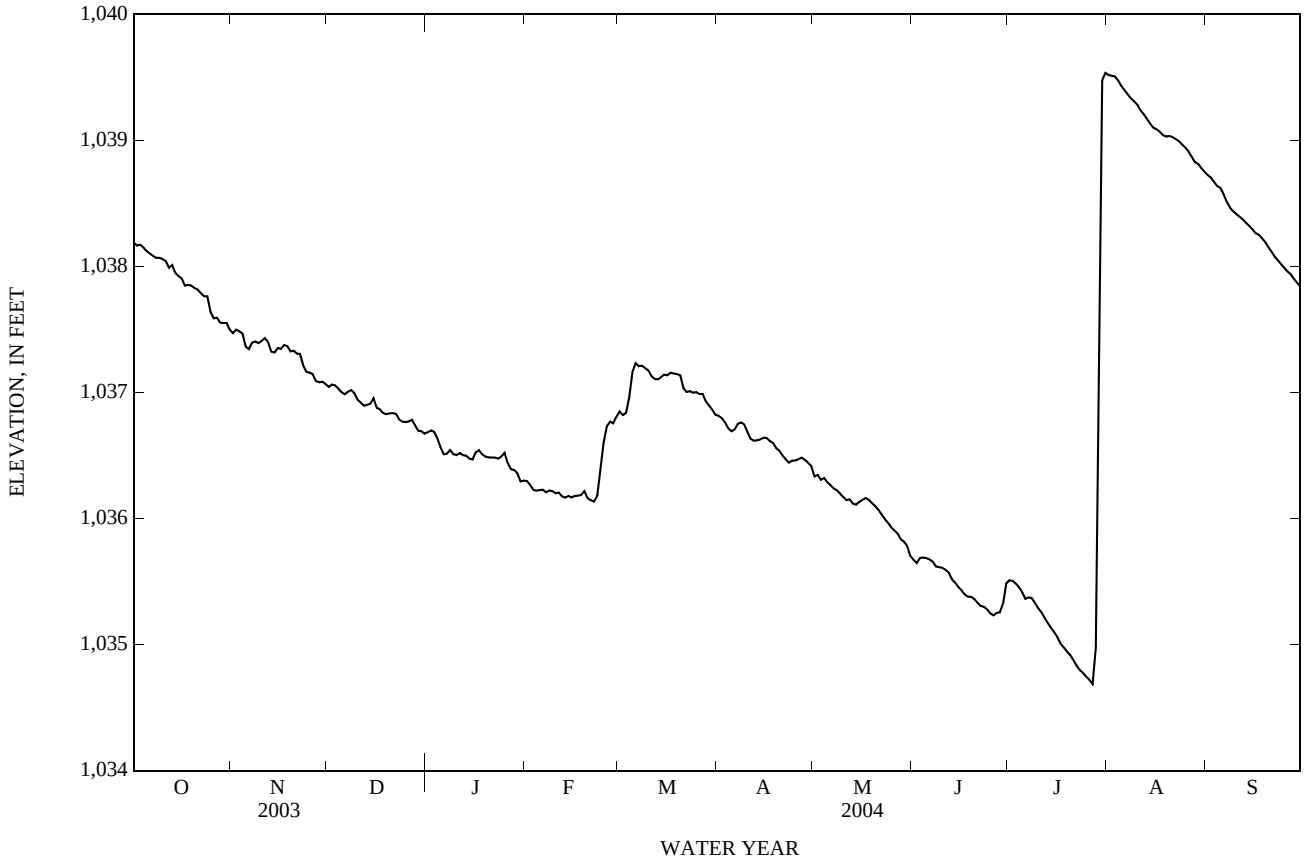
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,039.56 ft, July 31; minimum elevation, 1,034.66 ft, July 28.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,038.19	1,037.47	1,037.04	1,036.68	1,036.30	1,036.85	1,036.81	1,036.33	1,035.67	1,035.51	1,039.52	1,038.73
2	1,038.16	1,037.50	1,037.06	1,036.70	1,036.27	1,036.82	1,036.80	1,036.35	1,035.65	1,035.50	1,039.51	1,038.71
3	1,038.17	1,037.48	1,037.06	1,036.69	1,036.23	1,036.84	1,036.76	1,036.31	1,035.69	1,035.48	1,039.51	1,038.67
4	1,038.15	1,037.47	1,037.03	1,036.64	1,036.22	1,036.96	1,036.71	1,036.32	1,035.69	1,035.45	1,039.47	1,038.64
5	1,038.12	1,037.36	1,037.00	1,036.57	1,036.23	1,037.16	1,036.69	1,036.29	1,035.69	1,035.42	1,039.43	1,038.62
6	1,038.10	1,037.34	1,036.99	1,036.51	1,036.23	1,037.23	1,036.71	1,036.27	1,035.68	1,035.36	1,039.40	1,038.57
7	1,038.08	1,037.40	1,037.01	1,036.51	1,036.21	1,037.21	1,036.75	1,036.24	1,035.66	1,035.38	1,039.37	1,038.51
8	1,038.07	1,037.40	1,037.02	1,036.54	1,036.22	1,037.21	1,036.76	1,036.22	1,035.62	1,035.37	1,039.33	1,038.47
9	1,038.07	1,037.39	1,037.00	1,036.51	1,036.22	1,037.19	1,036.75	1,036.20	1,035.62	1,035.33	1,039.31	1,038.44
10	1,038.06	1,037.41	1,036.94	1,036.51	1,036.20	1,037.17	1,036.69	1,036.17	1,035.61	1,035.29	1,039.28	1,038.41
11	1,038.04	1,037.43	1,036.92	1,036.52	1,036.21	1,037.13	1,036.63	1,036.15	1,035.59	1,035.26	1,039.24	1,038.39
12	1,037.99	1,037.40	1,036.89	1,036.50	1,036.17	1,037.11	1,036.62	1,036.15	1,035.57	1,035.21	1,039.21	1,038.37
13	1,038.01	1,037.33	1,036.90	1,036.50	1,036.16	1,037.11	1,036.62	1,036.12	1,035.52	1,035.17	1,039.17	1,038.35
14	1,037.95	1,037.32	1,036.91	1,036.47	1,036.18	1,037.12	1,036.63	1,036.11	1,035.49	1,035.13	1,039.13	1,038.32
15	1,037.92	1,037.35	1,036.95	1,036.47	1,036.17	1,037.14	1,036.64	1,036.13	1,035.46	1,035.10	1,039.10	1,038.30
16	1,037.91	1,037.35	1,036.88	1,036.53	1,036.18	1,037.14	1,036.64	1,036.15	1,035.43	1,035.06	1,039.09	1,038.26
17	1,037.85	1,037.38	1,036.87	1,036.54	1,036.18	1,037.16	1,036.62	1,036.16	1,035.40	1,035.01	1,039.07	1,038.25
18	1,037.85	1,037.37	1,036.84	1,036.51	1,036.19	1,037.15	1,036.60	1,036.15	1,035.38	1,034.98	1,039.04	1,038.23
19	1,037.85	1,037.33	1,036.83	1,036.49	1,036.22	1,037.15	1,036.56	1,036.12	1,035.38	1,034.95	1,039.03	1,038.19
20	1,037.83	1,037.33	1,036.83	1,036.48	1,036.16	1,037.14	1,036.54	1,036.10	1,035.36	1,034.92	1,039.04	1,038.15
21	1,037.82	1,037.31	1,036.84	1,036.48	1,036.14	1,037.03	1,036.50	1,036.07	1,035.33	1,034.88	1,039.03	1,038.12
22	1,037.79	1,037.31	1,036.83	1,036.48	1,036.13	1,037.00	1,036.47	1,036.03	1,035.31	1,034.83	1,039.01	1,038.08
23	1,037.76	1,037.22	1,036.79	1,036.47	1,036.18	1,037.01	1,036.44	1,036.00	1,035.30	1,034.80	1,038.99	1,038.05
24	1,037.76	1,037.16	1,036.77	1,036.49	1,036.39	1,037.00	1,036.46	1,035.96	1,035.28	1,034.78	1,038.97	1,038.02
25	1,037.64	1,037.16	1,036.77	1,036.52	1,036.60	1,037.00	1,036.46	1,035.93	1,035.25	1,034.75	1,038.94	1,037.99
26	1,037.59	1,037.15	1,036.77	1,036.44	1,036.73	1,036.99	1,036.47	1,035.90	1,035.23	1,034.72	1,038.91	1,037.96
27	1,037.59	1,037.09	1,036.78	1,036.39	1,036.77	1,036.99	1,036.48	1,035.88	1,035.25	1,034.69	1,038.87	1,037.94
28	1,037.55	1,037.08	1,036.74	1,036.38	1,036.76	1,036.93	1,036.46	1,035.84	1,035.26	1,034.97	1,038.83	1,037.90
29	1,037.55	1,037.09	1,036.70	1,036.36	1,036.81	1,036.90	1,036.44	1,035.82	1,035.33	1,038.10	1,038.81	1,037.87
30	1,037.55	1,037.07	1,036.69	1,036.30	---	1,036.86	1,036.42	1,035.78	1,035.49	1,039.48	1,038.78	1,037.84
31	1,037.50	---	1,036.67	1,036.30	---	1,036.82	---	1,035.70	---	1,039.54	1,038.75	---
MEAN	1,037.89	1,037.32	1,036.88	1,036.50	1,036.30	1,037.05	1,036.60	1,036.10	1,035.47	1,035.50	1,039.13	1,038.28
MAX	1,038.19	1,037.50	1,037.06	1,036.70	1,036.81	1,037.23	1,036.81	1,036.35	1,035.69	1,039.54	1,039.52	1,038.73
MIN	1,037.50	1,037.07	1,036.67	1,036.30	1,036.13	1,036.82	1,036.42	1,035.70	1,035.23	1,034.69	1,038.75	1,037.84

CAL YR 2003 MEAN 1,039.21 MAX 1,041.01 MIN 1,036.67
WTR YR 2004 MEAN 1,036.92 MAX 1,039.54 MIN 1,034.69

07314000 Lake Kickapoo near Archer City, TX—Continued



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 mi^2.of which 275 mi^2 is above Lake Kickapoo.

PERIOD OF RECORD.--May. 1932 to Jan. 1956, Aug. 1966 to current year. Water-quality records: Chemical data: Jan. 1953 to Jan. 1956. Sediment data: May 1968 to Sept. 1975. Water temperature: Jan. 1953 to Jan. 1956.

REVISED RECORDS.--WSP 827: 1932-35. WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 934.72 ft above NGVD of 1929. Aug. 17, 1954, to Jan. 6, 1956, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1946, at least 10% of contributing drainage area has been regulated. The city of Wichita Falls diverts water from Lake Kickapoo (station 07314000) for municipal use and wholesale customers. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--13 years (water years 1933-1945), 110 ft^3/s (79,700 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1930 reached a stage of about 28 ft, from information by Texas Department of Transportation.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1933-1945: Maximum discharge, 17,900 ft^3/s Oct. 31, 1941 (gage height, 21.80 ft); no flow at times.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	39	0.03	0.86	0.00	231	283	1.2
2	0.00	0.00	0.00	0.00	0.00	31	0.02	2.3	0.01	32	15	0.77
3	0.00	0.00	0.00	0.00	0.00	9.3	0.02	1.5	0.03	8.3	5.5	0.47
4	0.00	0.00	0.00	0.00	0.00	13	0.01	1.6	0.00	1.9	2.0	0.28
5	0.00	0.00	0.00	0.00	0.00	182	0.01	0.82	0.17	0.93	1.1	0.17
6	0.00	0.00	0.00	0.00	0.00	125	0.03	0.40	0.94	0.65	0.71	0.12
7	0.00	0.00	0.00	0.00	0.00	20	0.05	0.25	0.16	0.63	0.61	0.08
8	0.00	0.00	0.00	0.00	0.00	6.6	0.42	0.15	0.07	0.30	0.45	0.06
9	0.00	0.00	0.00	0.00	0.00	2.0	3.6	0.08	0.02	0.15	0.25	0.05
10	0.00	0.00	0.00	0.00	0.00	0.92	0.96	0.05	0.03	0.04	0.14	0.03
11	0.00	0.00	0.00	0.00	0.00	0.60	0.36	0.02	0.00	0.02	0.10	0.03
12	0.00	0.00	0.00	0.00	0.00	0.45	0.23	0.01	0.23	0.00	0.06	0.02
13	0.00	0.00	0.00	0.00	0.00	0.42	0.17	0.05	0.22	0.00	0.03	0.01
14	0.00	0.00	0.00	0.00	0.00	0.32	0.14	0.07	0.14	0.00	0.03	0.00
15	0.00	0.00	0.00	0.00	0.00	131	0.24	0.08	0.10	0.01	0.14	0.00
16	0.00	0.00	0.00	0.00	0.00	31	0.13	0.82	0.10	0.00	0.37	0.00
17	0.00	0.00	0.00	0.00	0.00	13	0.09	1.8	0.10	0.00	0.16	0.00
18	0.00	0.00	0.00	0.00	0.00	4.3	0.08	0.93	0.06	0.00	0.11	0.00
19	0.00	0.00	0.00	0.00	0.00	1.5	0.07	0.34	0.03	0.00	0.09	0.00
20	0.00	0.00	0.00	0.00	0.00	0.68	0.05	0.30	0.01	0.00	0.09	0.00
21	0.00	0.00	0.00	0.00	0.00	0.48	0.03	0.36	1.5	0.00	0.08	0.00
22	0.00	0.14	0.00	0.00	0.00	0.37	0.07	0.30	0.62	0.00	0.06	0.00
23	0.00	0.30	0.00	0.00	0.00	0.33	0.22	0.23	0.21	0.00	0.05	0.00
24	0.00	0.15	0.00	0.00	5.3	0.30	2.3	0.13	0.07	0.00	0.04	0.00
25	0.00	0.08	0.00	0.00	94	0.24	7.0	0.10	0.01	0.40	0.03	0.00
26	0.00	0.04	0.00	0.00	182	0.16	13	0.10	0.00	0.00	0.03	0.00
27	0.00	0.02	0.00	0.00	33	0.10	6.4	0.08	0.00	0.00	0.03	0.00
28	0.00	0.01	0.00	0.00	9.1	0.06	7.8	0.06	0.00	503	0.29	0.00
29	0.00	0.00	0.00	0.00	4.7	0.04	4.3	0.06	0.01	4,830	0.29	0.00
30	0.00	0.00	0.00	0.00	---	0.03	1.4	0.02	241	4,000	0.07	0.00
31	0.00	---	0.00	0.00	---	0.04	---	0.01	---	1,650	1.6	---
TOTAL	0.00	0.74	0.00	0.00	328.10	614.24	49.23	13.88	245.84	11,259.33	312.51	3.29
MEAN	0.00	0.02	0.00	0.00	11.3	19.8	1.64	0.45	8.19	363	10.1	0.11
MAX	0.00	0.30	0.00	0.00	182	182	13	2.3	241	4,830	283	1.2
MIN	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.01	0.00	0.00	0.03	0.00
AC-FT	0.00	1.5	0.00	0.00	651	1,220	98	28	488	22,330	620	6.5

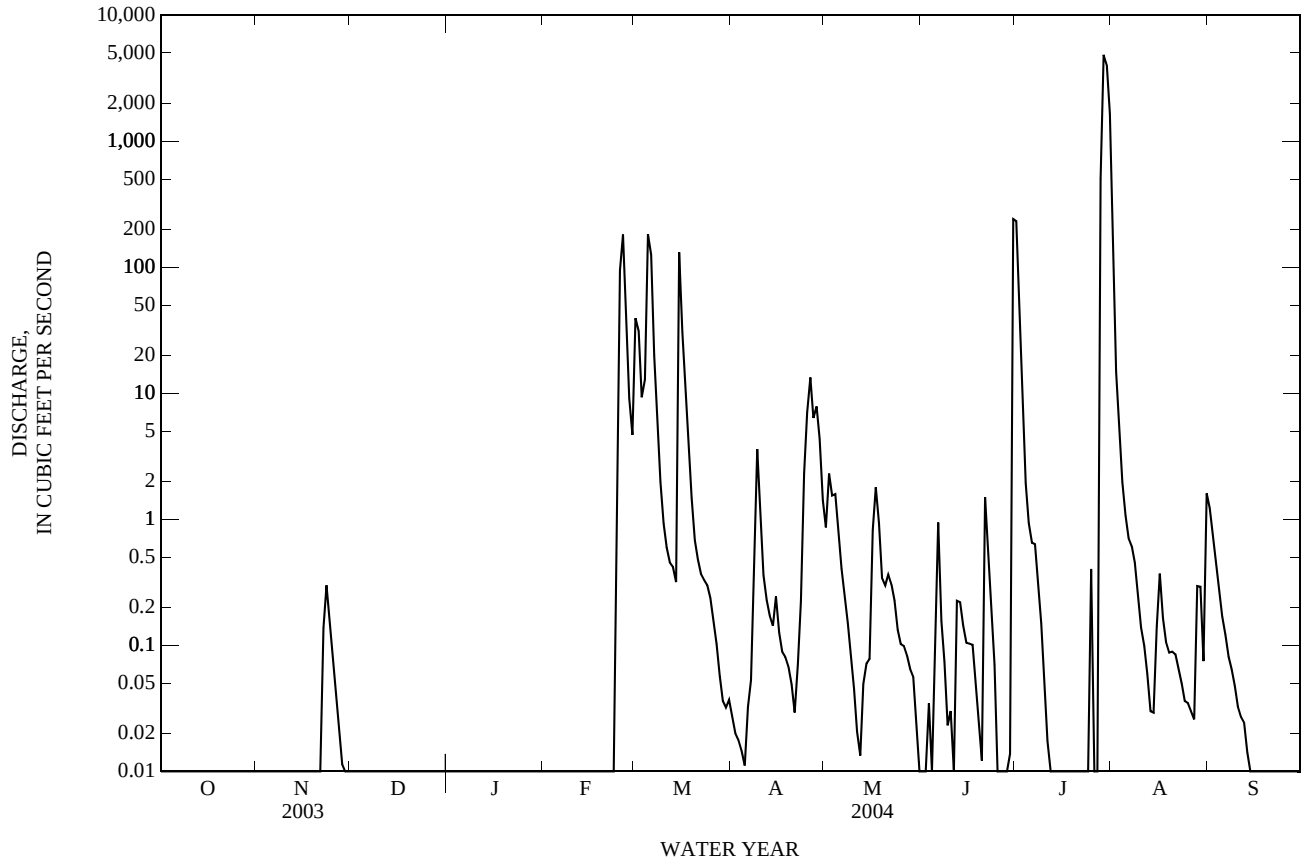
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2004hz, BY WATER YEAR (WY)

MEAN	49.6	17.3	19.9	13.4	26.5	44.6	37.4	140	106	28.8	39.9	57.9
MAX	771	160	194	154	254	309	637	1,224	944	363	1,337	624
(WY)	(1982)	(1987)	(1992)	(1990)	(2001)	(1990)	(1990)	(1982)	(1985)	(2004)	(1950)	(1989)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1953)	(1946)	(1946)	(1953)	(1947)	(1950)	(1971)	(1984)	(1953)	(1974)	(1967)	(1954)

07314500 Little Wichita River near Archer City, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1946 - 2004hz	
ANNUAL TOTAL	4,485.54		12,827.16			
ANNUAL MEAN	12.3		35.0		48.0	
HIGHEST ANNUAL MEAN					252	1990
LOWEST ANNUAL MEAN					2.27	1996
HIGHEST DAILY MEAN	1,030	May 25	4,830	Jul 29	9,550	Aug 2, 1950
LOWEST DAILY MEAN	0.00	Mar 12	0.00	Oct 1	0.00	Oct 31, 1945
ANNUAL SEVEN-DAY MINIMUM	0.00	Mar 12	0.00	Oct 1	0.00	Oct 31, 1945
MAXIMUM PEAK FLOW			7,390	Jul 29	20,100	May 16, 1989
MAXIMUM PEAK STAGE			25.21	Jul 29	27.03	May 16, 1989
ANNUAL RUNOFF (AC-FT)	8,900		25,440		34,790	
10 PERCENT EXCEEDS	7.9		2.3		51	
50 PERCENT EXCEEDS	0.00		0.01		0.28	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

h See PERIOD OF RECORD paragraph.
z 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 mi^2.

PERIOD OF RECORD.--June 1967 to Sept. 2002 (daily mean contents). Oct. 2002 to current year (daily mean gage height).

GAGE.--Water-stage recorder. Datum of gage is 0.40 ft below NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good. 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 Dec. 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 U.S. Geological Survey topographic maps. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	944.40
Design flood	939.95
Crest of spillway	926.40
Lowest gated outlet (invert)	874.10

COOPERATION.--Capacity table 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 contents after initial filling, 74,600 acre-ft, Aug. 11, 1971, gage height, 909.63 ft.

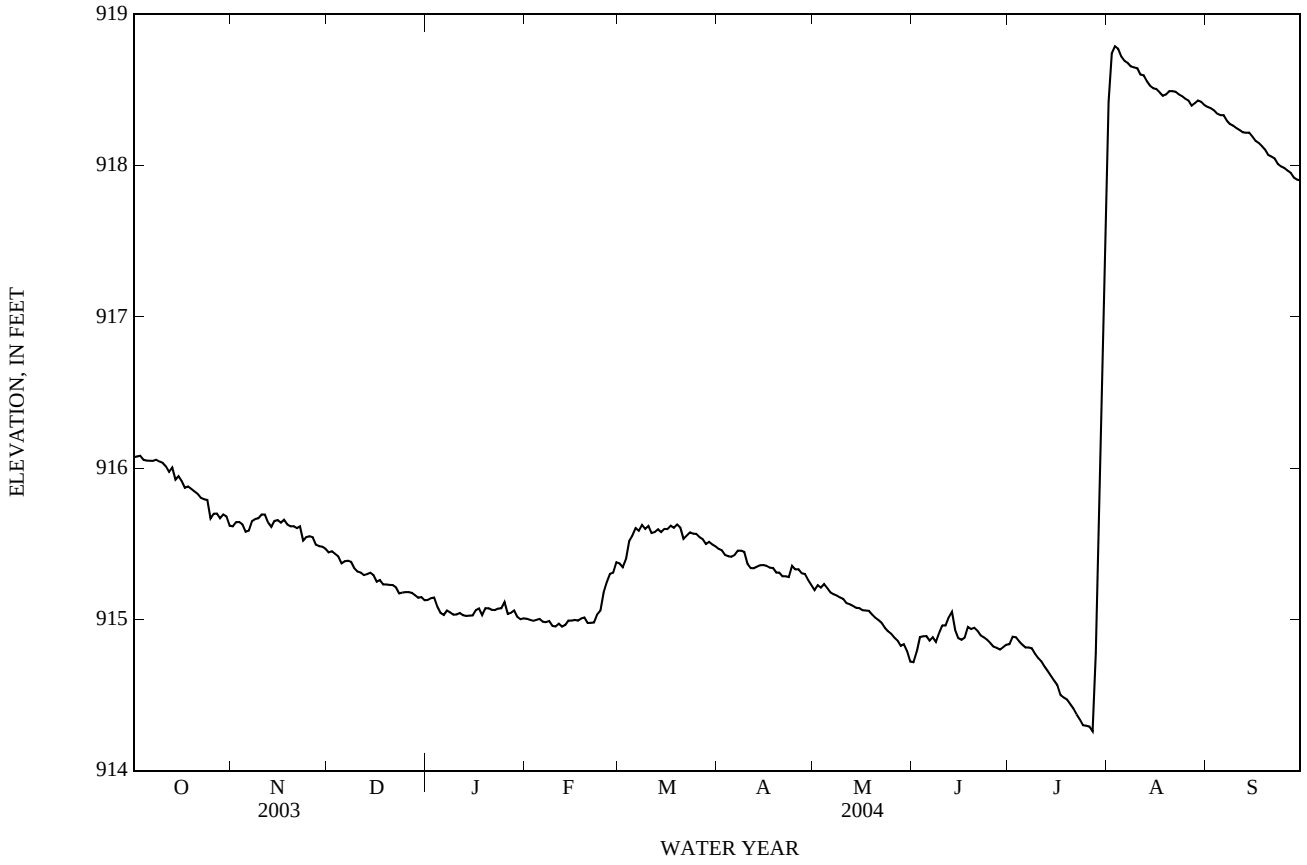
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 918.80 ft, Aug 3; minimum elevation, 914.24 ft, July 27.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	916.07	915.61	915.44	915.13	915.00	915.37	915.47	915.19	914.72	914.84	918.42	918.39
2	916.08	915.64	915.45	915.14	915.00	915.35	915.46	915.23	914.79	914.88	918.74	918.38
3	916.08	915.64	915.43	915.14	914.99	915.40	915.43	915.21	914.88	914.88	918.79	918.37
4	916.06	915.63	915.42	915.08	915.00	915.52	915.42	915.23	914.89	914.86	918.77	918.34
5	916.05	915.58	915.37	915.04	915.00	915.55	915.41	915.21	914.89	914.83	918.72	918.33
6	916.05	915.59	915.38	915.03	914.99	915.60	915.43	915.18	914.86	914.81	918.69	918.33
7	916.05	915.65	915.39	915.06	914.98	915.59	915.45	915.17	914.88	914.81	918.68	918.30
8	916.06	915.66	915.38	915.05	914.99	915.62	915.45	915.16	914.85	914.81	918.65	918.27
9	916.04	915.67	915.34	915.03	914.96	915.60	915.45	915.14	914.91	914.77	918.65	918.26
10	916.04	915.69	915.32	915.03	914.95	915.62	915.37	915.13	914.96	914.74	918.64	918.25
11	916.01	915.69	915.31	915.04	914.97	915.57	915.34	915.11	914.96	914.72	918.60	918.24
12	915.97	915.64	915.29	915.03	914.95	915.58	915.34	915.10	915.01	914.69	918.60	918.22
13	916.00	915.61	915.30	915.02	914.96	915.60	915.35	915.09	915.05	914.66	918.56	918.22
14	915.92	915.65	915.31	915.02	914.99	915.58	915.36	915.08	914.93	914.63	918.53	918.22
15	915.95	915.66	915.29	915.03	914.99	915.60	915.36	915.08	914.88	914.59	918.51	918.19
16	915.91	915.64	915.25	915.06	915.00	915.60	915.35	915.06	914.87	914.56	918.51	918.16
17	915.87	915.66	915.26	915.07	914.99	915.62	915.34	915.06	914.88	914.50	918.48	918.15
18	915.88	915.63	915.23	915.03	915.01	915.61	915.34	915.06	914.95	914.48	918.46	918.13
19	915.86	915.62	915.23	915.07	915.01	915.63	915.31	915.03	914.94	914.47	918.47	918.11
20	915.85	915.62	915.23	915.07	914.98	915.61	915.31	915.01	914.94	914.44	918.49	918.07
21	915.83	915.60	915.23	915.06	914.98	915.53	915.29	915.00	914.92	914.41	918.49	918.06
22	915.80	915.62	915.21	915.06	914.98	915.55	915.29	914.98	914.89	914.37	918.49	918.05
23	915.79	915.52	915.17	915.07	915.03	915.58	915.28	914.94	914.88	914.34	918.47	918.01
24	915.79	915.54	915.18	915.07	915.06	915.57	915.35	914.92	914.86	914.30	918.46	917.99
25	915.67	915.55	915.18	915.11	915.18	915.57	915.33	914.90	914.84	914.30	918.44	917.98
26	915.70	915.54	915.18	915.04	915.25	915.54	915.33	914.88	914.82	914.29	918.43	917.97
27	915.70	915.49	915.18	915.04	915.30	915.53	915.31	914.86	914.81	914.26	918.40	917.95
28	915.67	915.48	915.16	915.06	915.31	915.50	915.30	914.83	914.80	914.78	918.41	917.92
29	915.69	915.48	915.14	915.02	915.38	915.51	915.26	914.84	914.82	916.08	918.43	917.91
30	915.68	915.47	915.15	915.00	---	915.50	915.23	914.79	914.83	916.95	918.42	917.90
31	915.62	---	915.13	915.01	---	915.48	---	914.72	---	917.81	918.40	---
MEAN	915.89	915.60	915.28	915.06	915.04	915.55	915.36	915.04	914.88	914.83	918.54	918.16
MAX	916.08	915.69	915.45	915.14	915.38	915.63	915.47	915.23	915.05	917.81	918.79	918.39
MIN	915.62	915.47	915.13	915.00	914.95	915.35	915.23	914.72	914.72	914.26	918.40	917.90

WTR YR 2004 MEAN 915.77 MAX 918.79 MIN 914.26

07314800 Lake Arrowhead near Henrietta, TX—Continued



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 mi^2.

PERIOD OF RECORD.--Jan. 1953 to current year. Prior to Oct. 1974, published as "station 07315000 Little Wichita River near Henrietta". Water-quality records: Chemical data: Dec. 1952 to Jan. 1956, Nov. 1959 to Sept. 1966, Jan. 1968 to Sept. 1985. Dissolved oxygen: Aug. 1999 to Sept. 1999.

REVISED RECORDS.--WDR TX-93-1: Daily discharge.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 831.57 ft above NGVD of 1929. Prior to June 26, 1953, nonrecording gage, and June 27, 1953 to July 11, 1975 water-stage recorder, all at site 2.6 mi downstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records poor. Since installation of gage in Jan. 1953, at least 10% of contributing drainage area has been regulated. The city of Wichita Falls returns waste water/filter-plant wash water to the river below Wichita River at Wichita Falls (station 07312500) and above Wichita River near Charlie (station 07312700). The city of Henrietta diverts water from pool below gage for municipal use. Records of diversions are furnished by the cities of Wichita Falls and Henrietta. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1908 reached a stage of 21 ft at former site, from information by Texas Department of Transportation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

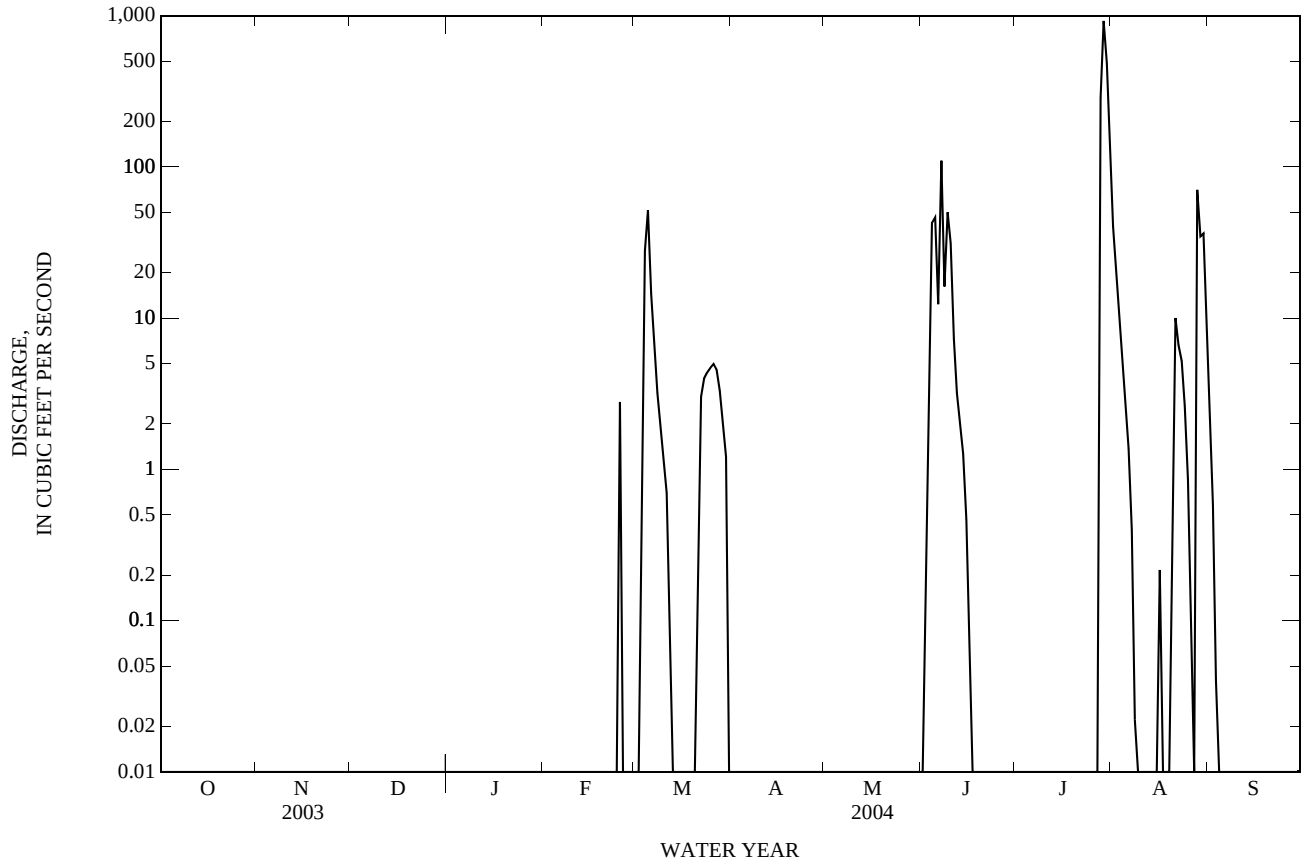
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40	2.2
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	21	0.59
3	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	6.7	0.00	11	0.04
4	0.00	0.00	0.00	0.00	0.00	28	0.00	0.00	43	0.00	5.3	0.01
5	0.00	0.00	0.00	0.00	0.00	52	0.00	0.00	46	0.00	2.8	0.00
6	0.00	0.00	0.00	0.00	0.00	15	0.00	0.00	12	0.00	1.4	0.00
7	0.00	0.00	0.00	0.00	0.00	6.5	0.00	0.00	110	0.00	0.40	0.00
8	0.00	0.00	0.00	0.00	0.00	3.2	0.00	0.00	16	0.00	0.02	0.00
9	0.00	0.00	0.00	0.00	0.00	2.0	0.00	0.00	50	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	1.2	0.00	0.00	31	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00	7.3	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	3.2	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.22	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00
21	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00	10	0.00
22	0.00	0.00	0.00	0.00	0.00	3.0	0.00	0.00	0.00	0.00	6.6	0.00
23	0.00	0.00	0.00	0.00	0.00	4.0	0.00	0.00	0.00	0.00	5.2	0.00
24	0.00	0.00	0.00	0.00	0.00	4.4	0.00	0.00	0.00	0.00	2.6	0.00
25	0.00	0.00	0.00	0.00	2.8	4.7	0.00	0.00	0.00	0.00	0.86	0.00
26	0.00	0.00	0.00	0.00	0.00	5.0	0.00	0.00	0.00	0.00	0.08	0.00
27	0.00	0.00	0.00	0.00	0.00	4.6	0.00	0.00	0.00	0.00	0.01	0.00
28	0.00	0.00	0.00	0.00	0.00	3.3	0.00	0.00	0.00	287	71	0.00
29	0.00	0.00	0.00	0.00	0.00	2.1	0.00	0.00	0.00	924	35	0.00
30	0.00	0.00	0.00	0.00	---	1.2	0.00	0.00	0.00	486	36	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	114	9.0	---
TOTAL	0.00	0.00	0.00	0.00	2.80	141.66	0.00	0.00	329.42	1,811.00	258.83	2.84
MEAN	0.00	0.00	0.00	0.00	0.10	4.57	0.00	0.00	11.0	58.4	8.35	0.09
MAX	0.00	0.00	0.00	0.00	2.8	52	0.00	0.00	110	924	71	2.2
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	5.6	281	0.00	0.00	653	3,590	513	5.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2004, BY WATER YEAR (WY)

MEAN	68.8	38.9	31.7	12.3	32.7	61.9	93.4	256	177	26.8	9.04	72.9
MAX	1,050	854	622	131	305	937	2,169	3,279	1,652	549	157	656
(WY)	(1954)	(1958)	(1963)	(1992)	(2001)	(1990)	(1990)	(1957)	(1992)	(1992)	(1966)	(1955)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1953)	(1953)	(1953)	(1953)	(1953)	(1954)	(1953)	(1971)	(1953)	(1956)	(1954)	(1954)

07314900 Little Wichita River above Henrietta, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1953 - 2004	
ANNUAL TOTAL	381.53		2,546.55			
ANNUAL MEAN	1.05		6.96		73.5	
HIGHEST ANNUAL MEAN					498	1990
LOWEST ANNUAL MEAN					0.84	2000
HIGHEST DAILY MEAN	236	Jun 15	924	Jul 29	10,500	May 3, 1990
LOWEST DAILY MEAN	0.00	Jan 15	0.00	Oct 1	0.00	Oct 1, 1952
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 15	0.00	Oct 1	0.00	Oct 1, 1952
MAXIMUM PEAK FLOW			1,060	Jul 29	14,200	May 3, 1990
MAXIMUM PEAK STAGE			18.48	Jul 29	24.96	May 3, 1990
ANNUAL RUNOFF (AC-FT)	757		5,050		53,220	
10 PERCENT EXCEEDS	0.00		3.1		57	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	



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 mi^2.

PERIOD OF RECORD.--Nov. 1963 to current year.

REVISED RECORDS.--WRD TX-72-1: 1966(M).

GAGE.--Water-stage recorder. Datum of gage is 825.32 ft above NGVD of 1929. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Oct. 1941 reached a stage of 28.8 ft, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	2.4	0.00	22	0.00	e1.2	5.1	0.00
2	0.00	0.00	0.00	0.00	0.00	2.0	0.00	3.7	0.01	e0.82	1.6	0.00
3	0.00	0.00	0.00	0.00	0.00	6.0	0.00	1.2	0.01	e0.64	0.62	0.00
4	0.00	0.00	0.00	0.00	0.00	45	0.00	0.48	0.00	e0.49	0.38	0.00
5	0.00	0.00	0.00	0.00	0.00	121	0.00	0.19	0.00	e0.32	0.18	0.00
6	0.00	0.00	0.00	0.00	0.00	61	0.00	0.12	0.00	e0.27	0.08	0.00
7	0.00	0.00	0.00	0.00	0.00	14	0.00	0.09	0.48	e0.26	0.04	0.00
8	0.00	0.00	0.00	0.00	0.00	5.2	0.00	0.08	0.29	e0.25	0.01	0.00
9	0.00	0.00	0.00	0.00	0.00	2.0	0.00	0.08	37	0.97	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	1.0	0.00	0.07	13	0.53	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.07	17	0.32	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.07	9.4	0.15	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.10	3.5	0.08	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.11	1.2	0.04	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.08	0.54	0.02	1.7	0.00
16	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.08	0.28	0.00	20	0.00
17	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.07	0.16	0.00	4.9	0.00
18	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.04	0.13	0.00	0.97	0.00
19	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.01	0.09	0.00	0.45	0.00
20	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.05	0.00	0.27	0.00
21	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.02	0.00	0.44	0.00
22	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	2.0	0.00	0.38	0.00
23	0.00	0.00	0.00	0.00	0.01	0.04	64	0.00	1.0	0.00	0.35	0.00
24	0.00	0.00	0.00	0.00	0.01	0.02	836	0.00	0.47	0.00	0.22	0.00
25	0.00	0.00	0.00	0.00	14	0.00	908	0.00	0.40	0.00	0.11	0.00
26	0.00	0.00	0.00	0.00	64	0.00	83	0.00	0.40	0.00	0.08	0.00
27	0.00	0.00	0.00	0.00	24	0.00	12	0.00	0.40	0.00	0.05	0.00
28	0.00	0.00	0.00	0.00	7.8	0.00	4.8	0.00	e0.37	22	0.05	0.00
29	0.00	0.00	0.00	0.00	3.9	0.00	2.1	0.00	e0.35	105	0.06	0.00
30	0.00	0.00	0.00	0.00	---	0.00	3.8	0.00	e0.51	76	0.03	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	17	0.00	---
TOTAL	0.00	0.00	0.00	0.00	113.72	262.34	1,913.70	28.64	89.06	226.36	38.07	0.00
MEAN	0.00	0.00	0.00	0.00	3.92	8.46	63.8	0.92	2.97	7.30	1.23	0.00
MAX	0.00	0.00	0.00	0.00	64	121	908	22	37	105	20	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	226	520	3,800	57	177	449	76	0.00

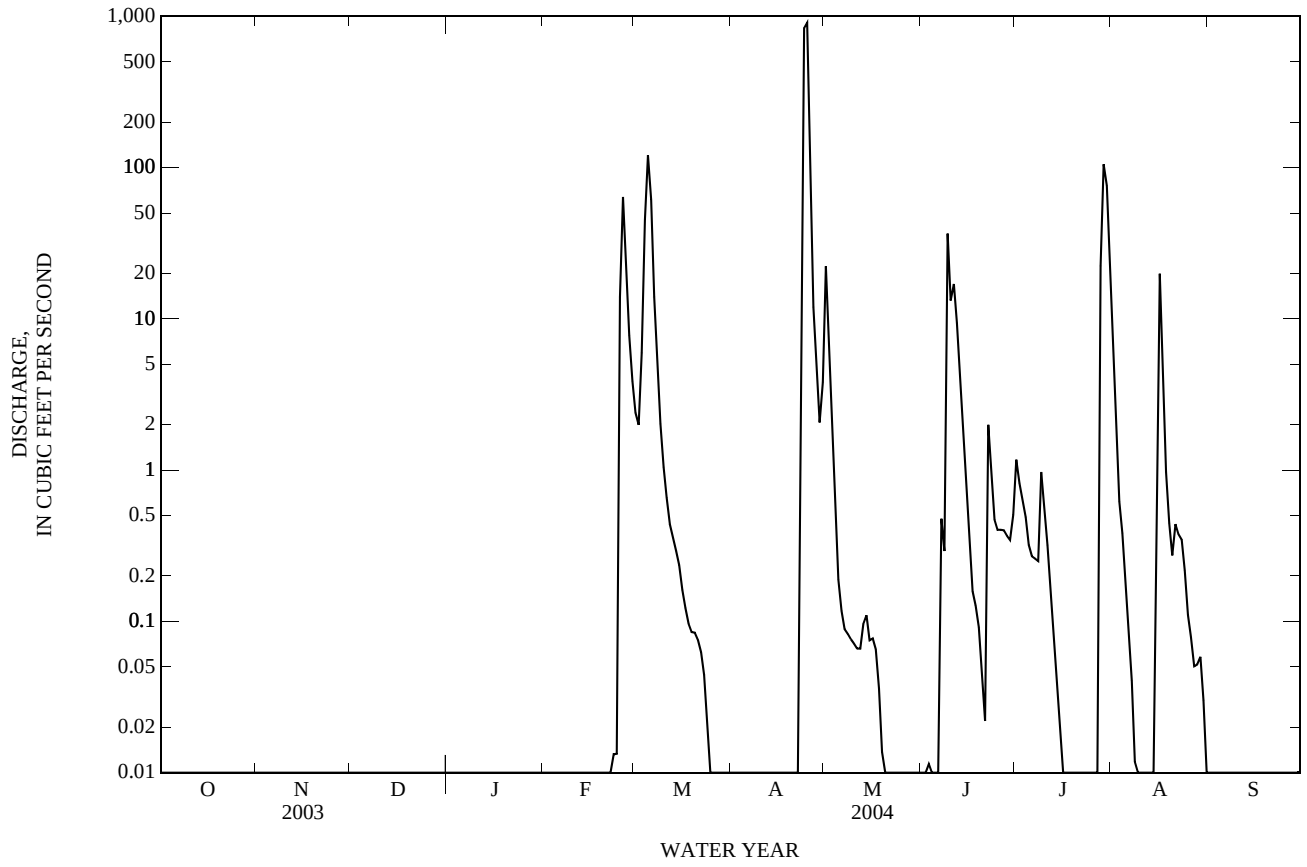
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	31.9	12.6	19.2	11.5	31.9	49.1	38.1	94.5	57.7	5.44	4.78	10.9
MAX	902	97.3	303	139	411	295	686	453	508	123	48.7	102
(WY)	(1982)	(1974)	(1992)	(1985)	(1997)	(1985)	(1990)	(1989)	(1992)	(1973)	(1995)	(1980)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1979)	(1972)	(1966)	(1966)	(1966)	(1967)	(1971)	(1971)	(1971)	(1964)	(1969)	(1979)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004	
ANNUAL TOTAL	213.93		2,671.89			
ANNUAL MEAN	0.59		7.30		31.2	
HIGHEST ANNUAL MEAN					128	1982
LOWEST ANNUAL MEAN					0.44	1996
HIGHEST DAILY MEAN	30	Sep 12	908	Apr 25	16,900	Oct 13, 1981
LOWEST DAILY MEAN	0.00	Jan 15	0.00	Oct 1	0.00	Dec 1, 1963
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 15	0.00	Oct 1	0.00	Dec 1, 1963
MAXIMUM PEAK FLOW			1,150	Apr 25	32,500	Oct 13, 1981
MAXIMUM PEAK STAGE			18.86	Apr 25	31.70	Oct 13, 1981
ANNUAL RUNOFF (AC-FT)	424		5,300		22,600	
10 PERCENT EXCEEDS	0.86		2.0		16	
50 PERCENT EXCEEDS	0.00		0.00		0.12	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated

07315200 East Fork Little Wichita River near Henrietta, TX—Continued



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 and Rock Island 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 mi^2 of which 5,936 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Apr. 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 NGVD of 1929. Prior to Jan. 12, 1939, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in Apr. 1938, at least 10% of contributing drainage area has been regulated. There are many small diversions upstream from station for irrigation, oil field operations, and for municipal uses.

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.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

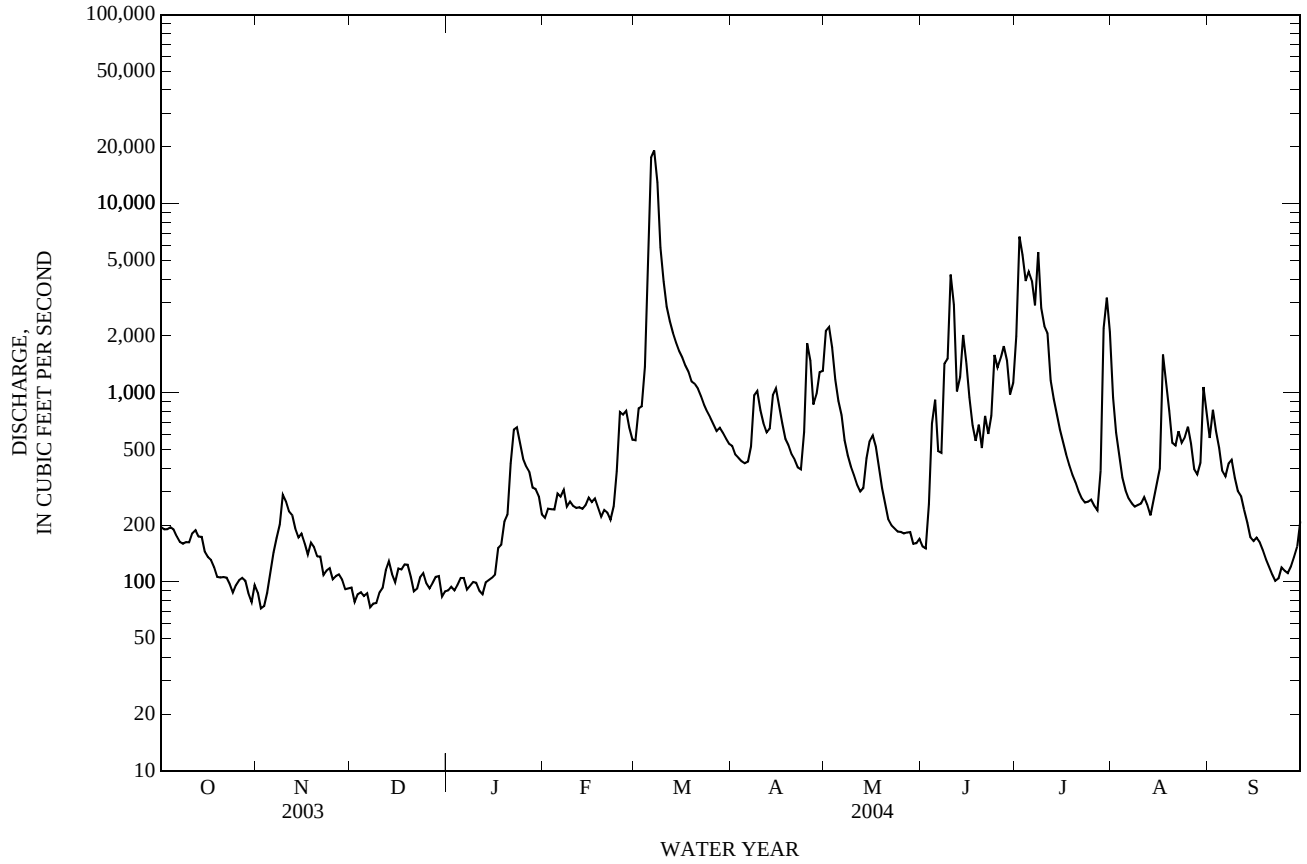
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	195	88	93	90	218	562	524	2,130	154	1,990	944	577
2	190	72	78	94	244	828	473	2,230	150	6,690	614	813
3	190	74	86	90	243	849	453	1,740	258	5,370	458	629
4	195	88	88	96	241	1,370	435	1,170	688	3,900	357	511
5	190	114	84	105	294	4,580	424	909	919	4,370	305	387
6	174	143	87	105	283	17,600	433	763	492	3,900	277	362
7	163	171	73	91	307	19,200	521	562	482	2,900	260	423
8	159	201	77	95	250	13,000	971	467	1,430	5,550	250	442
9	162	290	77	100	266	5,880	1,020	409	1,520	2,810	255	355
10	162	267	88	99	252	3,880	808	367	4,220	2,260	260	302
11	181	236	93	90	246	2,860	690	327	2,920	2,070	280	284
12	188	225	115	86	248	2,390	618	301	1,020	1,160	256	240
13	174	192	129	99	243	2,080	646	314	1,210	930	225	206
14	173	172	110	102	254	1,850	972	451	2,020	763	273	172
15	145	180	100	105	279	1,670	1,060	554	1,440	639	332	165
16	136	160	118	109	265	1,540	849	595	946	547	398	172
17	131	140	116	151	276	1,390	693	521	673	472	1,590	162
18	120	161	124	157	248	1,290	571	405	558	413	1,130	148
19	106	153	123	209	221	1,150	530	314	678	369	804	132
20	106	137	106	227	240	1,120	473	259	511	336	544	120
21	106	136	89	424	232	1,060	443	214	756	302	527	110
22	105	109	92	639	214	961	403	199	606	277	626	101
23	98	115	106	657	252	865	394	192	755	263	544	104
24	88	118	111	541	385	794	621	185	1,590	266	580	119
25	96	103	98	448	792	739	1,830	184	1,360	273	662	115
26	102	107	92	406	767	679	1,480	180	1,530	253	539	111
27	105	110	99	381	803	628	868	182	1,770	239	395	121
28	101	103	106	316	657	654	986	183	1,480	386	371	135
29	87	91	107	310	566	616	1,290	159	980	2,200	427	154
30	78	92	84	284	---	572	1,310	161	1,130	3,190	1,070	209
31	96	---	89	228	---	538	---	169	---	2,100	776	---
TOTAL	4,302	4,348	3,038	6,934	9,786	93,195	22,789	16,796	34,246	57,188	16,329	7,881
MEAN	139	145	98.0	224	337	3,006	760	542	1,142	1,845	527	263
MAX	195	290	129	657	803	19,200	1,830	2,230	4,220	6,690	1,590	813
MIN	78	72	73	86	214	538	394	159	150	239	225	101
AC-FT	8,530	8,620	6,030	13,750	19,410	184,900	45,200	33,310	67,930	113,400	32,390	15,630

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2004, BY WATER YEAR (WY)

MEAN	2,885	1,511	1,125	943	1,376	2,039	2,558	6,267	6,007	1,639	1,275	1,913
MAX	23,900	9,713	11,810	5,306	9,320	14,710	18,080	43,580	37,460	8,077	14,730	9,653
(WY)	(1987)	(1987)	(1992)	(1992)	(1987)	(1998)	(1990)	(1957)	(1941)	(1950)	(1995)	(1986)
MIN	108	102	91.2	76.5	136	66.1	142	134	517	158	107	100
(WY)	(1953)	(1940)	(1939)	(1940)	(1953)	(1940)	(1971)	(1971)	(1966)	(1964)	(2003)	(2000)

07315500 Red River near Terral, OK—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1938 - 2004	
ANNUAL TOTAL	212,560		276,832			
ANNUAL MEAN	582		756		2,459	
HIGHEST ANNUAL MEAN					8,925	1987
LOWEST ANNUAL MEAN					523	1953
HIGHEST DAILY MEAN	10,400	Jun 8	19,200	Mar 7	215,000	Jun 7, 1995
LOWEST DAILY MEAN	63	Aug 2	72	Nov 2	46	Mar 20, 1940
ANNUAL SEVEN-DAY MINIMUM	64	Aug 1	82	Dec 3	47	Mar 18, 1940
MAXIMUM PEAK FLOW			21,300	Mar 6	236,000	Jun 7, 1995
MAXIMUM PEAK STAGE			14.37	Mar 6	33.60	Oct 22, 1983
ANNUAL RUNOFF (AC-FT)	421,600		549,100		1,782,000	
10 PERCENT EXCEEDS	1,100		1,530		5,360	
50 PERCENT EXCEEDS	284		284		589	
90 PERCENT EXCEEDS	92		98		174	



07315500 Red River near Terral, OK—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1967 to Sept. 1997, Oct. 2002 to current year.
BIOLOGICAL DATA: May 1997 to Sept. 1997, Oct. 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
28...	0940	359	12.3	122	8.4	5,450	14.2	89	103	2	.53	1.8	<.04
MAR													
26...	1030	673	9.6	107	8.1	7,610	19.7	95	112	2	.28	1.1	<.04
MAY													
24...	1055	183	7.3	94	8.1	6,040	25.0	80	94	1	.33	1.1	<.04
AUG													
13...	1205	190	8.3	107	8.2	4,400	25.6	94	111	2	.43	1.3	<.04

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
OCT									
28...	.09	.12	.032	<.02	.018	.24oc	1.9	E37k	E40k
MAR									
26...	--	<.06	<.008	<.02	.012	.19oc	--	E43k	E15k
MAY									
24...	--	<.06	.008	<.02	.015	.149	--	E33k	20
AUG									
13...	--	<.06	<.008	<.02	.018	.172	--	E18k	E13k

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

Value qualifier codes used in this table:
c -- See laboratory comment
k -- Counts outside acceptable range
o -- Result determined by alternate method

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07315600 Lake Nacona near Nacona, TX

LOCATION.--Lat 33°52'57", long 97°39'09", Montague County, Hydrologic Unit 11130201, on western bank near left end of dam on Farmer's River, 6.0 mi northeast of Nocona.

DRAINAGE AREA.--94.0 mi^2.

PERIOD OF RECORD.--Mar. 1999 to Sept. 2002 (daily mean contents). Oct. 2002 to current year (daily mean gage height).

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

REMARKS.--Records good. The lake is formed by an earthfill dam 3,720 ft long, including a 483-ft-wide reinforced concrete ogee-type uncontrolled spillway near right end of dam. The dam was completed Oct. 1960, and storage began spring 1961. The service outlet consists of two gate-controlled 4- by 5-ft conduits. The dam and lake are owned by the North Montague County Water Supply District, which uses the water for their municipal supply. The capacity table is based on U.S. Geological Survey topographic maps, dated 1929. The capacity curve was entitled "Initial Lake Nocona Area and Capacity Characteristics". Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	847.0
Crest of spillway	827.5
Lowest gated outlet (invert)	795.0

COOPERATION.--Capacity curve provided by the North Montague County Water Supply District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 29,540 acre-ft, Feb. 28, Mar. 1, 2001, elevation, 829.51 ft; minimum contents, 13,240 acre-ft, Oct. 5, 2000, elevation, 816.95 ft.

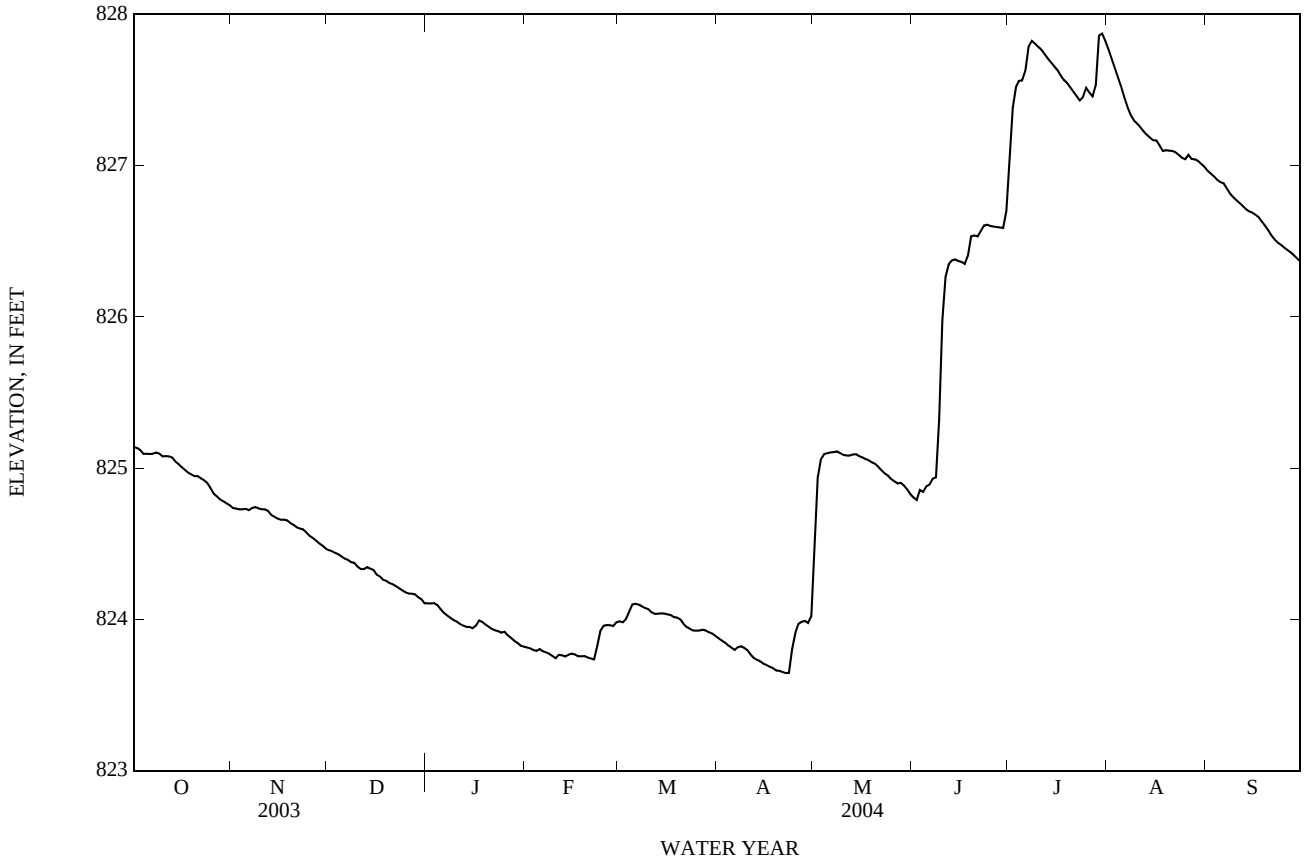
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 827.90 ft, July 29; minimum elevation, 823.63 ft, April 23.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	825.14	824.74	824.46	824.11	823.81	823.99	823.88	824.54	824.81	827.02	827.77	826.97
2	825.13	824.73	824.45	824.11	823.81	823.98	823.86	824.94	824.79	827.38	827.70	826.95
3	825.12	824.73	824.44	824.11	823.80	824.00	823.85	825.06	824.86	827.52	827.64	826.93
4	825.09	824.73	824.43	824.09	823.79	824.05	823.83	825.09	824.84	827.56	827.58	826.91
5	825.10	824.73	824.42	824.07	823.80	824.10	823.81	825.10	824.88	827.56	827.52	826.89
6	825.09	824.72	824.40	824.04	823.79	824.10	823.80	825.10	824.89	827.63	827.45	826.88
7	825.10	824.74	824.39	824.03	823.78	824.10	823.82	825.11	824.93	827.79	827.38	826.85
8	825.10	824.74	824.38	824.01	823.77	824.09	823.82	825.11	824.94	827.83	827.33	826.82
9	825.10	824.73	824.37	824.00	823.76	824.08	823.81	825.10	825.32	827.81	827.30	826.79
10	825.08	824.73	824.35	823.99	823.74	824.07	823.80	825.09	825.98	827.79	827.28	826.77
11	825.08	824.73	824.33	823.97	823.77	824.05	823.77	825.08	826.27	827.77	827.25	826.75
12	825.08	824.72	824.33	823.96	823.76	824.04	823.74	825.08	826.35	827.74	827.23	826.73
13	825.07	824.69	824.35	823.95	823.75	824.04	823.73	825.09	826.37	827.71	827.20	826.71
14	825.04	824.68	824.34	823.95	823.77	824.04	823.72	825.09	826.38	827.68	827.18	826.70
15	825.03	824.67	824.33	823.94	823.77	824.04	823.71	825.08	826.37	827.66	827.17	826.69
16	825.01	824.66	824.30	823.96	823.77	824.03	823.70	825.07	826.36	827.63	827.17	826.67
17	824.99	824.66	824.28	823.99	823.76	824.03	823.69	825.06	826.35	827.60	827.13	826.66
18	824.97	824.65	824.26	823.98	823.76	824.02	823.68	825.05	826.40	827.57	827.10	826.63
19	824.96	824.64	824.25	823.97	823.76	824.01	823.66	825.04	826.53	827.55	827.10	826.60
20	824.95	824.62	824.24	823.95	823.75	824.00	823.66	825.03	826.54	827.52	827.10	826.57
21	824.95	824.61	824.23	823.94	823.74	823.97	823.65	825.01	826.53	827.49	827.10	826.54
22	824.93	824.60	824.22	823.93	823.73	823.95	823.64	824.98	826.57	827.46	827.09	826.51
23	824.92	824.59	824.21	823.92	823.82	823.94	823.65	824.96	826.60	827.43	827.07	826.49
24	824.90	824.57	824.19	823.91	823.93	823.93	823.80	824.95	826.61	827.45	827.05	826.48
25	824.87	824.55	824.18	823.92	823.96	823.93	823.91	824.93	826.60	827.51	827.04	826.46
26	824.83	824.54	824.17	823.89	823.96	823.93	823.97	824.91	826.60	827.48	827.07	826.44
27	824.81	824.52	824.17	823.88	823.96	823.93	823.99	824.90	826.59	827.46	827.04	826.43
28	824.79	824.50	824.17	823.86	823.96	823.93	823.99	824.90	826.59	827.53	827.04	826.41
29	824.78	824.49	824.15	823.85	823.98	823.91	823.98	824.89	826.59	827.86	827.03	826.39
30	824.77	824.47	824.13	823.83	---	823.91	824.02	824.86	826.70	827.87	827.01	826.37
31	824.75	---	824.11	823.82	---	823.89	---	824.83	---	827.82	826.99	---
MEAN	824.98	824.65	824.29	823.97	823.81	824.00	823.80	825.00	826.00	827.60	827.23	826.67
MAX	825.14	824.74	824.46	824.11	823.98	824.10	824.02	825.11	826.70	827.87	827.77	826.97
MIN	824.75	824.47	824.11	823.82	823.73	823.89	823.64	824.54	824.79	827.02	826.99	826.37

CAL YR 2003 MEAN 825.60 MAX 827.00 MIN 824.11
WTR YR 2004 MEAN 825.17 MAX 827.87 MIN 823.64

07315600 Lake Nacona near Nacona, TX—Continued



07315950 Moss Lake near Gainesville, TX

LOCATION.--Lat 33°46'26", long 97°12'50", Cooke County, Hydrologic Unit 11130201, on upstream side of dam 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 10.0 mi northwest of Gainesville.

DRAINAGE AREA.--65.0 mi^2.

PERIOD OF RECORD.--Oct. 1967 to current year. Water-quality records: Chemical data: Oct. 1969 to Sept. 1984.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Apr. 20, 1979, recording gage at site about 150 ft upstream from same datum. Satellite telemeter at station.

REMARKS.--No estimated daily contents. Records good. 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 ft^3/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. Conservation pool storage is 24,155 acre-ft. Data regarding the dam is given in the following table:

	Elevation (feet)
Top of dam	740.0
Top of design flood pool	736.0
Crest of spillway	725.0
Crest of spillway morning-glory type (top of conservation pool)	715.0
Lowest gated outlet (invert)	666.0

COOPERATION.--Capacity Table No. 1, prepared by Freese, Nichols, and Endress, Consulting Engineers, Fort Worth, for the city of Gainesville, was replaced by Capacity Table No. 2. Table No. 2 was furnished by the Texas Water Development Board, and put into effect Oct. 27, 1999.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 50,990 acre-ft, Oct. 13, 1981, elevation, 733.72 ft; minimum contents since lake filled in May 1968, 11,490 acre-ft, Jan. 18, 1990, elevation, 702.08 ft.

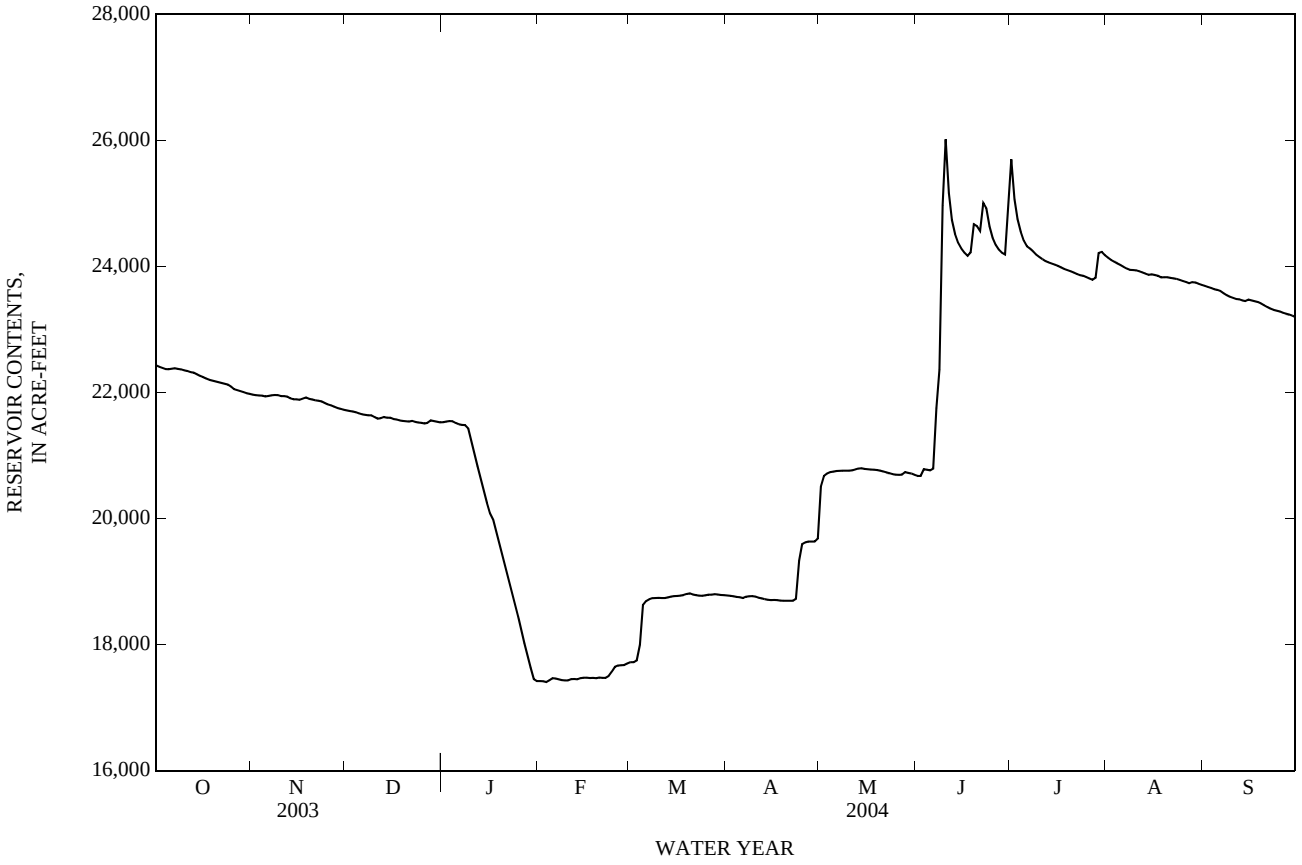
EXTREMES FOR CURRENT YEAR.--Maximum contents, 26,870 acre-ft, June 9, elevation, 717.65 ft; minimum contents, 17,390 acre-ft, Feb. 4, elevation, 708.16 ft.

RESERVOIR STORAGE, ACRE FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22,430	21,960	21,720	21,530	17,420	17,720	18,780	20,500	20,680	25,700	24,140	23,690
2	22,410	21,960	21,710	21,540	17,420	17,720	18,780	20,680	20,680	25,070	24,100	23,670
3	22,390	21,950	21,700	21,550	17,410	17,750	18,770	20,710	20,780	24,750	24,070	23,660
4	22,370	21,950	21,690	21,540	17,430	18,000	18,760	20,740	20,770	24,550	24,050	23,640
5	22,370	21,940	21,670	21,520	17,470	18,630	18,750	20,750	20,770	24,410	24,020	23,630
6	22,380	21,950	21,650	21,500	17,460	18,690	18,740	20,750	20,790	24,320	23,990	23,610
7	22,380	21,950	21,650	21,490	17,450	18,720	18,760	20,760	21,750	24,280	23,970	23,580
8	22,370	21,960	21,640	21,480	17,440	18,740	18,770	20,760	22,360	24,240	23,950	23,540
9	22,370	21,960	21,640	21,430	17,430	18,740	18,770	20,760	24,970	24,190	23,940	23,520
10	22,350	21,940	21,610	21,240	17,430	18,740	18,760	20,760	26,020	24,150	23,940	23,500
11	22,340	21,940	21,590	21,030	17,450	18,740	18,740	20,760	25,160	24,120	23,920	23,480
12	22,320	21,930	21,590	20,830	17,450	18,740	18,740	20,780	24,740	24,080	23,900	23,480
13	22,320	21,910	21,610	20,640	17,450	18,750	18,720	20,790	24,510	24,060	23,890	23,460
14	22,290	21,890	21,600	20,440	17,470	18,760	18,710	20,800	24,380	24,050	23,870	23,450
15	22,260	21,890	21,600	20,250	17,480	18,770	18,710	20,790	24,280	24,030	23,870	23,470
16	22,250	21,880	21,580	20,090	17,470	18,770	18,710	20,780	24,220	24,010	23,860	23,460
17	22,220	21,900	21,570	19,980	17,470	18,780	18,710	20,780	24,170	23,980	23,850	23,450
18	22,200	21,920	21,560	19,780	17,470	18,790	18,700	20,770	24,220	23,960	23,830	23,430
19	22,190	21,900	21,550	19,580	17,470	18,800	18,700	20,770	24,670	23,940	23,830	23,410
20	22,180	21,890	21,540	19,380	17,480	18,810	18,700	20,760	24,640	23,920	23,830	23,380
21	22,160	21,880	21,540	19,190	17,470	18,800	18,700	20,750	24,560	23,900	23,820	23,360
22	22,150	21,870	21,550	18,990	17,470	18,780	18,700	20,730	25,010	23,880	23,810	23,330
23	22,140	21,860	21,530	18,800	17,500	18,780	18,730	20,720	24,920	23,860	23,800	23,310
24	22,130	21,830	21,520	18,620	17,570	18,780	19,330	20,710	24,640	23,850	23,790	23,300
25	22,100	21,810	21,520	18,450	17,650	18,780	19,600	20,700	24,460	23,830	23,770	23,280
26	22,050	21,800	21,510	18,230	17,670	18,790	19,620	20,690	24,340	23,810	23,750	23,270
27	22,040	21,780	21,520	18,020	17,670	18,790	19,640	20,700	24,270	23,790	23,730	23,250
28	22,020	21,760	21,560	17,830	17,680	18,800	19,640	20,740	24,220	23,820	23,750	23,240
29	22,010	21,740	21,550	17,640	17,700	18,790	19,640	20,730	24,190	24,210	23,750	23,220
30	21,990	21,730	21,540	17,450	---	18,790	19,680	20,710	24,930	24,230	23,730	23,200
31	21,980	---	21,530	17,420	---	18,790	---	20,690	---	24,180	23,710	---
MEAN	22,230	21,890	21,590	19,920	17,500	18,640	18,940	20,740	23,670	24,170	23,880	23,440
MAX	22,430	21,960	21,720	21,550	17,700	18,810	19,680	20,800	26,020	25,700	24,140	23,690
MIN	21,980	21,730	21,510	17,420	17,410	17,720	18,700	20,500	20,680	23,790	23,710	23,200

CAL YR 2003 MEAN 23,280 MAX 24,630 MIN 21,510
WTR YR 2004 MEAN 21,400 MAX 26,020 MIN 17,410

07315950 Moss Lake near Gainesville, TX—Continued



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.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--30,782 mi^2 of which 5,936 mi^2 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 sea level. Prior to Jan. 17, 1939, and Feb. 13, 1965 to Nov. 14, 1966, nonrecording gage at same site and datum.

REMARKS.--Records poor. 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 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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 8	0500	*20,100	*17.18				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	299	e180	e152	e133	349	942	e630	4,270	265	8,400	4,880	875
2	284	e170	156	e135	e328	793	e580	7,540	e280	9,540	2,900	1,020
3	267	e160	e140	e120	304	713	e530	4,720	e290	16,200	1,560	754
4	262	e150	e130	e105	294	995	e490	3,270	e275	17,300	1,030	820
5	259	e155	e132	95	319	1,540	450	2,530	e260	11,600	783	810
6	251	e160	e130	e94	325	3,000	e440	1,960	e275	8,170	641	677
7	241	e165	e142	95	311	15,800	e580	1,600	2,170	6,800	542	566
8	235	e170	e120	e104	312	19,800	e750	1,370	1,580	5,940	487	491
9	221	e175	e100	e101	317	14,400	e920	1,180	3,020	6,220	462	453
10	212	e180	91	160	314	8,250	e1,100	1,000	8,580	8,350	443	503
11	208	213	e110	185	319	5,370	e1,000	858	9,730	4,180	438	468
12	215	272	e140	187	324	3,800	e880	792	8,180	3,670	414	409
13	e230	266	e150	190	312	2,930	788	754	5,220	2,810	386	375
14	e240	227	e159	193	298	2,420	709	697	3,500	1,820	397	351
15	e220	206	e155	195	298	2,050	683	652	2,380	1,410	397	333
16	e210	189	e150	225	290	1,800	873	661	2,740	1,140	360	305
17	e194	188	e155	290	283	1,600	1,170	732	2,100	937	384	274
18	e190	193	e158	306	286	1,450	1,010	860	1,960	807	401	255
19	e185	169	e152	277	282	1,330	847	834	4,800	726	1,330	234
20	e180	e164	e150	256	299	e1,410	755	761	4,040	661	1,370	217
21	e178	e160	e145	252	280	e1,310	e683	644	2,490	601	1,100	200
22	e176	e155	e154	278	258	e1,200	606	e480	3,370	555	807	187
23	e170	e150	e154	341	265	e1,100	585	e430	3,800	518	642	177
24	e170	e155	e158	572	403	e1,000	1,070	e400	2,920	485	705	174
25	e178	e159	e154	795	893	e900	3,290	e370	2,240	480	682	170
26	e192	e155	e145	778	743	e840	4,650	e350	2,430	517	662	161
27	204	e160	e140	683	939	e790	3,170	e330	2,190	503	775	158
28	e190	e150	e142	605	1,080	e800	1,940	e310	2,160	480	845	155
29	e184	e147	e145	568	997	e750	1,260	e290	2,330	1,250	637	149
30	e170	e150	e140	493	---	e700	1,390	e280	3,780	3,790	527	148
31	e170	---	e130	377	---	e680	---	e285	---	5,930	474	---
TOTAL	6,585	5,293	4,379	9,188	12,022	100,463	33,829	41,210	89,355	131,790	27,461	11,869
MEAN	212	176	141	296	415	3,241	1,128	1,329	2,978	4,251	886	396
MAX	299	272	159	795	1,080	19,800	4,650	7,540	9,730	17,300	4,880	1,020
MIN	170	147	91	94	258	680	440	280	260	480	360	148
AC-FT	13,060	10,500	8,690	18,220	23,850	199,300	67,100	81,740	177,200	261,400	54,470	23,540

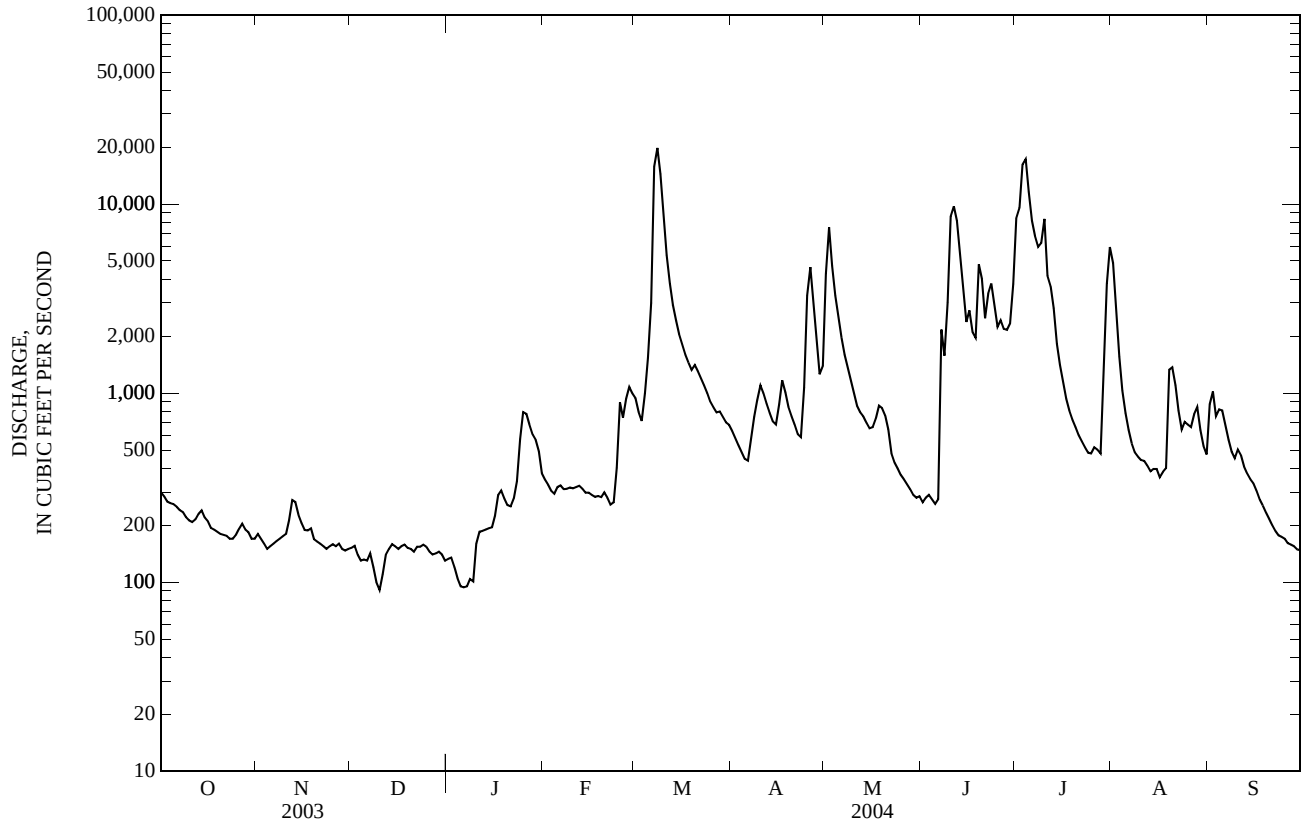
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2004, BY WATER YEAR (WY)

MEAN	3,619	2,013	1,589	1,265	1,917	2,886	3,502	7,715	7,993	2,175	1,540	2,372
MAX	31,080	14,020	14,990	7,258	10,920	19,590	27,400	47,780	43,510	9,857	20,730	12,880
(WY)	(1942)	(1942)	(1992)	(1998)	(2001)	(1998)	(1990)	(1957)	(1941)	(1950)	(1995)	(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)

e Estimated

07316000 Red River near Gainesville, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1937 - 2004	
ANNUAL TOTAL	341,201		473,444			
ANNUAL MEAN	935		1,294		3,217	
HIGHEST ANNUAL MEAN					11,890	1987
LOWEST ANNUAL MEAN					651	1953
HIGHEST DAILY MEAN	11,100	May 28	19,800	Mar 8	232,000	May 31, 1987
LOWEST DAILY MEAN	91	Dec 10	91	Dec 10	48	Jan 18, 1940
ANNUAL SEVEN-DAY MINIMUM	118	Dec 5	102	Jan 3	48	Jan 18, 1940
MAXIMUM PEAK FLOW			20,100	Mar 8	265,000	May 31, 1987
MAXIMUM PEAK STAGE			17.18	Mar 8	40.08	May 31, 1987
ANNUAL RUNOFF (AC-FT)	676,800		939,100		2,331,000	
10 PERCENT EXCEEDS	2,190		3,280		7,150	
50 PERCENT EXCEEDS	432		442		840	
90 PERCENT EXCEEDS	156		151		215	



07316000 Red River near Gainesville, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1994 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1994 to current year.
WATER TEMPERATURE: October 1994 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1994.

REMARKS.--Samples were collected monthly, and specific conductance, pH, water temperature, alkalinity and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 12,600 microsiemens Apr. 19, 2004; minimum, 402 microsiemens Nov. 14, 1994.
WATER TEMPERATURE: Maximum, 36.5°C July 15, 1998; minimum , -0.5°C Jan. 4, 5, 1999.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 12,600 microsiemens Apr. 19; minimum, 780 microsiemens July 1.
WATER TEMPERATURE: Maximum, 34.0°C July 15; minimum, 1.2°C Jan. 6.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Depth at sample location, feet (81903)	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
OCT												
08...	1342	1028	1028	1.94	8.32	234	725	7.7	8.3	5,200	24.8	14.0
08...	1343	1028	1028	2.00	8.32	234	725	7.6	8.2	5,210	24.4	28.0
08...	1344	1028	1028	2.30	8.32	234	725	7.5	8.2	5,230	24.1	42.0
08...	1345	1028	1028	2.60	8.32	234	725	7.3	8.2	5,230	23.9	56.0
08...	1346	1028	1028	3.00	8.32	234	725	7.2	8.2	5,240	23.9	70.0
08...	1347	1028	1028	2.77	8.32	234	725	7.2	8.2	5,250	23.9	84.0
08...	1348	1028	1028	2.42	8.32	234	725	7.1	8.2	5,250	23.9	98.0
08...	1349	1028	1028	1.70	8.32	234	725	7.2	8.2	5,250	23.9	112
08...	1350	1028	1028	1.26	8.32	234	725	7.2	8.2	5,250	24.0	126
08...	1351	1028	1028	.75	8.32	234	725	7.2	8.2	5,240	24.1	140
AUG												
05...	0835	1028	1028	1.76	9.72	838	744	6.8	8.1	1,690	29.4	25.0
05...	0836	1028	1028	1.52	9.72	838	744	6.7	8.1	1,700	29.5	50.0
05...	0837	1028	1028	1.43	9.72	838	744	6.7	8.1	1,700	29.5	75.0
05...	0838	1028	1028	1.88	9.72	838	744	6.7	8.1	1,700	29.5	100
05...	0839	1028	1028	2.70	9.72	838	744	6.7	8.1	1,700	29.5	125
05...	0840	1028	1028	2.40	9.72	838	744	6.7	8.1	1,700	29.5	150
05...	0841	1028	1028	2.42	9.72	838	744	6.7	8.1	1,700	29.5	175
05...	0842	1028	1028	2.82	9.72	838	744	6.7	8.1	1,700	29.5	200
05...	0843	1028	1028	2.32	9.72	838	744	6.7	8.1	1,700	29.5	225
05...	0844	1028	1028	1.53	9.72	838	744	6.7	8.1	1,710	29.5	250

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)
OCT													
08...	1400	1028	80020	8.32	234	725	8.5	105	8.0	5,260	25.3	22.5	770
NOV													
12...	1015	1028	80020	8.42	295	754	10.9	119	8.3	4,010	23.1	18.3	540
DEC													
10...	0850	1028	80020	7.93	155	760	--	--	8.4	4,300	3.0	3.6	600
JAN													
05...	1340	1028	80020	7.95	95	765	11.5	93	7.5	4,670	1.2	5.6	650
FEB													
10...	1055	1028	80020	8.62	337	762	11.1	89	8.2	6,210	2.5	5.1	710
MAR													
01...	0850	1028	80020	9.63	1,670	752	8.8	81	8.3	3,510	9.4	10.6	450
APR													
05...	1500	1028	80020	9.23	476	750	15.2	173	8.2	6,570	23.2	20.0	1,000
19...	1155	1028	80020	9.76	819	--	--	--	--	12,600	--	19.8	--
MAY													
11...	0925	1028	80020	9.40	840	747	5.6	67	8.0	3,570	23.4	22.5	520
JUN													
09...	0750	1028	80020	10.78	2,350	750	8.1	96	7.7	1,100	22.5	22.5	120
JUL													
12...	0900	1028	80020	11.78	3,450	748	5.7	75	7.2	1,460	26.2	28.5	150
AUG													
05...	0900	1028	80020	9.72	838	744	6.7	91	8.1	1,700	26.5	29.5	200
SEP													
01...	1300	1028	80020	9.72	903	752	6.3	82	8.1	3,580	28.2	27.1	500

07316000 Red River near Gainesville, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
OCT													
08...	880	235	70.6	9.41	11	757	65	109	133	2	1,320	.4	7.1
NOV													
12...	660	165	59.8	8.20	10	568	65	118	140	2	974	.5	2.7
DEC													
10...	770	192	70.0	28.6	10	639	63	169	200	3	1,080	.5	4.1
JAN													
05...	810	202	74.8	8.43	10	656	63	165	198	1	1,190	.5	2.2
FEB													
10...	860	223	73.2	8.20	13	875	69	148	169	5	1,550	.4	.5
MAR													
01...	580	153	48.9	7.38	9	497	65	136	E160	E3	834	.4	1.8
APR													
05...	1,100	291	97.5	10.6	13	1,030	66	102	E120	E2	1,690	.4	5.9
19...	1,600	436	117	13.3	23	2,070	74	--	--	--	3,530	.5	3.5
MAY													
11...	630	162	55.1	7.79	10	555	65	110	130	2	797	.4	4.8
JUN													
09...	210	60.6	15.3	6.17	3	115	53	91	110	.0	182	.2	10.2
JUL													
12...	230	66.0	15.8	7.21	5	187	63	81	97	.0	297	.3	10.8
AUG													
05...	290	76.5	24.2	7.21	5	211	60	94	112	1	337	.3	6.7
SEP													
01...	620	166	50.0	8.78	10	560	66	124	148	2	880	.4	5.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L (71846)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L (71851)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L (71856)	Nitrite water, fltrd, mg/L as N (00613)
OCT													
08...	662	3,130	4.26	1,980	32	.88	.07	.056	--	--	<.016	--	<.002
NOV													
12...	467	2,320	3.15	1,840	23	.94	.02	.013	--	--	E.009	--	E.001
DEC													
10...	493	2,610	3.54	1,090	15	.96	.02	.018	--	--	<.016	.010	.003
JAN													
05...	536	2,770	3.76	710	10	.84	--	E.018	--	--	<.016	--	E.001
FEB													
10...	701	3,520	4.79	3,200	15	1.1	.04	.030	--	--	<.016	--	<.002
MAR													
01...	400	2,030	2.76	9,140	130	1.6	.02	.012	2.11	.48	.490	.046	.014
APR													
05...	859	4,050	5.50	5,200	26	.95	.06	.043	--	--	<.016	--	<.002
19...	1,300	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
11...	441	2,090	2.84	4,740	118	.95	--	E.005	--	--	<.016	--	<.002
JUN													
09...	88.5	534	.73	3,390	397	1.6	.05	.041	1.05	.24	.251	.046	.014
JUL													
12...	148	784	1.07	7,300	157	1.4	.02	.015	2.80	.63	.639	.020	.006
AUG													
05...	178	898	1.22	2,030	68	1.1	--	E.007	--	--	<.016	--	<.002
SEP													
01...	458	2,200	3.00	5,370	132	1.0	.01	.010	--	--	<.016	--	<.002

07316000 Red River near Gainesville, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L (00660)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)
OCT													
08...	.82	--	<.006	.011	.129	--	2.8	2	149	161	<.12	<.12	<.8
NOV													
12...	.93	--	<.006	.012	.129	--	2.0	2	126	129	<.08	<.08	<.8
DEC													
10...	.94	--	<.006	.009	.106	--	1.8	<2	121	132	<.08	E.05	<.8
JAN													
05...	--	--	E.003	.018	.117	--	2.1	3	127	120	E.04	E.04	<.8
FEB													
10...	1.1	--	<.006	.017	.123	--	1.7	E2	88	84	<.12	<.12	<.8
MAR													
01...	1.6	.159	.052	.079	.35	2.1	2.1	3	90	114	<.08	<.08	<.8
APR													
05...	.90	--	<.006	.010	.184	--	1.9	6	134	159	E.06	<.12	<.8
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
11...	--	--	<.006	.012	.18	--	3.0	4	121	122	<.08	<.08	<.8
JUN													
09...	1.5	.123	.040	.059	.40	1.8	2.2	4	60	120	E.02	.09	<.8
JUL													
12...	1.4	.484	.158	.172	.46	2.1	4.0	5	102	210	<.04	.10	<.8
AUG													
05...	--	.350	.114	.134	.23	--	4.3	4	117	134	<.04	.05	<.8
SEP													
01...	.99	.080	.026	.041	.18	--	4.3	5	153	158	E.04	<.08	<.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover-able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
OCT													
08...	<.8	3.1	8.6	<19	320	<.24	.55	7.4	113	<.02	<.02	3.41	10.3
NOV													
12...	<.8	2.7	6.5	35	250	<.16	.50	10.4	56	<.02	<.02	3.24	7.05
DEC													
10...	<.8	2.6	7.9	<6	230	<.16	.35	20.6	44	<.02	<.02	4.49	10.3
JAN													
05...	<.8	6.8	7.4	26	140	E.08	.20	48.6	66	<.02	<.02	7.69	9.18
FEB													
10...	<.8	3.1	5.6	<19	180	E.19	.18	27.2	41	<.02	<.02	3.82	10.1
MAR													
01...	1.7	2.9	6.1	19	3,280	.16	2.33	3.4	116	<.02	<.02	4.25	9.27
APR													
05...	E.4	6.0	6.8	<32	390	.29	.51	14.6	63	<.02	<.02	4.76	7.38
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
11...	1.3	4.4	5.9	<19	1,130	<.16	1.21	5.5	95	<.02	<.02	1.47	6.28
JUN													
09...	5.5	2.3	8.5	26	4,590	E.07	6.27	9.9	297	<.02	E.01	2.32	10.4
JUL													
12...	6.8	3.3	21.1	E6	5,740	<.08	7.74	.4	277	<.02	E.01	2.63	13.5
AUG													
05...	1.6	3.1	4.7	E4	980	<.08	1.26	1.2	70	<.02	<.02	3.15	4.76
SEP													
01...	1.6	3.1	8.5	<19	1,180	.32	1.31	8.1	130	<.02	<.02	4.78	11.4

07316000 Red River near Gainesville, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recoverable, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha-Endosulfan, water, unfltrd ug/L (34361)	alpha-HCH, water, unfltrd ug/L (39337)	alpha-HCH-d6, surrog, Sch1608 water, unfltrd pct rcv (99778)	Aroclor 1016 + 1242, water, unfltrd ug/L (81648)	Aroclor 1221, water, unfltrd ug/L (39488)	Aroclor 1232, water, unfltrd ug/L (39492)
OCT													
08...	<1.2	2.4	<.6	<.48	2.9	6	--	--	--	--	--	--	--
NOV													
12...	<1	--	<.4	<.32	5.2	9	<.04	<.1	<.03	69.3	<.1	<1	<.1
DEC													
10...	--	2.5	<.4	<.32	2.1	5	--	--	--	--	--	--	--
JAN													
05...	--	1.4	<.4	<.32	3.5	5	--	--	--	--	--	--	--
FEB													
10...	4	4	<.6	<.48	3.3	<6	--	--	--	--	--	--	--
MAR													
01...	1	2	<.4	<.32	3.2	10	--	--	--	--	--	--	--
APR													
05...	<1	3	<.6	<.48	6.2	E4	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
11...	1	3	<.4	<.32	1.9	6	<.04	<.1	<.03	E15.3	<.1	<1	<.1
JUN													
09...	<1	<1	<.2	<.16	1.7	25	--	--	--	--	--	--	--
JUL													
12...	<1	<1	<.2	<.16	2.3	23	--	--	--	--	--	--	--
AUG													
05...	<1	<1	<.2	<.16	1.3	5	--	--	--	--	--	--	--
SEP													
01...	1	1	<.4	<.32	2.4	10	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Aroclor 1248, water, unfltrd ug/L (39500)	Aroclor 1254, water, unfltrd ug/L (39504)	Aroclor 1260, water, unfltrd ug/L (39508)	beta-Endosulfan, water, unfltrd ug/L (34356)	beta-HCH, water, unfltrd ug/L (39338)	Chlordane, technical, water, unfltrd ug/L (39350)	cis-Chlordane, water, unfltrd ug/L (39062)	delta-HCH, water, unfltrd ug/L (34259)	Dieldrin, water, unfltrd ug/L (39380)	Endosulfan sulfate water unfltrd ug/L (34351)	Endrin aldehyde, water, unfltrd ug/L (34366)	Endrin, water, unfltrd ug/L (39390)	Heptachlor epoxide water unfltrd ug/L (39420)
OCT													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
12...	<.1	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8
DEC													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
11...	<.1	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06	<.8
JUN													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--

07316000 Red River near Gainesville, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Hepta-chlor, water, unfltrd ug/L (39410)	Isodrin surrog, Sch1608 wat unf percent recovry (90570)	Lindane water, unfltrd ug/L (39340)	p,p-' DDD, water, unfltrd ug/L (39310)	p,p-' DDE, water, unfltrd ug/L (39320)	p,p-' DDT, water, unfltrd ug/L (39300)	PCB 207, surrog, Sch1608 water, unfltrd pct rcv (99781)	Toxa-phene, water, unfltrd ug/L (39400)	trans-Chlor-dane, water, unfltrd ug/L (39065)
OCT									
08...	--	--	--	--	--	--	--	--	--
NOV									
12...	<.03	79.7	<.03	<.1	<.04	<.1	74.7	<2	<.1
DEC									
10...	--	--	--	--	--	--	--	--	--
JAN									
05...	--	--	--	--	--	--	--	--	--
FEB									
10...	--	--	--	--	--	--	--	--	--
MAR									
01...	--	--	--	--	--	--	--	--	--
APR									
05...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
MAY									
11...	<.03	E14.1	<.03	<.1	<.04	<.1	E9.4	<2	<.1
JUN									
09...	--	--	--	--	--	--	--	--	--
JUL									
12...	--	--	--	--	--	--	--	--	--
AUG									
05...	--	--	--	--	--	--	--	--	--
SEP									
01...	--	--	--	--	--	--	--	--	--

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5,050	4,910	4,970	4,990	4,840	4,940	4,420	4,340	4,400	4,880	4,710	4,820
2	5,100	4,960	5,060	4,940	4,880	4,910	4,680	4,380	4,560	4,750	4,680	4,720
3	5,050	4,880	4,970	4,920	4,810	4,860	4,710	4,470	4,590	4,710	4,640	4,680
4	4,910	4,800	4,870	4,820	4,690	4,750	4,470	4,370	4,420	4,670	4,620	4,640
5	5,050	4,820	4,920	4,710	4,120	4,580	4,500	4,380	4,440	4,780	4,620	4,670
6	5,160	5,000	5,060	4,360	4,120	4,270	4,520	4,460	4,490	4,880	4,730	4,830
7	5,260	5,100	5,190	4,390	4,130	4,260	4,490	4,410	4,430	4,950	4,880	4,910
8	6,490	5,220	5,520	4,330	4,050	4,210	4,440	4,330	4,390	5,000	4,910	4,960
9	6,510	6,270	6,390	4,050	3,840	3,920	4,350	4,290	4,320	5,020	4,980	5,010
10	6,270	6,020	6,130	3,990	3,850	3,900	4,340	4,240	4,310	5,010	3,230	3,680
11	6,020	5,860	5,910	4,010	3,950	3,980	4,330	4,230	4,280	3,260	3,180	3,220
12	5,860	5,660	5,750	4,200	3,960	4,060	4,340	4,080	4,260	3,290	3,210	3,250
13	5,730	5,630	5,670	4,290	4,200	4,230	4,350	4,120	4,250	3,400	3,290	3,350
14	5,780	5,700	5,740	4,540	4,290	4,420	4,380	4,290	4,350	3,360	3,290	3,320
15	5,920	5,760	5,850	4,490	4,130	4,290	4,290	4,130	4,200	3,340	3,280	3,310
16	6,010	5,900	5,960	4,130	3,730	3,920	4,290	4,240	4,270	3,330	3,110	3,260
17	6,080	6,000	6,040	3,730	3,570	3,650	4,320	4,260	4,280	3,610	3,110	3,310
18	6,020	5,700	5,850	3,580	3,410	3,480	4,350	4,240	4,300	3,620	3,430	3,570
19	5,720	5,450	5,560	3,540	3,410	3,460	4,250	4,110	4,190	3,450	3,310	3,390
20	5,450	5,260	5,360	4,150	3,540	3,860	4,260	4,150	4,200	3,430	3,360	3,400
21	5,260	5,020	5,140	4,410	4,150	4,300	4,360	4,260	4,300	3,600	3,420	3,520
22	5,020	4,910	4,970	4,560	4,410	4,490	4,450	4,320	4,380	3,860	3,600	3,700
23	5,040	4,930	4,980	4,610	4,490	4,560	4,700	4,440	4,580	4,200	3,850	3,930
24	5,110	5,010	5,050	4,640	4,570	4,600	4,770	4,540	4,710	5,070	4,200	4,790
25	5,250	5,060	5,140	4,600	4,330	4,490	4,800	4,750	4,780	5,890	4,530	5,290
26	5,290	5,180	5,240	4,350	4,260	4,290	4,800	4,730	4,760	5,520	4,190	4,540
27	5,240	5,140	5,200	4,420	4,290	4,360	4,770	3,790	4,630	5,770	4,570	5,130
28	5,220	5,130	5,170	4,450	4,380	4,420	4,520	3,850	4,350	6,370	5,770	6,140
29	5,150	5,070	5,120	4,400	4,300	4,350	4,740	4,490	4,610	6,570	6,350	6,430
30	5,150	5,060	5,100	4,410	4,320	4,360	4,860	4,730	4,780	7,800	6,520	6,800
31	5,060	4,950	5,010	---	---	---	4,900	4,830	4,870	8,290	7,800	8,180
MONTH	6,510	4,800	5,380	4,990	3,410	4,270	4,900	3,790	4,440	8,290	3,110	4,480

07316000 Red River near Gainesville, TX—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	e8,050	3,550	2,630	e3,400	---	---	e5,070	3,810	1,450	2,590
2	---	---	e8,000	3,300	2,630	3,030	---	---	e5,180	2,010	1,450	1,710
3	---	---	e7,500	3,460	3,180	3,310	---	---	e5,590	1,910	1,330	1,570
4	7,030	6,340	6,700	3,710	3,230	3,440	---	---	e5,790	2,820	1,460	2,210
5	6,400	6,320	6,350	3,730	2,120	3,240	---	---	e6,050	3,400	2,820	3,230
6	6,420	6,240	6,330	3,420	975	2,030	---	---	e6,680	3,500	3,160	3,280
7	6,450	6,240	6,370	3,000	975	2,440	---	---	e5,890	3,740	3,500	3,660
8	6,420	6,340	6,380	3,000	2,290	2,690	---	---	e5,380	3,820	3,600	3,690
9	6,380	6,240	6,310	2,330	2,240	2,280	---	---	e5,090	3,980	3,600	3,840
10	6,240	6,070	6,150	2,440	2,260	2,320	---	---	e4,730	3,600	3,500	3,540
11	6,120	5,520	5,810	---	---	e2,320	---	---	e4,400	3,620	3,120	3,440
12	5,600	5,460	5,550	---	---	e2,440	---	---	e4,250	3,390	3,110	3,190
13	5,460	5,300	5,350	---	---	e2,540	4,820	3,900	4,130	3,830	3,390	3,600
14	5,330	5,010	5,170	---	---	e2,630	4,020	3,860	3,950	4,630	3,830	4,260
15	5,160	5,010	5,080	---	---	e2,740	4,480	3,980	4,200	5,000	4,630	4,880
16	5,210	5,110	5,170	---	---	e2,990	6,710	4,480	5,560	5,000	4,930	4,980
17	5,230	5,080	5,130	---	---	e3,250	9,400	6,710	8,210	5,030	4,810	4,910
18	5,300	5,220	5,250	---	---	e3,700	11,300	9,380	10,000	5,120	4,570	4,900
19	5,300	5,160	5,240	---	---	e3,970	12,600	11,300	12,300	4,880	4,410	4,730
20	5,280	5,110	5,220	---	---	e4,230	---	---	e11,500	4,410	3,960	4,070
21	5,300	5,100	5,220	---	---	e4,300	---	---	e9,500	4,300	4,000	4,120
22	5,350	5,000	5,220	---	---	e4,370	---	---	e8,100	4,440	4,300	4,370
23	5,180	4,820	5,030	---	---	e4,460	7,600	7,100	7,480	4,480	4,440	4,460
24	---	---	e4,860	---	---	e4,480	7,100	4,050	5,690	4,670	4,440	4,530
25	---	---	e4,700	---	---	e4,570	5,960	1,840	4,650	4,940	4,660	4,780
26	---	---	e4,400	---	---	e4,620	1,840	1,580	1,640	5,140	4,940	5,070
27	---	---	e4,100	---	---	e4,660	2,060	1,720	1,930	5,330	5,090	5,210
28	---	---	e3,800	---	---	e4,710	2,230	1,700	1,890	5,090	4,760	4,970
29	---	---	e3,600	---	---	e4,770	3,510	2,230	2,820	5,260	4,970	5,120
30	---	---	---	---	---	e4,890	4,570	3,510	4,060	5,370	5,080	5,210
31	---	---	---	---	---	e4,960	---	---	---	5,610	5,350	5,430
MONTH	7,030	4,820	5,590	3,730	975	3,540	12,600	1,580	5,720	5,610	1,330	4,050
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	e5,520	2,320	780	1,370	1,400	934	1,080	4,100	3,540	3,720
2	---	---	e4,500	3,230	1,240	1,970	1,420	1,070	1,170	4,070	2,880	3,510
3	---	---	e4,000	1,870	849	1,200	1,260	1,080	1,140	2,900	2,580	2,820
4	---	---	e3,500	---	---	e1,600	1,550	1,260	1,400	2,710	2,300	2,430
5	---	---	e3,000	---	---	e1,100	2,050	1,550	1,780	5,680	2,760	4,240
6	---	---	e2,500	1,560	828	1,040	2,470	2,050	2,290	5,640	3,420	4,350
7	---	---	e2,000	3,560	1,560	2,410	2,680	2,470	2,580	3,550	3,410	3,470
8	---	---	e1,500	4,690	3,160	4,060	2,970	2,680	2,840	3,570	3,470	3,520
9	---	---	e1,100	---	---	e2,200	3,150	2,960	3,050	3,700	3,460	3,570
10	1,550	963	1,280	---	---	e2,000	3,250	3,150	3,220	4,030	3,700	3,920
11	1,320	980	1,100	---	---	e1,800	3,330	3,250	3,300	4,020	3,770	3,850
12	1,100	824	991	---	---	e1,600	3,310	2,880	3,150	4,560	4,020	4,410
13	866	821	851	2,950	2,260	2,650	3,260	2,880	3,040	4,960	4,560	4,720
14	1,020	859	919	2,260	1,690	1,900	3,810	3,260	3,530	4,990	4,610	4,910
15	2,490	1,020	1,420	1,710	1,660	1,680	4,090	3,680	3,940	4,670	4,590	4,630
16	7,760	2,330	5,240	1,960	1,710	1,820	4,050	3,940	3,970	4,610	4,310	4,490
17	6,200	5,390	5,680	2,540	1,960	2,210	---	---	e4,200	4,310	4,140	4,220
18	5,770	3,660	5,190	3,540	2,540	3,000	---	---	e4,280	4,220	4,140	4,190
19	---	---	e2,750	4,020	3,540	3,830	---	---	e4,350	4,410	4,210	4,310
20	---	---	e2,200	4,100	4,020	4,070	3,180	1,890	2,200	4,480	4,410	4,460
21	---	---	e1,750	4,110	4,030	4,080	1,920	1,840	1,880	4,490	4,460	4,470
22	2,190	825	1,620	4,040	3,940	4,000	2,130	1,860	2,040	4,500	4,460	4,480
23	2,050	985	1,450	4,000	3,920	3,960	2,000	1,920	1,950	4,540	4,500	4,520
24	2,520	1,500	2,070	4,090	3,960	4,040	2,510	2,000	2,170	4,570	4,500	4,550
25	1,720	1,430	1,520	4,380	4,090	4,220	2,840	2,510	2,730	4,550	4,500	4,530
26	3,990	1,720	2,890	4,380	4,250	4,320	2,920	2,580	2,740	4,560	4,430	4,510
27	4,100	3,090	3,550	---	---	e4,280	3,730	2,920	3,190	4,740	4,490	4,640
28	5,740	3,370	4,540	---	---	e4,180	4,520	3,350	4,010	4,900	4,740	4,830
29	6,900	5,460	6,330	3,800	1,520	3,000	4,940	4,520	4,770	5,000	4,880	4,940
30	5,460	1,130	4,090	2,120	1,430	1,650	4,830	4,010	4,400	5,000	4,950	4,970
31	---	---	---	2,010	1,030	1,480	4,030	3,640	3,850	---	---	---
MONTH	7,760	821	2,840	4,690	780	2,670	4,940	934	2,910	5,680	2,300	4,210

e Estimated

07316000 Red River near Gainesville, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.0	19.3	20.5	23.3	18.7	20.7	12.8	8.3	10.5	13.7	10.4	12.1
2	19.5	17.6	18.5	23.7	19.3	21.4	11.5	9.7	10.5	18.3	12.6	15.2
3	21.1	16.7	18.7	23.3	20.8	21.8	13.1	9.9	11.0	18.5	15.3	16.9
4	22.7	17.6	20.1	24.5	20.3	22.0	12.5	7.5	9.9	17.2	8.1	13.8
5	21.9	20.3	21.1	20.9	13.7	17.2	9.8	6.0	7.8	8.1	4.2	5.9
6	23.5	20.7	21.7	13.7	11.5	12.3	9.1	3.7	6.3	5.1	1.2	3.2
7	25.5	20.5	22.7	11.5	10.2	10.8	9.7	4.7	7.1	3.9	1.3	2.5
8	25.2	20.9	23.1	12.2	10.9	11.6	12.8	6.8	9.8	9.7	2.8	6.1
9	26.1	22.8	24.1	12.9	11.7	12.2	12.7	6.4	10.8	9.0	4.4	6.7
10	26.5	22.8	24.2	15.4	12.4	13.8	8.4	3.6	5.8	9.4	4.4	6.7
11	24.9	21.2	23.2	20.1	14.8	17.2	8.2	3.0	5.5	10.3	5.3	7.6
12	23.4	20.9	22.0	20.2	17.0	18.7	5.9	4.3	5.3	11.2	7.2	8.9
13	25.4	20.1	22.4	17.0	12.5	14.4	6.0	4.1	5.5	13.3	9.2	10.8
14	23.0	18.6	20.8	12.5	11.4	11.7	7.7	2.4	5.1	13.9	9.9	11.5
15	21.0	16.0	18.5	16.7	11.6	13.9	12.1	5.7	8.5	12.0	10.2	11.2
16	22.8	16.5	19.5	17.7	12.5	15.2	9.2	5.6	7.4	12.0	11.1	11.5
17	21.4	17.8	19.7	18.9	16.4	17.7	8.7	3.1	5.9	12.9	11.4	12.1
18	22.1	15.4	18.7	17.3	13.2	15.6	9.3	4.3	6.5	11.4	6.5	8.9
19	23.1	16.6	19.7	15.9	11.3	13.5	9.2	3.8	6.4	8.4	4.6	6.4
20	24.1	17.6	20.8	16.1	11.3	13.5	9.4	3.9	6.5	8.2	4.7	6.3
21	25.3	18.7	21.9	16.5	11.3	13.9	12.2	5.7	8.9	8.7	5.2	6.8
22	25.1	18.8	21.9	18.8	14.1	16.4	14.3	10.5	12.1	10.1	5.7	7.7
23	24.7	17.9	21.3	17.9	9.2	13.5	11.4	8.1	9.6	10.6	6.3	8.4
24	24.4	18.5	21.3	10.7	6.7	8.5	10.2	5.5	7.8	11.5	10.1	10.8
25	21.3	14.6	18.5	9.9	6.0	7.9	10.4	6.1	8.1	14.0	10.9	12.2
26	14.7	12.0	13.3	13.3	8.0	10.6	11.4	7.8	9.3	12.4	6.3	9.9
27	18.0	10.6	14.1	11.8	8.3	10.4	14.9	11.4	13.5	7.2	3.8	5.5
28	18.8	13.3	15.9	10.2	6.0	8.0	13.8	10.1	12.6	7.9	3.9	5.8
29	19.4	13.0	16.2	10.6	5.6	7.9	11.0	7.1	9.0	8.7	6.1	7.3
30	22.0	15.3	18.5	12.0	5.9	8.9	9.8	5.3	7.5	7.4	5.1	6.3
31	24.3	19.7	21.4	---	---	---	10.4	5.5	8.0	6.2	4.3	5.2
MONTH	26.5	10.6	20.1	24.5	5.6	14.0	14.9	2.4	8.3	18.5	1.2	8.7
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	14.7	10.6	13.4	---	---	---	21.9	16.9	18.6
2	---	---	---	14.0	11.5	12.9	---	---	---	18.2	15.4	16.8
3	---	---	---	14.8	13.2	13.9	---	---	---	20.5	17.3	18.7
4	6.6	5.0	5.7	16.8	14.3	15.5	---	---	---	22.2	18.6	20.3
5	6.2	4.8	5.4	17.1	11.6	15.2	---	---	---	24.0	19.5	21.7
6	6.9	4.4	5.5	16.4	12.5	15.0	---	---	---	25.2	21.3	23.2
7	8.2	3.0	5.4	15.1	11.8	14.1	---	---	---	26.0	22.6	24.0
8	6.4	4.0	5.3	13.6	12.7	13.2	---	---	---	26.9	23.1	24.8
9	6.9	5.7	6.4	14.0	11.6	13.1	---	---	---	25.4	22.9	24.1
10	8.8	5.4	7.1	13.9	12.3	13.2	---	---	---	25.2	22.2	23.6
11	7.8	6.8	7.3	---	---	---	---	---	---	26.2	22.5	24.2
12	8.1	4.7	6.4	---	---	---	---	---	---	27.0	23.1	24.8
13	6.4	3.5	5.1	---	---	---	16.3	11.9	14.1	26.0	22.4	24.7
14	5.4	3.7	4.8	---	---	---	18.3	12.6	15.3	22.4	19.1	20.6
15	8.1	3.7	5.6	---	---	---	21.1	14.9	17.8	23.8	18.5	20.8
16	10.2	4.5	7.2	---	---	---	23.2	18.0	20.3	25.8	20.6	23.1
17	12.5	7.1	9.5	---	---	---	23.8	20.1	21.8	26.5	22.4	24.3
18	12.8	7.9	10.2	---	---	---	22.5	20.3	21.0	27.9	23.7	25.7
19	15.4	9.7	12.4	---	---	---	20.6	19.3	20.0	29.4	24.9	26.9
20	15.9	11.9	13.8	---	---	---	---	---	---	29.8	25.4	27.5
21	15.7	10.3	12.9	---	---	---	---	---	---	28.5	25.3	27.0
22	16.2	10.9	13.5	---	---	---	---	---	---	27.4	24.2	25.8
23	14.3	12.7	13.6	---	---	---	24.3	22.3	23.3	29.1	23.5	26.0
24	---	---	---	---	---	---	22.9	20.3	21.1	28.0	24.7	26.3
25	---	---	---	---	---	---	22.1	19.1	20.7	26.7	24.0	24.8
26	---	---	---	---	---	---	22.6	20.1	21.3	28.4	23.3	25.6
27	---	---	---	---	---	---	24.1	20.2	22.1	27.1	24.6	25.9
28	---	---	---	---	---	---	23.2	21.0	22.0	31.0	23.8	27.1
29	---	---	---	---	---	---	22.9	19.7	21.2	28.8	26.2	27.1
30	---	---	---	---	---	---	24.5	21.3	22.5	30.6	24.6	27.3
31	---	---	---	---	---	---	---	---	---	30.1	25.0	27.6
MONTH	16.2	3.0	8.2	17.1	10.6	13.9	24.5	11.9	20.3	31.0	15.4	24.2

07316000 Red River near Gainesville, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	30.7	24.8	27.6	26.9	24.2	25.4	31.0	27.8	29.2	29.1	25.6	27.5
2	30.5	25.8	27.7	27.9	26.3	27.0	32.9	29.1	30.9	29.5	25.8	27.6
3	28.6	23.8	26.1	28.5	26.9	27.7	33.9	29.7	31.8	28.5	24.6	26.7
4	29.8	24.5	27.1	29.6	28.0	28.7	33.4	30.1	31.7	28.8	25.7	27.2
5	27.7	25.6	26.6	29.7	26.9	28.7	33.3	29.5	31.4	30.1	26.1	28.0
6	28.5	24.5	26.2	29.3	28.0	28.6	31.7	28.6	30.1	29.4	26.2	27.8
7	26.0	24.0	25.0	29.2	27.7	28.4	30.7	27.3	29.1	27.3	23.5	25.3
8	25.4	23.7	24.2	30.3	27.8	29.0	29.1	26.7	27.5	26.9	21.6	24.2
9	23.7	21.9	22.7	30.7	28.8	29.7	32.0	25.8	28.6	27.5	21.4	24.4
10	24.2	21.4	23.0	---	---	---	33.6	27.5	30.4	28.1	22.3	25.1
11	26.0	23.7	24.7	---	---	---	31.4	27.2	28.9	28.9	23.5	26.1
12	27.3	24.9	26.1	---	---	---	30.5	24.1	27.1	29.7	24.5	27.0
13	28.2	25.9	27.0	32.9	29.2	31.0	29.9	25.6	27.5	29.2	24.6	27.0
14	29.8	26.1	27.9	33.6	29.5	31.6	27.9	25.2	26.3	28.6	25.6	26.9
15	28.9	27.0	27.9	34.0	29.8	31.9	26.7	24.1	25.5	29.5	24.9	26.9
16	30.3	25.8	28.2	33.9	31.0	32.4	28.5	23.9	26.0	32.1	26.3	28.9
17	31.1	27.0	28.9	33.0	30.4	31.7	---	---	---	32.3	27.4	29.7
18	29.8	26.4	28.3	32.4	28.2	30.3	---	---	---	30.8	27.3	29.1
19	---	---	24.9	33.5	27.7	30.5	---	---	---	29.2	26.2	27.6
20	---	---	---	33.6	28.9	31.2	27.3	24.8	25.8	27.9	23.7	25.8
21	---	---	---	32.8	29.0	31.0	27.5	24.2	25.9	27.8	23.5	25.5
22	25.7	23.5	24.8	32.9	28.4	30.6	29.1	25.0	26.8	27.8	23.5	25.4
23	28.3	24.0	25.9	33.2	28.7	31.0	30.2	26.0	28.0	27.0	23.6	25.3
24	30.5	25.8	27.9	32.2	29.0	30.4	31.2	26.6	28.8	27.4	23.8	25.5
25	29.4	27.7	28.7	29.0	25.0	26.6	30.8	27.0	28.9	28.3	23.5	25.9
26	28.4	26.7	27.4	29.4	23.5	26.1	31.3	27.0	29.0	28.2	23.2	25.7
27	27.6	25.4	26.5	---	---	---	30.7	26.8	28.6	27.8	22.5	25.2
28	28.9	25.7	27.0	---	---	---	29.0	26.0	27.5	25.7	21.9	23.7
29	27.8	26.2	26.9	27.1	23.6	24.9	30.7	25.6	27.9	26.5	20.0	23.1
30	26.9	24.5	25.7	28.0	24.4	26.1	30.2	25.4	27.8	23.7	20.2	22.1
31	---	---	---	29.1	26.2	27.5	30.6	25.1	27.8	---	---	---
MONTH	31.1	21.4	26.5	34.0	23.5	29.2	33.9	23.9	28.4	32.3	20.0	26.2

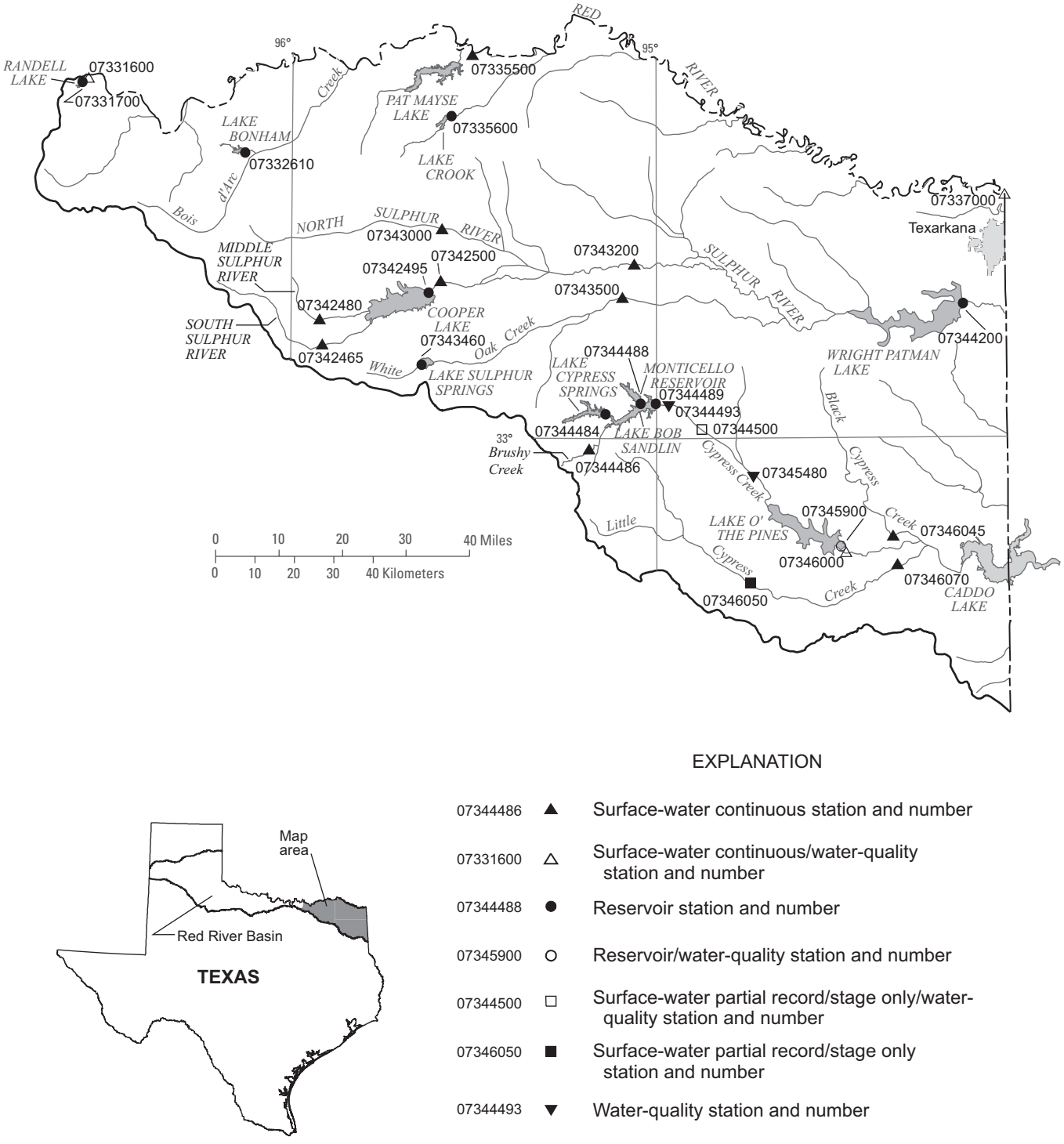


Figure 7.--Map showing location of gaging stations in the fourth section of the Red River Basin

07331600 Red River at Denison Dam near Denison, TX

LOCATION.--Lat 33°49'08", long 96°33'47", Grayson County, Hydrologic Unit 11140101, on right bank 1,800 ft downstream from Denison Dam powerhouse, 0.4 mi upstream from Shawnee Creek (spillway flow return), 4.5 mi north of Denison, and at mile 725.5.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--39,720 mi^2, of which 5,936 mi^2 is probably noncontributing. At site used prior to October 1961 drainage area was 39,777 mi^2, of which 5,936 mi^2 probably was noncontributing.

PERIOD OF RECORD.--October 1923 to September 1989; December 1996 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to October 1934, published as "near Denison, TX", and October 1934 to September 1961, published as "near Colbert, OK". Gage-height records collected at various sites in this vicinity 1892-93, 1906-28, 1931-49 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 807: 1935 (M). WSP 1211: Drainage area. WSP 1241: 1924-29, 1932-33, 1934 (M), 1935.

GAGE.--Water-stage recorder. Datum of gage is 495.00 ft above National Geodetic Vertical Datum of 1929. Oct. 9, 1923, to Sept. 24, 1934, nonrecording gage, and July 29, 1942, to Sept. 30, 1961, water-stage recorder, at county road bridge 2.5 mi downstream. Prior to Oct. 1, 1931, at datum 11.85 ft higher; Oct. 1, 1931, to Sept 24, 1934, at datum 12.07 ft higher; and July 29, 1942, to Sept. 30, 1961, at datum 2.36 ft higher; Sept. 25, 1934, to July 28, 1942, water-stage recorder at railway bridge 1.9 mi downstream at datum 12.36 ft higher. July 29, 1942 to Sept. 30, 1989, at same site and datum 5.00 ft higher.

REMARKS.--No estimated daily discharges. Records good except for discharges less than 100 ft^3/s which are poor. Flow regulated since October 1943 by Lake Texoma (station 07331500). U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 26, 1908, reached a stage of 45.5 ft (at site and datum used July 29, 1942, to Sept. 30, 1961); from record of National Weather Service.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,070	196	1,560	169	173	1,490	2,240	1,090	2,900	4,010	3,360	3,170
2	3,050	82	2,360	124	2,290	1,910	2,250	87	3,550	4,730	6,320	3,160
3	3,050	1,410	1,990	122	2,440	1,500	620	2,370	3,550	478	8,530	3,140
4	202	2,250	1,900	115	2,920	1,960	66	2,710	2,340	112	8,540	272
5	73	2,260	1,890	1,890	2,700	1,890	1,670	3,330	275	2,870	8,570	99
6	1,650	2,000	406	1,910	2,760	436	2,250	3,030	103	4,600	8,640	100
7	1,790	1,800	169	1,980	188	101	2,190	2,720	1,730	5,880	4,130	3,000
8	1,770	552	1,660	1,960	169	1,530	2,160	959	1,920	7,050	3,570	3,130
9	1,780	110	1,780	167	2,460	1,850	2,160	78	1,970	10,700	7,980	3,130
10	1,800	1,410	2,490	144	2,160	2,130	593	2,460	1,920	10,700	8,550	3,150
11	214	1,830	2,360	139	1,980	1,550	58	3,060	1,880	10,800	8,610	257
12	72	1,880	2,390	1,890	2,190	1,830	1,610	3,060	290	10,900	8,590	88
13	1,610	1,840	201	1,960	5,260	425	2,130	3,050	109	7,580	5,440	2,950
14	1,750	1,950	150	1,890	786	95	1,750	3,410	1,700	5,920	636	3,170
15	1,780	428	2,510	1,920	161	1,500	2,170	658	1,850	6,680	105	3,180
16	1,810	102	2,200	1,670	2,190	1,830	2,460	81	3,130	7,540	3,000	3,120
17	1,770	1,540	2,750	693	3,300	1,870	562	2,860	3,140	4,730	3,190	3,130
18	213	1,840	2,320	167	2,390	1,820	66	3,480	3,030	3,980	3,190	240
19	71	1,850	1,900	2,320	2,440	2,010	1,920	3,490	1,580	6,440	3,240	75
20	1,750	1,300	175	2,380	2,970	191	2,440	3,480	1,420	6,840	3,210	2,950
21	1,200	2,160	149	2,360	367	77	2,440	3,480	3,050	7,060	274	4,100
22	1,110	480	1,890	2,400	126	2,010	2,400	696	3,760	6,900	96	4,140
23	1,140	111	1,450	181	2,570	3,008	2,500	89	3,290	6,950	3,020	280
24	1,090	2,820	2,250	136	2,620	3,160	784	2,890	1,990	5,910	3,190	3,890
25	196	3,470	187	121	2,580	3,160	99	3,520	313	5,780	3,190	334
26	74	2,900	153	1,980	2,340	3,110	1,920	3,480	110	6,290	3,170	68
27	1,080	468	145	2,580	2,380	696	1,570	3,510	154	6,330	3,180	2,960
28	1,120	118	136	2,800	193	79	1,230	3,520	2,970	6,350	3,160	3,110
29	1,140	135	1,860	2,390	162	2,830	1,450	742	3,220	5,430	264	3,120
30	888	147	1,940	2,350	---	3,550	2,550	111	3,950	3,220	3,010	3,120
31	1,100	---	1,910	206	---	4,580	---	97	---	4,000	3,670	---
TOTAL	39,413	39,439	45,231	41,114	55,265	54,178	48,308	67,598	61,194	186,760	133,625	66,633
MEAN	1,271	1,315	1,459	1,326	1,906	1,748	1,610	2,181	2,040	6,025	4,310	2,221
MAX	3,070	3,470	2,750	2,800	5,260	4,580	2,550	3,520	3,950	10,900	8,640	4,140
MIN	71	82	136	115	126	77	58	78	103	112	96	68
AC-FT	78,180	78,230	89,720	81,550	109,600	107,500	95,820	134,100	121,400	370,400	265,000	132,200

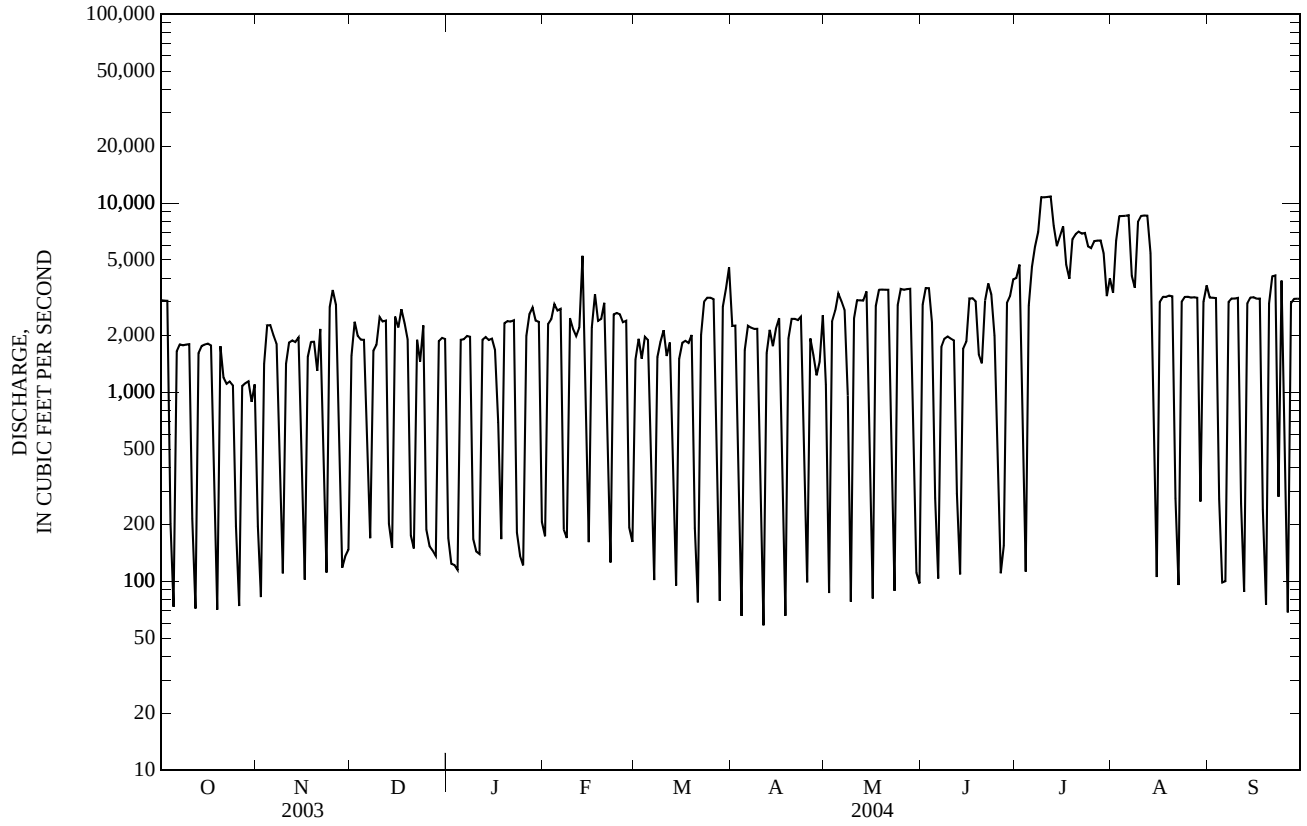
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2004, BY WATER YEAR (WY)

MEAN	4,646	3,598	3,390	3,701	3,528	4,623	4,865	7,284	10,820	5,447	3,521	2,590
MAX	27,860	18,880	13,320	20,630	13,800	24,760	20,400	34,710	66,960	21,820	25,570	10,330
(WY)	(1987)	(1975)	(1997)	(1998)	(1987)	(1987)	(1945)	(1957)	(1957)	(1982)	(1950)	(1950)
MIN	66.7	79.6	569	271	678	614	789	712	1,449	1,580	953	325
(WY)	(1957)	(1957)	(1981)	(1945)	(1945)	(1976)	(1978)	(1959)	(1956)	(1956)	(1972)	(1984)

07331600 Red River at Denison Dam near Denison, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1945 - 2004	
ANNUAL TOTAL	989,178		838,758			
ANNUAL MEAN	2,710		2,292		a4,782	
HIGHEST ANNUAL MEAN					16,030	1987
LOWEST ANNUAL MEAN					1,510	1964
HIGHEST DAILY MEAN	11,500	Feb 26	10,900	Jul 12	96,200	Jun 5, 1957
LOWEST DAILY MEAN	16	Feb 16	58	Apr 11	16	Feb 16, 2003
ANNUAL SEVEN-DAY MINIMUM	617	Mar 15	798	Oct 24	25	Mar 8, 2000
MAXIMUM PEAK FLOW			12,200	Aug 6	b102,000	Jun 5, 1957
MAXIMUM PEAK STAGE			10.87	Aug 6	c26.26	Jun 5, 1957
ANNUAL RUNOFF (AC-FT)	1,962,000		1,664,000		3,464,000	
10 PERCENT EXCEEDS	5,860		4,270		10,500	
50 PERCENT EXCEEDS	2,100		1,980		2,760	
90 PERCENT EXCEEDS	136		122		183	

a Prior to regulation, water years 1924-43, 5,684 ft^3/s.
b Maximum discharge for period of record, 201,000 ft^3/s May 21, 1935.
c Maximum gage height for period of record, 32.00 ft Apr. 25, 1942, site and datum then in use.



07331600 Red River at Denison Dam near Denison, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1944 to August 1989; October 1996 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1944 to September 1989; February 1997 to current year.
WATER TEMPERATURE: October 1945 to September 1989; February 1997 to current year.

INSTRUMENTATION.--Water-quality monitor February 1997 to current year.

REMARKS.--Samples were collected monthly, and specific conductance, pH, water temperature, alkalinity and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,520 microsiemens Aug. 14, 1944; minimum daily, 656 microsiemens Oct. 16, 1945.
WATER TEMPERATURE: Maximum daily, 31.0°C July 17, 1969; minimum daily, 3.0°C Feb. 2-4, 7, 1966.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,880 microsiemens several days; minimum, 1250 microsiemens Nov. 7.
WATER TEMPERATURE: Maximum, 28.3°C Sept. 12; minimum, 5.3°C Feb. 7.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Depth at sample location, feet (81903)	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
OCT												
08...	0918	1028	1028	1.05	4.97	40	751	9.6	8.0	1,620	22.5	10.0
08...	0919	1028	1028	1.50	4.97	40	751	9.3	8.0	1,620	22.6	20.0
08...	0920	1028	1028	.90	4.97	40	751	9.1	8.0	1,620	22.7	30.0
08...	0921	1028	1028	1.55	4.97	40	751	9.3	8.0	1,620	22.7	40.0
08...	0922	1028	1028	1.15	4.97	40	751	9.0	8.0	1,620	22.7	50.0
08...	0923	1028	1028	.84	4.97	40	751	9.0	8.0	1,620	22.7	60.0
08...	0924	1028	1028	1.10	4.97	40	751	9.1	8.0	1,620	22.7	170
08...	0925	1028	1028	.80	4.97	40	751	9.1	8.0	1,620	22.7	180
08...	0926	1028	1028	.90	4.97	40	751	8.9	8.0	1,620	22.6	190
08...	0927	1028	1028	1.25	4.97	40	751	8.8	8.0	1,620	22.6	200
08...	0928	1028	1028	1.45	4.97	40	751	8.9	8.0	1,620	22.6	210

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)
OCT													
02...	0900	1028	80020	4.95	147	754	9.5	109	7.6	1,640	--	21.7	--
08...	0935	1028	80020	4.97	40	751	9.6	113	8.0	1,620	16.8	22.5	230
NOV													
12...	1200	1028	80020	4.92	33	757	12.5	139	8.3	1,680	22.5	19.8	220
DEC													
10...	1225	1028	80020	7.13	3,110	760	11.6	108	7.6	1,710	8.7	11.8	220
JAN													
06...	0756	1028	80020	9.51	8,350	777	10.6	92	7.9	1,650	-7.8	9.5	270
FEB													
10...	1340	1028	80020	5.89	1,650	765	12.1	103	7.9	1,770	11.9	8.2	250
MAR													
01...	1110	1028	80020	4.76	96	752	13.9	123	8.3	1,740	16.3	9.0	270
APR													
06...	0755	1028	80020	5.28	555	748	13.4	130	8.3	1,740	12.0	12.7	270
MAY													
11...	1300	1028	80020	5.00	262	747	10.7	118	7.9	1,750	--	19.0	250
JUN													
08...	1205	1028	80020	4.91	202	747	6.3	70	7.2	1,730	24.5	19.4	260
JUL													
12...	1250	1028	80020	10.33	10,300	748	5.5	67	7.3	1,870	28.9	24.5	210
AUG													
04...	1500	1028	80020	10.69	11,800	740	4.9	62	7.5	1,840	36.1	25.7	--
SEP													
01...	1020	1028	80020	4.91	177	752	4.8	58	7.2	1,830	25.6	23.4	230

07331600 Red River at Denison Dam near Denison, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
OCT													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	340	84.7	32.4	5.33	5	197	55	110	134	.0	310	.3	4.8
NOV													
12...	340	84.8	32.1	5.39	5	205	56	120	139	3	317	.3	5.0
DEC													
10...	350	85.9	31.9	5.41	5	198	55	124	148	1	323	.3	4.5
JAN													
06...	370	93.9	33.9	5.74	5	207	54	106	127	.0	330	.3	4.7
FEB													
10...	350	87.7	32.6	5.46	5	213	56	107.6	E128	E1	333	.3	4.8
MAR													
01...	370	92.7	34.1	5.77	5	224	56	106	E126	E1	325	.3	3.6
APR													
06...	380	95.8	35.0	5.86	5	223	55	114	137	.0	330	.3	5.2
MAY													
11...	360	88.9	34.4	5.62	5	209	55	118	142	1	323	.3	6.2
JUN													
08...	380	97.2	34.0	5.36	5	209	54	119	144	.0	325	.3	6.7
JUL													
12...	340	83.2	30.9	5.01	5	205	57	121	145	.0	354	.3	6.2
AUG													
04...	360	88.2	33.1	5.42	5	214	56	--	--	--	354	.3	6.2
SEP													
01...	360	88.9	34.1	5.69	5	212	56	133	161	.0	357	.3	9.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L (71846)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L (71851)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L (71856)	Nitrite water, fltrd, mg/L as N (00613)
OCT													
02...	--	--	--	--	--	--	.23	.18	.146	.03	.09	.171	.052
08...	226	928	1.26	100	<10	.49	.10	.078	.230	.05	.078	.085	.026
NOV													
12...	230	951	1.29	84.8	<10	.44	.05	.040	.376	.08	.092	.023	.007
DEC													
10...	231	955	1.30	8,020	<10	.47	.04	.033	.553	.12	.127	.007	.002
JAN													
06...	237	976	1.33	22,000	<10	.47	.07	.056	.500	.11	.115	.007	.002
FEB													
10...	241	983	1.34	4,380	<10	.47	.04	.031	.474	.11	.109	.007	.002
MAR													
01...	241	990	1.35	257	<10	.42	.02	.012	.186	.04	.044	.007	.002
APR													
06...	220	984	1.34	1,470	<10	.52	.10	.075	.212	.05	.052	.013	.004
MAY													
11...	233	973	1.32	688	<10	.57	.24	.190	.336	.08	.089	.043	.013
JUN													
08...	234	984	1.34	537	<10	.44	.05	.036	.916	.21	.215	.026	.008
JUL													
12...	251	1,010	1.37	28,100	<10	.44	.11	.087	.212	.05	.054	.020	.006
AUG													
04...	251	--	--	--	<10	.48	.11	.085	--	--	<.016	--	<.002
SEP													
01...	242	1,030	1.40	493	15	1.3	1.05	.817	--	--	<.016	--	<.002

07331600 Red River at Denison Dam near Denison, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Organic nitrogen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L (00660)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, wat flt by anal ysis, mg/L (62854)	Total nitro-gen, water, unfltrd mg/L (00600)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover -able, ug/L (01007)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
OCT													
02...	--	.126	.041	.056	--	.56	--	--	--	--	--	--	--
08...	.41	.028	.009	.019	.036	--	.57	1.4	2	86	129	E.04	E.03
NOV													
12...	.40	.028	.009	.017	.028	--	.53	1.8	E2	131	133	<.04	E.04
DEC													
10...	.44	.031	.010	.020	.041	--	.59	1.8	<2	128	138	.17	.21
JAN													
06...	.42	.040	.013	.019	.037	--	.59	1.6	E2	130	131	.07	.06
FEB													
10...	.43	--	E.005	.013	.031	--	.57	1.6	E1	133	124	.08	.08
MAR													
01...	.41	--	<.006	.010	.022	--	.47	1.3	E2	136	128	<.04	<.04
APR													
06...	.44	--	<.006	.011	.031	--	.57	1.5	<2	134	135	<.04	<.04
MAY													
11...	.38	.071	.023	.037	.047	--	.66	2.2	E2	137	119	<.04	<.04
JUN													
08...	.40	.132	.043	.057	.071	--	.65	2.6	3	123	130	<.20	E.02
JUL													
12...	.35	.077	.025	.043	.059	--	.49	2.1	<2	125	133	<.04	E.03
AUG													
04...	.39	.089	.029	.035	.052	--	--	2.5	M	130	126	E.03	E.03
SEP													
01...	.46	.675	.220	.22	.24	--	--	3.7	3	139	127	.04	.04

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)
OCT													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	E.8	<.8	1.3	3.4	<6	120	.31	.29	6.0	59	<.02	<.02	1.27
NOV													
12...	<.8	<.8	1.5	3.4	<6	90	<.08	.38	3.3	33	<.02	<.02	1.94
DEC													
10...	<.8	E.7	3.8	6.0	<6	130	E.07	1.37	1.2	27	<.02	E.01	2.33
JAN													
06...	<.8	<.8	4.0	4.1	<6	90	.27	.64	1.1	20	<.02	<.02	3.53
FEB													
10...	<.8	<.8	2.5	3.1	<6	40	.13	.22	1.1	15	<.02	E.01	1.91
MAR													
01...	<.8	<.8	1.8	2.4	<6	40	E.05	.09	2.0	14	<.02	<.02	2.60
APR													
06...	<.8	<.8	2.3	4.5	<6	90	<.08	.19	4.2	32	<.02	<.02	4.75
MAY													
11...	<.8	<.8	2.1	2.1	<6	80	E.05	.15	182	238	<.02	<.02	1.10
JUN													
08...	<.8	<.8	3.3	3.7	<6	100	<.40	.24	262	324	<.02	<.02	2.64
JUL													
12...	<.8	<.8	2.1	3.4	<6	70	E.05	.14	174	218	<.02	<.02	2.54
AUG													
04...	<.8	<.8	2.2	2.7	<6	30	E.08	.32	200	194	<.02	<.02	3.17
SEP													
01...	<.8	<.8	1.6	4.1	21	80	.11	.23	643	636	<.02	<.02	2.75

07331600 Red River at Denison Dam near Denison, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Nickel, water, unfltrd recover-able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Aldrin, water, unfltrd ug/L (39330)	alpha-Endo-sulfan, water, unfltrd ug/L (34361)	alpha-HCH, water, unfltrd ug/L (39337)	alpha-HCH-d6, surrog, Sch1608 water, unfltrd pct rcv (99778)	Aroclor 1016 + 1242, water, unfltrd ug/L (81648)	Aroclor 1221, water, unfltrd ug/L (39488)
OCT													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	4.08	E.3	.9	<.2	<.16	4.5	3	--	--	--	--	--	--
NOV													
12...	3.46	<1	--	<.2	<.16	.9	2	<.04	<.1	<.03	62.5	<.1	<1
DEC													
10...	5.46	.7	--	<.2	<.16	7.4	27	--	--	--	--	--	--
JAN													
06...	4.32	.6	--	<.2	<.16	3.9	4	--	--	--	--	--	--
FEB													
10...	3.72	<1	4	<.2	<.16	2.5	4	--	--	--	--	--	--
MAR													
01...	3.60	1	<1	<.2	<.16	1.3	<2	--	--	--	--	--	--
APR													
06...	3.07	<1	<1	<.2	<.16	2.0	5	--	--	--	--	--	--
MAY													
11...	2.83	<1	<1	<.2	<.16	1.5	E2	<.04	<.1	<.03	E18.1	<.1	<1
JUN													
08...	3.53	1	<1	<1.0	<.16	E3.0	3	--	--	--	--	--	--
JUL													
12...	3.69	<1	2	<.2	<.16	7.6	5	--	--	--	--	--	--
AUG													
04...	3.02	<1	<1	<.2	<.16	3.7	4	--	--	--	--	--	--
SEP													
01...	4.94	<1	<1	<.2	<.16	6.5	8	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Aroclor 1232, water, unfltrd ug/L (39492)	Aroclor 1248, water, unfltrd ug/L (39500)	Aroclor 1254, water, unfltrd ug/L (39504)	Aroclor 1260, water, unfltrd ug/L (39508)	beta-Endo-sulfan, water, unfltrd ug/L (34356)	beta-HCH, water, unfltrd ug/L (39338)	Chlor-dane, tech-nical, water, unfltrd ug/L (39350)	cis-Chlor-dane, water, unfltrd ug/L (39062)	delta-HCH, water, unfltrd ug/L (34259)	Diel-drin, water, unfltrd ug/L (39380)	Endo-sulfan sulfate water unfltrd ug/L (34351)	Endrin alde-hyde, water, unfltrd ug/L (34366)	Endrin, water, unfltrd ug/L (39390)
OCT													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
12...	<.1	<.1	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06
DEC													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
11...	<.1	<.1	<.1	<.1	<.04	<.03	<.1	<.1	<.09	<.02	<.6	<.2	<.06
JUN													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--

07331600 Red River at Denison Dam near Denison, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Hepta-chlor epoxide water unfltrd ug/L (39420)	Hepta-chlor, water, unfltrd ug/L (39410)	Isodrin surrog, Sch1608 wat unf percent recovry (90570)	Lindane water, unfltrd ug/L (39340)	p,p-' DDD, water, unfltrd ug/L (39310)	p,p-' DDE, water, unfltrd ug/L (39320)	p,p-' DDT, water, unfltrd ug/L (39300)	PCB 207, surrog, Sch1608 water, unfltrd pct rcv (99781)	Toxa-phene, water, unfltrd ug/L (39400)	trans-Chlor-dane, water, unfltrd ug/L (39065)
OCT										
02...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
NOV										
12...	<.8	<.03	77.0	<.03	<.1	<.04	<.1	62.3	<2	<.1
DEC										
10...	--	--	--	--	--	--	--	--	--	--
JAN										
06...	--	--	--	--	--	--	--	--	--	--
FEB										
10...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	--	--	--	--	--	--	--	--	--	--
APR										
06...	--	--	--	--	--	--	--	--	--	--
MAY										
11...	<.8	<.03	E16.8	<.03	<.1	<.04	<.1	E11.7	<2	<.1
JUN										
08...	--	--	--	--	--	--	--	--	--	--
JUL										
12...	--	--	--	--	--	--	--	--	--	--
AUG										
04...	--	--	--	--	--	--	--	--	--	--
SEP										
01...	--	--	--	--	--	--	--	--	--	--

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1,630	1,600	1,610	1,680	1,660	1,670	1,660	1,630	1,650	1,680	1,640	1,660
2	1,630	1,600	1,620	1,680	1,660	1,670	1,670	1,640	1,660	1,670	1,650	1,660
3	1,630	1,610	1,620	1,680	1,670	1,680	1,670	1,640	1,660	1,670	1,650	1,660
4	1,640	1,610	1,620	1,690	1,670	1,680	1,680	1,650	1,670	1,670	1,640	1,660
5	1,620	1,590	1,610	1,690	1,540	1,670	1,690	1,660	1,680	1,660	1,650	1,650
6	1,640	1,610	1,620	1,690	1,540	1,660	1,690	1,660	1,680	1,660	1,650	1,650
7	1,640	1,610	1,630	1,690	1,250	1,600	1,700	1,670	1,680	1,660	1,650	1,660
8	1,650	1,620	1,640	1,680	1,670	1,670	1,700	1,680	1,690	1,680	1,660	1,670
9	1,660	1,630	1,640	1,680	1,660	1,670	1,710	1,700	1,700	1,680	1,660	1,670
10	1,670	1,650	1,660	1,680	1,660	1,670	1,720	1,700	1,710	1,680	1,660	1,670
11	1,690	1,650	1,670	1,700	1,670	1,680	1,720	1,700	1,710	1,680	1,660	1,670
12	1,710	1,680	1,690	1,690	1,650	1,680	1,720	1,580	1,680	1,690	1,670	1,680
13	1,710	1,650	1,690	1,660	1,650	1,660	1,700	1,660	1,680	1,700	1,670	1,680
14	1,700	1,650	1,670	1,660	1,650	1,660	1,710	1,680	1,700	1,730	1,660	1,690
15	1,670	1,650	1,660	1,660	1,640	1,650	1,710	1,700	1,700	1,700	1,680	1,690
16	1,670	1,650	1,660	1,660	1,640	1,660	1,710	1,680	1,700	1,690	1,630	1,670
17	1,670	1,640	1,660	1,670	1,620	1,660	1,720	1,690	1,700	1,680	1,600	1,650
18	1,670	1,630	1,660	1,670	1,570	1,650	1,710	1,700	1,700	1,700	1,680	1,680
19	1,670	1,640	1,660	1,670	1,640	1,660	1,710	1,690	1,700	1,700	1,690	1,700
20	1,670	1,640	1,660	1,670	1,640	1,650	1,700	1,680	1,690	1,710	1,690	1,700
21	1,670	1,650	1,670	1,660	1,640	1,650	1,700	1,680	1,690	1,710	1,690	1,700
22	1,670	1,650	1,660	1,660	1,640	1,650	1,700	1,680	1,690	1,720	1,700	1,710
23	1,670	1,650	1,670	1,650	1,290	1,610	1,700	1,670	1,680	1,730	1,700	1,720
24	1,670	1,650	1,670	1,670	1,640	1,660	1,700	1,680	1,690	1,730	1,710	1,720
25	1,670	1,630	1,660	1,660	1,650	1,660	1,700	1,660	1,680	1,720	1,700	1,710
26	1,670	1,650	1,660	1,670	1,640	1,650	1,680	1,670	1,680	1,740	1,720	1,730
27	1,680	1,660	1,670	1,660	1,640	1,650	1,680	1,650	1,680	1,730	1,720	1,730
28	1,680	1,660	1,680	1,660	1,630	1,650	1,680	1,650	1,670	1,730	1,730	1,730
29	1,680	1,670	1,680	1,650	1,630	1,640	1,680	1,670	1,670	1,750	1,720	1,740
30	1,690	1,670	1,680	1,650	1,640	1,640	1,680	1,660	1,670	1,750	1,730	1,740
31	1,680	1,680	1,680	---	---	---	1,680	1,670	1,670	1,750	1,720	1,730
MONTH	1,710	1,590	1,660	1,700	1,250	1,660	1,720	1,580	1,680	1,750	1,600	1,690

07331600 Red River at Denison Dam near Denison, TX—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1,760	1,720	1,740	1,770	1,710	1,740	1,760	1,740	1,760	1,730	1,720	1,730
2	1,760	1,750	1,750	1,750	1,710	1,730	1,760	1,740	1,750	1,740	1,710	1,730
3	1,770	1,750	1,750	1,740	1,710	1,730	1,750	1,740	1,750	1,750	1,720	1,740
4	1,760	1,580	1,720	1,740	1,540	1,710	1,770	1,740	1,750	1,760	1,730	1,740
5	1,760	1,690	1,740	1,730	1,680	1,720	1,760	1,740	1,750	1,760	1,730	1,750
6	1,770	1,750	1,760	1,740	1,690	1,720	1,760	1,740	1,750	1,770	1,720	1,750
7	1,770	1,750	1,760	1,730	1,700	1,720	1,760	1,700	1,750	1,770	1,720	1,750
8	1,770	1,740	1,760	1,740	1,680	1,720	1,770	1,730	1,750	1,770	1,730	1,750
9	1,780	1,770	1,770	1,740	1,710	1,730	1,770	1,740	1,750	1,760	1,730	1,740
10	1,790	1,770	1,780	1,750	1,730	1,730	1,780	1,750	1,760	1,760	1,740	1,750
11	1,790	1,770	1,770	1,740	1,710	1,720	1,780	1,750	1,770	1,760	1,720	1,740
12	1,780	1,750	1,770	1,740	1,710	1,730	1,770	1,720	1,750	1,740	1,710	1,730
13	1,790	1,770	1,780	1,740	1,690	1,710	1,750	1,720	1,740	1,740	1,730	1,740
14	1,790	1,690	1,750	1,730	1,700	1,710	1,760	1,720	1,740	1,750	1,720	1,730
15	1,770	1,690	1,730	1,730	1,710	1,720	1,760	1,740	1,750	1,750	1,700	1,730
16	1,810	1,750	1,770	1,740	1,700	1,730	1,760	1,740	1,750	1,750	1,690	1,730
17	1,800	1,780	1,790	1,740	1,710	1,730	1,760	1,730	1,740	1,760	1,730	1,750
18	1,800	1,780	1,780	1,730	1,690	1,720	1,750	1,730	1,740	1,820	1,740	1,770
19	1,790	1,780	1,780	1,740	1,720	1,730	1,750	1,720	1,740	1,820	1,760	1,800
20	1,820	1,780	1,790	1,740	1,710	1,730	1,730	1,720	1,720	1,820	1,770	1,800
21	1,820	1,780	1,810	1,740	1,710	1,730	1,730	1,720	1,720	1,810	1,770	1,790
22	1,810	1,770	1,790	---	---	e1,740	1,730	1,720	1,730	1,810	1,690	1,790
23	1,810	1,730	1,780	---	---	e1,740	1,730	1,720	1,730	1,800	1,770	1,780
24	1,780	1,720	1,760	---	---	e1,760	1,730	1,620	1,690	1,810	1,620	1,790
25	1,770	1,720	1,760	---	---	e1,780	1,740	1,710	1,720	1,810	1,790	1,800
26	1,780	1,750	1,760	1,810	1,780	1,800	1,740	1,710	1,730	1,810	1,790	1,800
27	1,780	1,750	1,770	1,790	1,760	1,780	1,750	1,720	1,740	1,820	1,790	1,810
28	1,780	1,720	1,750	1,780	1,760	1,770	1,740	1,720	1,730	1,810	1,770	1,800
29	1,770	1,740	1,760	1,780	1,760	1,770	1,750	1,720	1,740	1,810	1,690	1,800
30	---	---	---	1,780	1,760	1,770	1,750	1,690	1,730	1,820	1,790	1,800
31	---	---	---	1,770	1,760	1,760	---	---	---	1,830	1,800	1,820
MONTH	1,820	1,580	1,760	1,810	1,540	1,740	1,780	1,620	1,740	1,830	1,620	1,770
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1,840	1,800	1,820	1,860	1,800	1,830	1,860	1,830	1,850	1,830	1,760	1,800
2	1,840	1,800	1,820	1,860	1,800	1,840	1,850	1,840	1,840	1,840	1,760	1,800
3	1,810	1,780	1,800	1,850	1,780	1,810	1,860	1,840	1,850	1,850	1,760	1,810
4	1,800	1,770	1,790	1,820	1,800	1,810	1,850	1,830	1,840	1,850	1,800	1,840
5	1,790	1,750	1,770	1,860	1,760	1,830	1,850	1,830	1,840	1,850	1,830	1,850
6	1,770	1,730	1,750	1,880	1,830	1,850	1,850	1,830	1,840	1,850	1,820	1,840
7	1,770	1,700	1,730	1,870	1,810	1,850	1,860	1,830	1,840	1,860	1,760	1,810
8	1,770	1,710	1,750	1,860	1,830	1,850	1,860	1,840	1,850	1,820	1,740	1,780
9	1,770	1,650	1,720	1,860	1,850	1,860	1,860	1,830	1,840	1,800	1,750	1,780
10	1,770	1,710	1,740	1,870	1,860	1,860	1,860	1,830	1,840	1,800	1,750	1,770
11	1,770	1,740	1,760	1,870	1,750	1,850	1,850	1,820	1,830	1,810	1,770	1,790
12	1,770	1,740	1,750	1,870	1,790	1,860	1,840	1,820	1,830	1,810	1,790	1,800
13	1,760	1,740	1,750	1,870	1,770	1,860	1,850	1,820	1,830	1,810	1,760	1,790
14	1,780	1,750	1,760	1,870	1,840	1,860	1,860	1,830	1,850	1,800	1,670	1,770
15	1,780	1,750	1,770	1,870	1,850	1,860	1,860	1,850	1,860	1,780	1,670	1,750
16	1,780	1,750	1,770	1,870	1,840	1,860	1,870	1,830	1,850	1,790	1,760	1,770
17	1,780	1,740	1,760	1,870	1,830	1,860	1,860	1,840	1,850	1,790	1,760	1,770
18	1,790	1,640	1,750	1,870	1,820	1,860	1,860	1,820	1,840	1,780	1,760	1,770
19	1,800	1,690	1,770	1,870	1,840	1,860	1,860	1,740	1,810	1,780	1,760	1,770
20	1,800	1,760	1,780	1,870	1,840	1,860	1,840	1,790	1,820	1,780	1,750	1,760
21	1,810	1,750	1,790	1,880	1,850	1,860	1,850	1,820	1,840	1,760	1,750	1,750
22	1,810	1,340	1,740	1,880	1,840	1,870	1,860	1,840	1,850	1,760	1,750	1,750
23	1,800	1,770	1,790	1,880	1,840	1,870	1,860	1,820	1,840	1,760	1,750	1,750
24	1,820	1,780	1,800	1,880	1,840	1,860	1,860	1,800	1,830	1,760	1,740	1,750
25	1,810	1,770	1,790	1,870	1,840	1,860	1,850	1,790	1,820	1,770	1,740	1,750
26	1,800	1,780	1,790	1,860	1,840	1,860	1,850	1,780	1,820	1,770	1,740	1,760
27	1,800	1,750	1,780	1,870	1,840	1,860	1,840	1,770	1,810	1,770	1,760	1,760
28	1,830	1,780	1,800	1,880	1,850	1,870	1,830	1,760	1,790	1,770	1,750	1,760
29	1,840	1,760	1,820	1,880	1,750	1,850	1,850	1,790	1,830	1,770	1,740	1,760
30	1,850	1,730	1,820	1,870	1,840	1,860	1,850	1,760	1,810	1,760	1,740	1,760
31	---	---	---	1,870	1,840	1,860	1,840	1,760	1,800	---	---	---
MONTH	1,850	1,340	1,770	1,880	1,750	1,850	1,870	1,740	1,830	1,860	1,670	1,780

e Estimated

07331600 Red River at Denison Dam near Denison, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.8	21.6	22.9	23.1	20.0	21.2	15.9	12.7	14.0	11.3	10.3	10.7
2	23.5	21.6	22.6	22.8	20.2	21.3	14.0	12.8	13.5	12.5	10.6	11.4
3	23.2	21.3	22.4	22.7	20.6	21.3	14.9	13.3	13.8	11.7	10.8	11.2
4	25.3	21.1	23.0	22.7	20.8	21.4	14.9	12.2	13.4	11.1	8.8	10.3
5	24.2	22.1	22.9	20.8	19.1	19.8	13.4	11.4	12.6	10.2	7.8	9.1
6	24.1	22.3	22.7	19.9	18.3	19.0	13.9	11.1	12.3	9.8	7.6	8.7
7	24.9	21.7	22.6	19.5	14.5	18.2	13.7	10.8	12.0	9.3	6.8	8.4
8	24.9	21.4	22.6	19.2	17.7	18.3	14.5	11.6	12.6	9.6	7.9	8.9
9	23.8	22.4	22.7	19.0	17.5	18.1	13.7	11.1	12.6	10.1	7.3	8.5
10	24.8	22.1	22.7	19.2	17.4	18.2	12.5	10.2	11.5	10.3	6.8	8.2
11	24.7	21.5	22.9	20.8	18.3	19.3	12.7	9.7	11.4	10.4	6.7	8.4
12	23.8	21.7	22.7	19.6	17.6	18.6	11.8	10.0	10.9	10.1	7.8	8.9
13	24.5	21.7	22.6	17.6	15.9	16.6	10.7	9.5	10.3	10.5	8.6	9.2
14	24.1	20.8	22.3	17.4	15.9	16.5	12.3	8.9	10.3	10.6	8.6	9.3
15	23.9	20.4	21.8	19.0	16.8	17.6	12.6	9.9	11.1	10.0	8.5	9.3
16	24.3	20.6	22.0	19.3	15.5	17.2	11.0	9.1	10.2	9.7	8.8	9.2
17	23.9	20.7	21.9	18.1	16.9	17.3	11.8	9.7	10.6	10.7	8.9	9.6
18	24.6	20.2	22.1	17.2	15.7	16.6	11.7	9.7	10.6	9.5	7.3	8.3
19	24.6	20.3	22.1	18.4	14.7	16.4	11.6	8.8	10.2	9.6	6.6	8.1
20	24.0	20.3	21.8	18.0	15.1	16.4	11.7	8.3	9.8	9.2	6.6	8.1
21	24.6	20.9	22.1	17.2	15.2	16.3	12.1	9.2	10.5	10.1	6.8	8.4
22	24.4	20.7	21.9	18.6	16.1	17.2	11.7	9.8	10.8	9.7	7.1	8.3
23	24.9	20.5	21.9	17.2	12.5	14.9	11.6	9.2	10.2	10.6	6.8	8.5
24	24.2	20.7	21.9	15.8	12.3	14.0	11.3	9.2	10.3	9.8	8.9	9.3
25	22.5	20.2	21.4	15.6	14.0	15.0	11.6	8.5	9.8	11.5	8.7	9.8
26	20.9	19.5	20.1	16.4	13.6	14.8	11.4	9.3	10.3	9.4	7.7	8.6
27	23.0	18.8	20.5	15.2	12.5	14.3	11.5	10.8	11.1	9.6	6.6	8.1
28	23.0	19.3	20.6	14.5	11.5	12.9	11.0	9.3	10.5	9.4	6.3	8.1
29	22.7	18.9	20.5	15.1	11.9	13.2	11.1	8.3	9.7	9.2	7.3	8.3
30	22.9	19.5	20.8	15.6	12.3	13.7	10.8	8.0	9.6	8.6	6.8	7.8
31	22.8	20.5	21.3	---	---	---	10.9	8.4	9.9	8.1	6.6	7.4
MONTH	25.3	18.8	22.0	23.1	11.5	17.2	15.9	8.0	11.2	12.5	6.3	8.9
		FEBRUARY			MARCH			APRIL			MAY	
1	9.1	7.6	8.2	11.5	7.6	9.2	15.8	11.9	13.6	17.9	15.8	16.6
2	9.2	6.8	7.9	11.2	7.7	9.0	15.7	12.2	13.6	20.4	15.1	17.4
3	8.7	6.2	7.6	10.5	8.3	8.9	16.5	12.4	13.9	19.8	14.9	17.2
4	7.7	6.4	7.2	11.9	8.6	9.6	15.8	11.1	13.2	20.1	16.6	18.2
5	8.0	6.7	7.4	12.9	8.4	10	14.2	11.7	12.9	20.7	17.0	18.2
6	8.2	6.1	7.3	12.5	8.7	10.3	15.1	12.3	13.4	21.2	16.8	18.3
7	9.4	5.3	7.0	13.3	8.6	10.6	14.3	12.7	13.5	21.0	17.2	18.5
8	8.1	5.5	6.8	12.8	8.1	10.2	16.8	12.7	14.2	20.1	17.6	18.8
9	7.6	7.1	7.3	13.5	9.3	10.9	15.8	12.8	14.0	20.9	17.4	18.9
10	8.8	6.7	7.6	12.4	8.8	10.8	13.8	12.4	13.3	20.7	17.3	18.4
11	7.5	7.0	7.3	11.9	9.3	10.3	13.7	12.2	12.8	20.0	17.5	18.3
12	9.4	6.0	7.3	11.2	9.4	10.3	17.1	12.7	14.4	20.5	17.4	18.0
13	7.7	6.0	7.0	11.1	9.9	10.4	17.9	13.2	15.2	19.0	17.7	18.3
14	7.0	5.7	6.4	13.2	9.8	11.0	18.0	13.6	15.4	19.6	16.5	18.4
15	9.3	5.5	7.0	11.2	9.5	10.5	18.0	13.8	15.3	20.6	17.3	18.9
16	9.4	5.7	7.0	12.1	9.5	10.7	17.9	14.3	15.1	20.7	16.5	18.7
17	9.2	6.3	7.2	14.1	9.4	11.1	18.6	14.4	16.0	20.6	17.2	18.5
18	8.5	6.0	7.3	13.8	10.3	11.7	17.2	15.2	16.1	21.2	18.4	19.1
19	9.2	6.8	7.9	12.5	10.3	10.9	16.2	15.1	15.5	22.0	18.5	19.3
20	10.7	7.2	8.3	14.0	11.1	12.4	16.7	15.0	15.4	22.1	18.5	19.4
21	10.7	6.4	8.1	14.4	10.1	12.0	17.8	15.3	15.8	21.7	18.7	19.4
22	10.4	6.7	8.5	---	---	---	17.3	15.4	15.9	20.6	18.3	19.4
23	8.6	7.7	8.1	---	---	---	16.8	15.8	16.2	22.1	18.5	20.0
24	8.2	7.5	7.8	---	---	---	16.6	15.5	16.1	20.9	18.6	19.6
25	9.3	7.1	7.9	---	---	---	19.6	14.7	16.7	20.4	19.0	19.8
26	10.5	6.8	8.4	12.6	11.5	11.9	19.3	14.9	16.7	21.7	19.2	20.2
27	10.0	6.5	8.4	13.4	11.5	12.2	19.2	15.5	17.1	21.6	19.4	20.5
28	9.7	7.2	8.5	13.3	11.3	12.2	17.8	15.8	16.8	23.2	19.6	21.1
29	9.9	8.6	9.0	14.5	10.0	12.2	18.4	16.0	17.1	22.2	19.7	20.9
30	---	---	---	15.8	11.5	13.4	19.4	16.4	17.3	24.1	19.6	21.1
31	---	---	---	14.7	11.9	13.6	---	---	---	22.9	18.4	20.6
MONTH	10.7	5.3	7.6	15.8	7.6	11.0	19.6	11.1	15.1	24.1	14.9	19.0

07331600 Red River at Denison Dam near Denison, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	24.1	18.6	21.0	23.4	20.0	21.9	25.3	22.0	23.8	27.0	23.0	25.2
2	23.1	20.2	21.5	23.3	20.5	22.1	25.4	22.1	24.1	26.9	23.2	25.2
3	23.3	20.3	21.8	23.3	20.2	21.7	25.4	23.2	24.9	26.8	23.0	25.0
4	22.9	20.1	21.7	24.1	19.9	21.8	26.0	23.5	25.1	25.7	23.3	24.6
5	21.4	19.4	20.2	23.4	20.2	21.8	26.7	23.8	25.8	26.5	23.1	24.5
6	21.9	18.7	20.1	24.2	20.6	22.5	26.2	23.3	25.4	26.4	23.0	24.3
7	21.8	18.8	20.1	24.0	20.7	22.6	25.8	23.7	24.9	26.7	21.8	24.3
8	21.5	19.4	20.2	23.8	21.8	23.2	25.7	23.5	24.7	26.7	22.5	24.8
9	21.4	19.4	20.3	24.1	23.5	23.7	26.1	23.6	25.5	26.5	22.8	24.9
10	21.8	19.3	20.5	24.2	23.6	24.0	26.2	23.7	25.6	26.6	22.9	25.0
11	22.7	19.6	20.8	24.3	23.8	24.0	27.0	23.5	25.9	28.1	23.3	25.4
12	22.5	19.5	20.7	24.6	24.0	24.3	26.9	23.9	26.1	28.3	23.3	25.5
13	22.6	19.3	20.8	24.8	22.8	24.1	26.5	23.6	25.4	26.4	23.1	24.9
14	22.9	19.4	21.0	25.0	22.5	23.9	25.6	22.6	23.8	26.3	24.2	25.3
15	22.7	19.3	20.8	24.7	22.4	24.0	24.5	21.6	22.9	26.3	24.4	25.4
16	22.8	19.6	21.2	24.8	22.5	24.1	26.1	21.8	23.8	27.7	24.6	25.7
17	23.0	19.6	21.3	25.6	22.2	24.2	26.1	22.2	24.3	27.3	24.6	25.8
18	23.0	19.6	21.2	25.2	21.3	23.5	26.0	22.3	24.2	27.9	24.7	26.2
19	22.7	20.0	21.2	25.0	20.9	23.6	25.8	22.6	24.1	27.8	23.8	25.6
20	22.8	20.0	21.8	24.8	22.2	23.9	26.2	22.8	24.5	26.6	23.5	24.9
21	23.4	19.3	21.3	25.0	22.2	24.1	25.1	22.6	23.9	26.0	23.8	25.1
22	23.6	19.6	21.7	25.2	22.5	24.2	25.7	22.2	23.6	25.9	23.9	25.1
23	23.9	19.7	21.8	25.2	22.7	24.2	26.0	22.5	24.2	27.2	24.1	25.5
24	23.3	19.8	21.5	25.7	22.8	24.4	26.1	23.2	24.7	26.8	24.1	25.1
25	22.1	19.9	20.8	26.1	22.0	24.6	26.2	23.5	24.9	28.1	24.0	25.8
26	22.5	19.2	20.5	26.1	23.0	24.9	26.1	23.6	25.0	28.1	23.8	25.7
27	21.3	19.4	20.2	25.5	22.7	24.5	26.3	23.7	25.1	26.4	23.2	24.8
28	23.3	19.3	21.1	25.2	22.4	24.2	26.9	23.4	25.2	25.8	23.6	24.8
29	23.2	20.1	21.7	25.0	22.6	24.1	27.5	23.4	25.2	26.5	23.4	24.9
30	23.1	20.0	21.6	25.3	23.2	24.4	27.1	22.2	24.8	26.0	23.1	24.7
31	---	---	---	25.5	22.5	24.2	27.0	22.7	25.2	---	---	---
MONTH	24.1	18.6	21.0	26.1	19.9	23.6	27.5	21.6	24.7	28.3	21.8	25.1

07331700 Randell Lake near Denison, TX

LOCATION.--Lat 33°48'06", long 96°34'48", Grayson County, Hydrologic Unit 11140101, on right bank near the right end of the dam on Shawne Creek, 5.6 mi northeast of Denison.

DRAINAGE AREA.--11.0 mi^2.

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

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

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 2,100 ft long. The outlet works consist of twenty-three 8 by 12-ft tainter gates and two 8-ft wide open concrete spillways. Dam was completed and impoundment began in 1909. The lake was built and owned by the city of Denison. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	640.0
Top of tainter gates	628.0
Crest of concrete spillway	630.0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 6,360 acre-ft, Apr. 7, 2002, elevation, 623.77 ft; minimum contents, 2,250 acre-ft, Sept. 3, 4, 5, 1999, elevation, 608.04 ft.

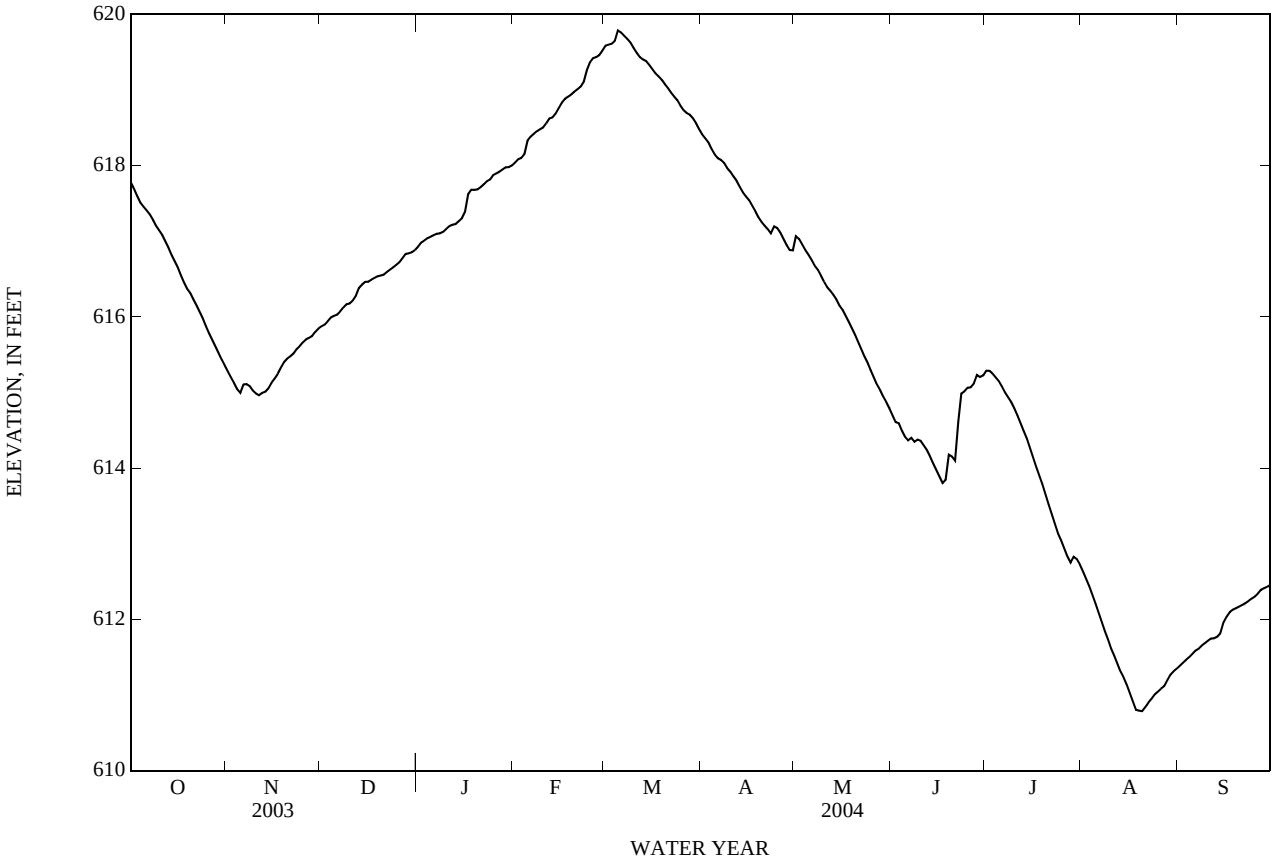
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 619.81 ft, Mar. 5; minimum elevation, 610.70 ft, Aug. 19.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	617.77	615.28	615.88	616.93	618.04	619.59	618.41	617.07	614.69	615.29	612.63	611.39
2	617.69	615.20	615.90	616.98	618.08	619.60	618.36	617.03	614.61	615.29	612.54	611.43
3	617.60	615.12	615.94	617.01	618.10	619.61	618.30	616.96	614.59	615.25	612.44	611.46
4	617.51	615.05	615.99	617.04	618.15	619.65	618.22	616.88	614.50	615.20	612.33	611.50
5	617.46	614.99	616.01	617.06	618.33	619.79	618.15	616.82	614.41	615.15	612.21	611.54
6	617.41	615.11	616.03	617.08	618.38	619.76	618.10	616.75	614.37	615.08	612.09	611.59
7	617.36	615.11	616.07	617.10	618.42	619.72	618.07	616.68	614.40	615.00	611.97	611.61
8	617.28	615.08	616.13	617.11	618.45	619.67	618.04	616.62	614.35	614.94	611.85	611.65
9	617.21	615.03	616.17	617.13	618.48	619.63	617.97	616.55	614.38	614.87	611.74	611.68
10	617.14	614.99	616.18	617.16	618.50	619.56	617.92	616.47	614.36	614.79	611.62	611.72
11	617.08	614.96	616.21	617.20	618.56	619.49	617.86	616.40	614.30	614.70	611.52	611.75
12	617.00	614.99	616.28	617.22	618.62	619.43	617.80	616.35	614.24	614.60	611.42	611.75
13	616.92	615.01	616.38	617.23	618.64	619.40	617.72	616.29	614.16	614.49	611.31	611.77
14	616.82	615.06	616.43	617.27	618.69	619.38	617.65	616.23	614.06	614.39	611.23	611.81
15	616.74	615.13	616.46	617.31	618.76	619.33	617.59	616.15	613.97	614.27	611.14	611.96
16	616.65	615.19	616.46	617.39	618.83	619.28	617.54	616.09	613.89	614.14	611.03	612.03
17	616.55	615.25	616.49	617.62	618.88	619.22	617.47	616.01	613.80	614.02	610.91	612.10
18	616.45	615.33	616.52	617.68	618.91	619.18	617.40	615.93	613.85	613.90	610.80	612.13
19	616.37	615.40	616.54	617.68	618.94	619.14	617.32	615.85	614.18	613.79	610.79	612.15
20	616.31	615.45	616.55	617.69	618.98	619.08	617.25	615.76	614.16	613.65	610.79	612.17
21	616.23	615.48	616.56	617.72	619.01	619.03	617.21	615.67	614.10	613.52	610.84	612.19
22	616.15	615.52	616.59	617.75	619.04	618.97	617.16	615.57	614.61	613.39	610.90	612.22
23	616.07	615.57	616.62	617.79	619.11	618.91	617.10	615.48	614.99	613.26	610.95	612.24
24	615.98	615.61	616.66	617.82	619.26	618.87	617.20	615.39	615.02	613.13	611.01	612.27
25	615.88	615.66	616.69	617.87	619.36	618.80	617.18	615.29	615.06	613.05	611.04	612.30
26	615.78	615.70	616.72	617.90	619.42	618.73	617.11	615.20	615.07	612.94	611.08	612.34
27	615.70	615.72	616.78	617.92	619.43	618.70	617.04	615.11	615.12	612.84	611.12	612.39
28	615.61	615.75	616.83	617.95	619.46	618.67	616.95	615.03	615.23	612.75	611.19	612.41
29	615.53	615.80	616.84	617.98	619.52	618.63	616.88	614.95	615.20	612.83	611.27	612.43
30	615.44	615.85	616.85	617.98	---	618.56	616.88	614.87	615.23	612.80	611.31	612.46
31	615.36	---	616.88	618.00	---	618.48	---	614.79	---	612.73	611.35	---
MEAN	616.61	615.31	616.41	617.47	618.77	619.22	617.60	616.01	614.50	614.07	611.43	611.95
MAX	617.77	615.85	616.88	618.00	619.52	619.79	618.41	617.07	615.23	615.29	612.63	612.46
MIN	615.36	614.96	615.88	616.93	618.04	618.48	616.88	614.79	613.80	612.73	610.79	611.39

CAL YR 2003 MEAN 617.91 MAX 620.51 MIN 614.96
WTR YR 2004 MEAN 615.77 MAX 619.79 MIN 610.79

07331700 Randell Lake near Denison, TX—Continued



07332610 Lake Bonham near Bonham, TX

LOCATION.--Lat 33°39'06", long 96°07'48", Fannin County, Hydrologic Unit 11140101, on south shore of lake near raw water intake structure, 42.0 mi west of Paris, TX, and approximately 98 miles from Fort Worth, TX.

DRAINAGE AREA.--29.0 mi^2.

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

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

REMARKS.--Records good. The lake is formed by a rolled earthfill dam. The dam was completed and storage began Apr. 28, 1970. A spillway has been cut through natural ground. The dam was built by the city of Bonham Water Authority to impound water for municipal use. There was no known diversion from the lake during the current water year. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	580.0
Crest of Spillway	565.0
Emergency Spillway	571.0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 16,950 acre-ft, Feb. 16, 2001, elevation, 568.50 ft; minimum contents, 9,920 acre-ft, Oct. 9, 2000, elevation, 562.02 ft.

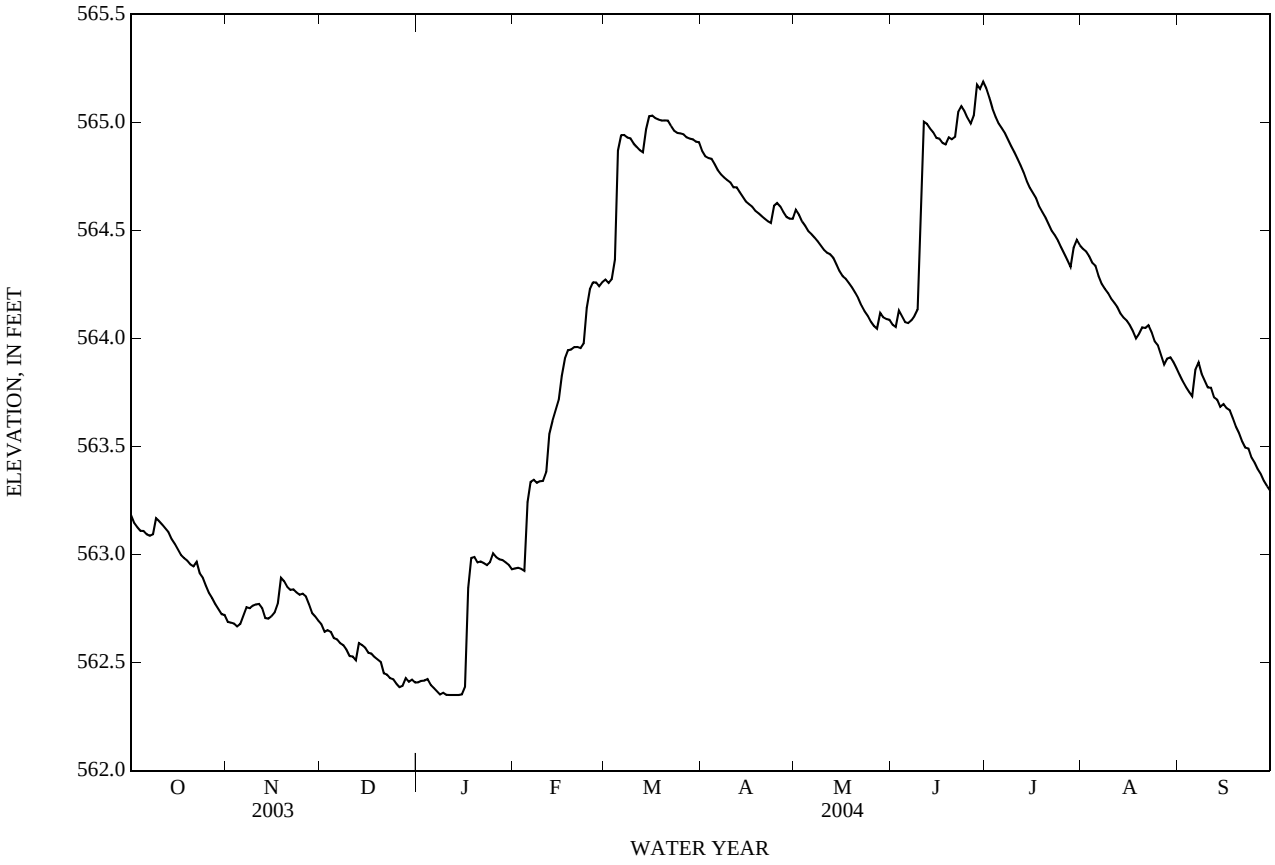
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 565.20 ft, June 30; minimum elevation, 562.35 ft, Jan. 6, 7, 8, 16.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	563.18	562.69	562.68	562.41	562.94	564.27	564.87	564.60	564.06	565.16	564.41	563.83
2	563.15	562.69	562.64	562.42	562.94	564.26	564.84	564.57	564.05	565.11	564.40	563.80
3	563.13	562.68	562.65	562.42	562.93	564.27	564.84	564.54	564.13	565.06	564.38	563.78
4	563.11	562.67	562.64	562.42	562.92	564.36	564.83	564.52	564.10	565.03	564.35	563.75
5	563.11	562.68	562.61	562.40	563.24	564.87	564.81	564.50	564.08	564.99	564.34	563.73
6	563.09	562.72	562.61	562.38	563.34	564.94	564.78	564.48	564.07	564.97	564.29	563.86
7	563.09	562.76	562.59	562.37	563.35	564.94	564.76	564.47	564.08	564.95	564.25	563.89
8	563.09	562.75	562.58	562.35	563.33	564.93	564.75	564.45	564.10	564.92	564.23	563.84
9	563.17	562.76	562.56	562.36	563.34	564.93	564.73	564.43	564.13	564.89	564.21	563.80
10	563.15	562.77	562.53	562.35	563.34	564.90	564.72	564.41	564.60	564.86	564.18	563.77
11	563.14	562.77	562.53	562.35	563.38	564.89	564.70	564.40	565.00	564.83	564.17	563.77
12	563.12	562.75	562.51	562.35	563.56	564.87	564.70	564.39	564.99	564.80	564.15	563.73
13	563.10	562.71	562.59	562.35	563.62	564.86	564.68	564.37	564.97	564.77	564.12	563.72
14	563.07	562.70	562.58	562.35	563.67	564.97	564.66	564.34	564.95	564.73	564.10	563.68
15	563.05	562.71	562.57	562.35	563.72	565.03	564.63	564.31	564.93	564.70	564.08	563.70
16	563.02	562.73	562.55	562.39	563.83	565.03	564.62	564.29	564.92	564.67	564.06	563.68
17	563.00	562.77	562.54	562.85	563.91	565.02	564.61	564.28	564.90	564.65	564.03	563.67
18	562.98	562.89	562.53	562.98	563.95	565.01	564.59	564.26	564.90	564.61	564.00	563.63
19	562.97	562.88	562.51	562.99	563.95	565.01	564.58	564.24	564.93	564.58	564.02	563.59
20	562.95	562.85	562.50	562.96	563.96	565.01	564.57	564.21	564.92	564.56	564.05	563.56
21	562.95	562.84	562.45	562.97	563.96	565.01	564.55	564.19	564.93	564.53	564.05	563.52
22	562.97	562.84	562.44	562.96	563.96	564.98	564.54	564.15	565.05	564.50	564.06	563.49
23	562.91	562.82	562.43	562.95	563.98	564.96	564.53	564.13	565.08	564.48	564.03	563.49
24	562.89	562.81	562.42	562.97	564.14	564.95	564.61	564.11	565.05	564.45	563.99	563.45
25	562.86	562.82	562.40	563.01	564.23	564.95	564.63	564.08	565.02	564.42	563.97	563.42
26	562.82	562.81	562.39	562.99	564.26	564.94	564.61	564.06	564.99	564.39	563.92	563.40
27	562.80	562.77	562.39	562.98	564.26	564.93	564.59	564.04	565.03	564.36	563.88	563.37
28	562.77	562.73	562.43	562.97	564.24	564.92	564.56	564.12	565.17	564.33	563.91	563.34
29	562.75	562.71	562.41	562.96	564.26	564.92	564.55	564.10	565.15	564.42	563.91	563.32
30	562.72	562.69	562.42	562.95	---	564.91	564.55	564.09	565.19	564.46	563.89	563.30
31	562.72	---	562.41	562.93	---	564.91	---	564.09	---	564.43	563.86	---
MEAN	562.99	562.76	562.52	562.66	563.67	564.86	564.67	564.30	564.72	564.70	564.11	563.63
MAX	563.18	562.89	562.68	563.01	564.26	565.03	564.87	564.60	565.19	565.16	564.41	563.89
MIN	562.72	562.67	562.39	562.35	562.92	564.26	564.53	564.04	564.05	564.33	563.86	563.30

WTR YR 2004 MEAN 563.80 MAX 565.19 MIN 562.35

07332610 Lake Bonham near Bonham, TX—Continued



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 mi^2, of which 5,936 mi^2 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 sea level. 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.--No estimated daily discharge. Records poor. 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.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,080	935	791	1,580	2,800	2,710	2,550	4,040	1,530	5,580	4,130	1,180
2	2,910	854	639	1,790	2,060	1,870	4,050	11,000	881	7,720	3,780	2,630
3	3,380	855	562	1,540	1,200	1,680	3,080	10,200	781	8,180	3,540	2,780
4	3,290	732	1,020	882	1,460	2,710	2,300	5,310	2,910	7,340	5,050	2,640
5	3,310	505	1,950	653	5,630	5,680	2,170	2,830	3,680	5,120	7,610	2,640
6	2,660	949	1,820	573	8,080	11,900	1,100	3,630	3,530	2,380	7,920	2,380
7	1,120	2,370	1,780	607	8,240	12,800	702	3,900	2,130	1,770	7,870	983
8	799	2,650	1,780	1,450	6,530	8,800	1,840	3,740	1,090	3,700	7,940	704
9	1,490	2,410	1,090	1,760	3,960	4,880	2,720	3,470	903	6,190	5,220	821
10	1,780	2,300	684	1,810	2,490	2,970	5,720	3,230	3,030	10,200	3,150	2,230
11	1,780	1,380	1,070	1,550	2,070	2,990	6,330	1,470	9,230	13,600	5,350	2,540
12	1,780	859	2,320	877	4,390	3,430	4,130	939	7,310	12,700	7,850	2,570
13	1,830	1,200	2,420	638	4,070	2,300	1,870	2,460	4,330	12,300	7,770	2,200
14	1,080	1,700	2,410	641	3,740	2,500	1,130	3,120	2,760	11,300	7,870	885
15	790	1,810	1,810	1,470	5,920	2,960	1,730	3,180	1,490	8,020	5,660	767
16	1,250	1,790	1,000	1,850	5,070	2,020	2,120	3,290	1,420	7,370	3,110	2,140
17	1,660	1,870	792	3,510	3,750	1,580	1,810	3,230	2,130	7,140	1,250	2,630
18	1,720	1,460	1,600	7,350	4,090	2,120	2,080	1,280	2,380	7,290	1,280	2,670
19	1,740	1,180	2,430	10,000	5,670	2,290	2,100	773	3,420	5,490	2,640	2,650
20	1,700	1,900	2,570	5,740	4,150	2,200	1,010	2,620	3,800	4,150	2,940	2,220
21	945	2,180	2,020	4,120	3,530	2,230	626	3,350	5,060	5,530	3,560	890
22	622	1,950	1,570	3,730	3,110	2,040	1,340	3,380	5,200	6,460	3,410	768
23	1,050	1,440	887	3,330	2,680	1,160	1,890	3,420	11,000	6,560	2,410	2,360
24	1,130	1,830	766	3,140	1,720	911	2,450	3,100	15,700	6,410	905	3,310
25	981	1,150	1,300	2,690	3,390	1,870	6,160	1,180	8,560	6,530	949	2,620
26	983	819	1,790	2,150	6,020	2,590	13,600	695	5,180	5,960	2,370	1,320
27	971	3,380	1,650	1,940	6,400	3,020	12,700	2,540	3,470	5,260	2,620	2,420
28	769	2,410	912	1,730	5,060	3,030	7,660	3,720	2,260	5,530	2,670	936
29	536	2,620	729	3,350	4,140	2,700	5,060	5,010	2,630	5,840	2,740	769
30	610	1,260	687	3,330	---	1,200	3,260	3,940	4,420	6,200	2,770	2,030
31	908	---	756	2,930	---	848	---	3,520	---	6,040	2,220	---
TOTAL	46,654	48,748	43,605	78,711	121,420	101,989	105,288	107,567	122,215	213,860	128,554	57,683
MEAN	1,505	1,625	1,407	2,539	4,187	3,290	3,510	3,470	4,074	6,899	4,147	1,923
MAX	3,380	3,380	2,570	10,000	8,240	12,800	13,600	11,000	15,700	13,600	7,940	3,310
MIN	536	505	562	573	1,200	848	626	695	781	1,770	905	704
AC-FT	92,540	96,690	86,490	156,100	240,800	202,300	208,800	213,400	242,400	424,200	255,000	114,400

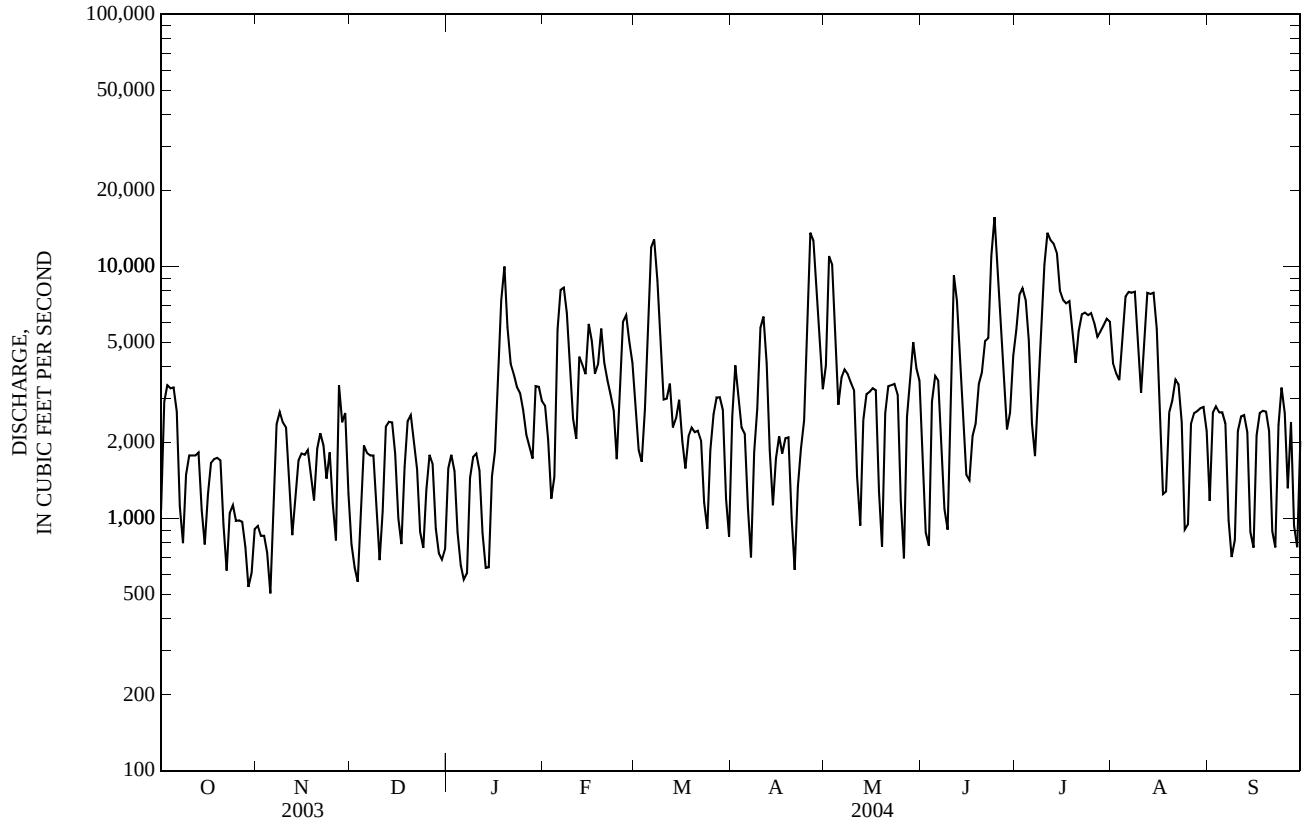
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2004, BY WATER YEAR (WY)

MEAN	6,605	7,246	7,390	7,037	8,641	11,050	11,720	16,240	17,200	7,678	4,854	4,673
MAX	40,240	37,170	32,340	39,930	32,130	39,430	55,500	103,900	83,820	27,700	34,840	19,010
(WY)	(1982)	(1975)	(1992)	(1992)	(2001)	(2001)	(1990)	(1990)	(1957)	(1989)	(1950)	(1950)
MIN	263	242	894	1,126	1,138	1,118	1,344	2,837	2,074	1,586	1,108	859
(WY)	(1957)	(1957)	(1957)	(1964)	(1959)	(1967)	(1956)	(1980)	(1956)	(1956)	(1972)	(1988)

07335500 Red River at Arthur City, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1945 - 2004	
ANNUAL TOTAL	1,454,015		1,176,294			
ANNUAL MEAN	3,984		3,214		a9,188	
HIGHEST ANNUAL MEAN					23,290	1990
LOWEST ANNUAL MEAN					2,754	1964
HIGHEST DAILY MEAN	20,700	Mar 1	15,700	Jun 24	269,000	May 4, 1990
LOWEST DAILY MEAN	505	Nov 5	505	Nov 5	134	bDec 11, 1956
ANNUAL SEVEN-DAY MINIMUM	771	Oct 30	771	Oct 30	134	Dec 11, 1956
MAXIMUM PEAK FLOW			17,200	Jun 24	c275,000	May 4, 1990
MAXIMUM PEAK STAGE			8.56	Jun 24	d34.21	May 4, 1990
ANNUAL RUNOFF (AC-FT)	2,884,000		2,333,000		6,656,000	
10 PERCENT EXCEEDS	7,360		6,730		23,600	
50 PERCENT EXCEEDS	3,150		2,440		4,260	
90 PERCENT EXCEEDS	977		858		1,360	

a Prior to regulation, water years 1906-11, 1937-43, 9,266 ft^3/s.
b Also occurred Dec. 12, 1956.
c Maximum discharge for period of record, 400,000 ft^3/s, May 28, 1908.
d Maximum gage height for period of record, 43.2 ft, May 28, 1908.



07335600 Lake Crook near Paris, TX

LOCATION.--Lat 33°43'42", long 95°34'00", Lamar County, Hydrologic Unit 11140101, 3.0 mi from city of Paris, 1.0 mi from Lamar County Road 31700. Gage is located on intake structure.

DRAINAGE AREA.--52.0 mi^2.

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

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

REMARKS.--Records good. Lake Crook dam is an earthfill 3,100 ft long with a maximum height of 38 ft and a crown width of 20 ft. A concrete overflow type spillway 300 ft long is located near the center of the dam. Lake Crook is about 2.7 miles in length with an average width of 0.6 mi, and the shoreline is approximately 12 miles in length. The lake is owned by the City of Paris. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	488.0
Crest of spillway	476.0
Stream bed	450.0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 11,820 acre-ft, Dec. 26, 2000, elevation, 478.30 ft; minimum contents, 5,940 acre-ft, Dec. 8, 1999, elevation, 473.49 ft.

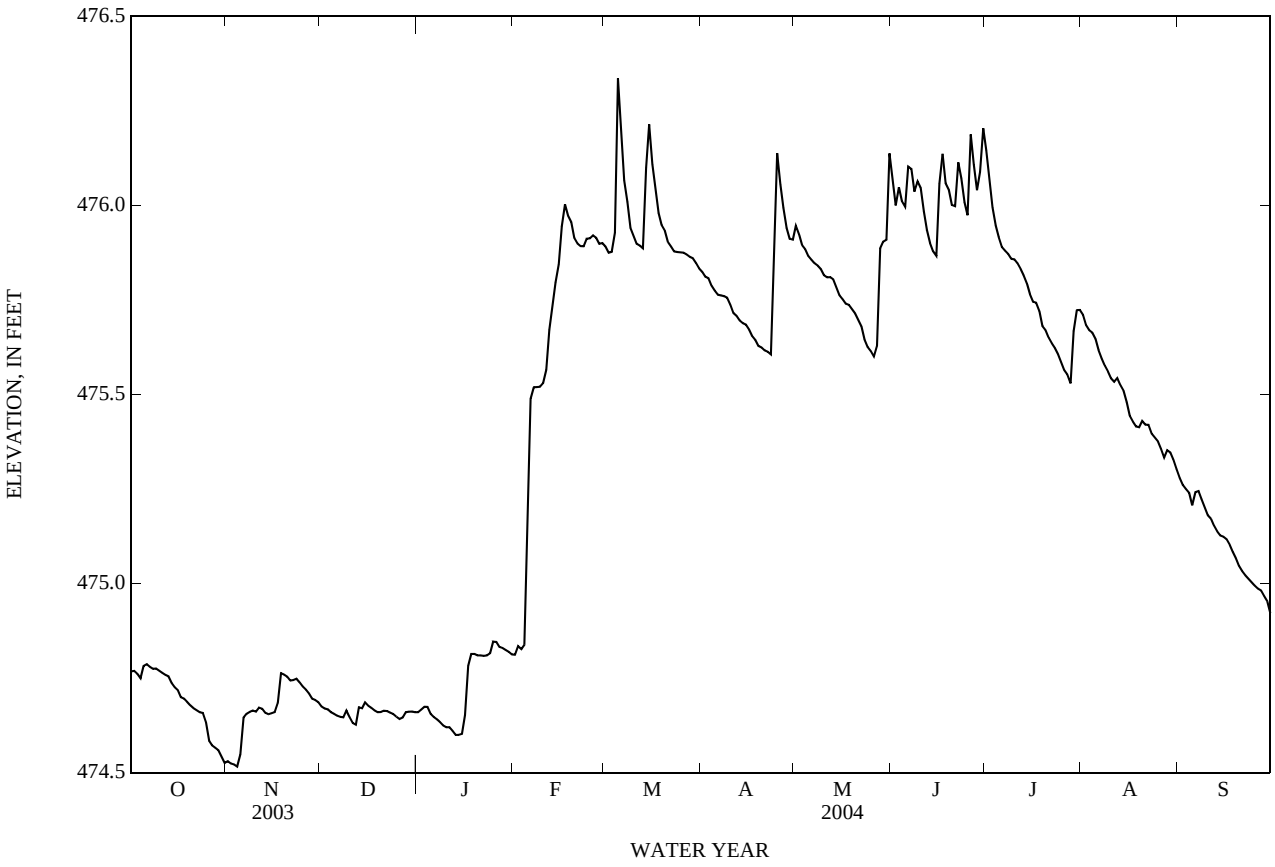
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 476.38 ft, Mar. 5; minimum elevation, 474.50 ft, Nov. 4.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	474.77	474.53	474.68	474.66	474.81	475.89	475.82	475.95	476.06	476.15	475.71	475.28
2	474.77	474.52	474.67	474.67	474.83	475.88	475.81	475.92	476.00	476.07	475.68	475.26
3	474.76	474.52	474.67	474.67	474.83	475.88	475.81	475.90	476.05	475.99	475.67	475.25
4	474.75	474.52	474.66	474.67	474.84	475.93	475.79	475.88	476.01	475.95	475.66	475.24
5	474.78	474.55	474.66	474.66	475.16	476.34	475.77	475.87	476.00	475.92	475.65	475.21
6	474.79	474.65	474.65	474.65	475.49	476.19	475.76	475.86	476.10	475.89	475.62	475.24
7	474.78	474.66	474.65	474.64	475.52	476.07	475.76	475.85	476.10	475.88	475.59	475.24
8	474.77	474.66	474.65	474.63	475.52	476.01	475.76	475.84	476.04	475.87	475.58	475.22
9	474.78	474.66	474.66	474.62	475.52	475.94	475.76	475.83	476.06	475.86	475.56	475.20
10	474.77	474.66	474.65	474.62	475.53	475.92	475.74	475.82	476.05	475.86	475.54	475.18
11	474.76	474.67	474.63	474.62	475.57	475.90	475.72	475.81	475.98	475.85	475.53	475.17
12	474.76	474.67	474.63	474.61	475.67	475.89	475.71	475.81	475.94	475.83	475.54	475.15
13	474.75	474.66	474.67	474.60	475.74	475.89	475.70	475.80	475.90	475.81	475.52	475.14
14	474.74	474.65	474.67	474.60	475.80	476.10	475.69	475.78	475.88	475.79	475.51	475.13
15	474.73	474.66	474.69	474.60	475.84	476.21	475.68	475.76	475.87	475.77	475.48	475.12
16	474.72	474.66	474.68	474.65	475.94	476.11	475.67	475.75	476.06	475.75	475.44	475.12
17	474.70	474.68	474.67	474.78	476.00	476.04	475.65	475.74	476.14	475.74	475.43	475.10
18	474.70	474.76	474.66	474.81	475.97	475.98	475.64	475.74	476.06	475.72	475.42	475.08
19	474.69	474.76	474.66	474.81	475.96	475.95	475.63	475.73	476.04	475.68	475.41	475.07
20	474.68	474.75	474.66	474.81	475.91	475.93	475.62	475.71	476.00	475.67	475.43	475.05
21	474.67	474.74	474.66	474.81	475.90	475.90	475.62	475.70	476.00	475.65	475.42	475.03
22	474.67	474.74	474.66	474.81	475.89	475.89	475.61	475.68	476.11	475.64	475.42	475.02
23	474.66	474.75	474.66	474.81	475.89	475.88	475.61	475.65	476.07	475.62	475.40	475.01
24	474.66	474.74	474.65	474.82	475.91	475.88	475.94	475.63	476.01	475.61	475.39	475.00
25	474.63	474.73	474.65	474.85	475.91	475.88	476.14	475.61	475.97	475.59	475.38	474.99
26	474.58	474.72	474.64	474.85	475.92	475.87	476.06	475.60	476.19	475.56	475.36	474.99
27	474.57	474.71	474.65	474.83	475.91	475.87	475.99	475.63	476.11	475.55	475.33	474.98
28	474.57	474.70	474.66	474.83	475.90	475.86	475.94	475.89	476.04	475.53	475.35	474.97
29	474.56	474.69	474.66	474.82	475.90	475.86	475.91	475.90	476.09	475.67	475.35	474.95
30	474.54	474.69	474.66	474.82	---	475.85	475.91	475.91	476.20	475.72	475.33	474.92
31	474.53	---	474.66	474.81	---	475.83	---	476.14	---	475.72	475.30	---
MEAN	474.70	474.67	474.66	474.72	475.64	475.96	475.77	475.80	476.04	475.77	475.48	475.11
MAX	474.79	474.76	474.69	474.85	476.00	476.34	476.14	476.14	476.20	476.15	475.71	475.28
MIN	474.53	474.52	474.63	474.60	474.81	475.83	475.61	475.60	475.87	475.53	475.30	474.92

CAL YR 2003 MEAN 475.26 MAX 475.94 MIN 474.52
WTR YR 2004 MEAN 475.36 MAX 476.34 MIN 474.52

07335600 Lake Crook near Paris, TX—Continued



07337000 Red River at Index, AR

LOCATION.--Lat 33°33'07", long 94°02'28", in NW1/4SW1/4 sec.7, T.14 S., R.28 W., Miller County, Hydrologic Unit 11140106, near right bank on 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 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 NGVD 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3110	1330	2370	1770	5900	6450	3200	11600	4990	9040	5770	3000
2	3020	1230	2540	1470	6170	5760	2680	12900	5080	9710	5950	3040
3	2440	1170	2380	1340	6090	5070	2100	12400	4640	15000	5840	2990
4	1800	1260	1910	1280	6100	4380	2100	12100	3800	16500	4820	2480
5	1860	1340	1520	1560	8760	5740	3200	13600	3310	15500	4180	2290
6	2690	1350	1300	1860	10800	6080	3630	13900	3740	14000	3970	2870
7	3020	1370	1190	1810	10600	6430	3090	11500	5180	12400	4940	2950
8	3060	1400	1210	1550	10900	8400	2770	9590	5430	9740	7850	2920
9	3050	1310	1700	1320	12100	12100	2510	9050	5030	7030	8950	3020
10	2510	1390	1910	1190	12200	13200	2090	7500	4020	6150	9070	2570
11	1880	2120	1920	1130	11300	12400	1970	6460	3270	6820	9070	1940
12	1640	2440	1890	1300	11200	10700	3490	6160	2920	8680	7610	1670
13	1840	2410	1720	1720	10200	9120	6040	5760	3780	11300	5910	1710
14	2000	2220	1470	1870	7940	7090	6280	4110	6420	13400	6600	2430
15	1980	1860	1400	1840	6920	6250	5140	2810	7120	13500	8410	2720
16	1970	1540	2000	1600	6770	6100	3660	2590	7160	12200	8000	2770
17	1920	1510	2390	1420	6910	6140	2710	3230	7800	10800	7100	2440
18	1640	2060	2440	1320	7600	5270	2340	3340	9670	8730	5890	1880
19	1440	2170	2170	1550	7010	4040	2540	3350	10000	7370	4280	1670
20	1560	2180	1760	2440	6410	3320	2530	3400	9150	6970	3150	2300
21	1810	2230	1500	5100	6890	3100	2480	2820	8130	6750	2590	2710
22	1880	2030	1650	7070	7380	3090	2570	2160	7700	5720	2780	2800
23	1900	1780	2240	7120	6240	3140	2360	2060	8020	4780	3220	2790
24	1840	1950	2470	6810	5320	3050	2180	2950	13600	5190	3450	2470
25	1570	2160	2290	7400	5150	2950	2550	3280	19000	6080	3550	1900
26	1380	2070	2000	7030	5170	2580	5690	3340	24400	6310	3260	1680
27	1370	1870	1660	6760	4700	2220	8480	3290	22200	6220	2550	2480
28	1470	1870	1520	6380	5170	2170	8710	3120	16500	6160	2080	3080
29	1420	1720	2090	5840	6370	2750	11300	2770	13800	5870	2230	2630
30	1380	1550	2300	5540	---	3120	11600	3070	11600	5490	2880	2270
31	1380	---	2180	5400	---	3300	---	4320	---	5480	3020	---
TOTAL	61830	52890	59090	101790	224270	175510	121990	188530	257460	278890	158970	74470
MEAN	1995	1763	1906	3284	7733	5662	4066	6082	8582	8996	5128	2482
MAX	3110	2440	2540	7400	12200	13200	11600	13900	24400	16500	9070	3080
MIN	1370	1170	1190	1130	4700	2170	1970	2060	2920	4780	2080	1670
AC-FT	122600	104900	117200	201900	444800	348100	242000	373900	510700	553200	315300	147700

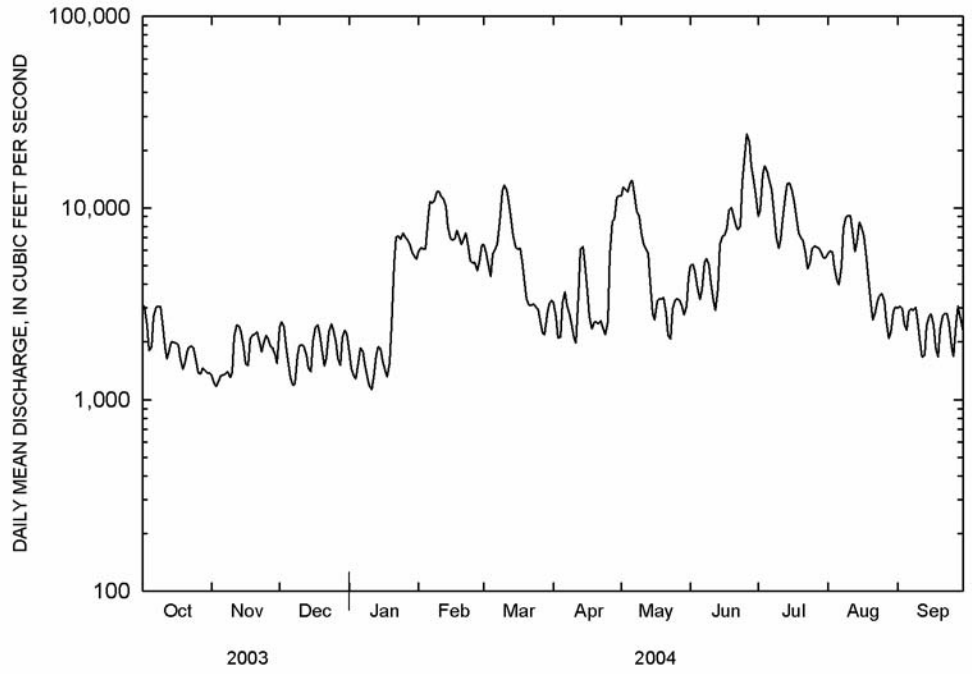
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2004, BY WATER YEAR (WY)

MEAN	7902	10490	12060	11220	14090	17340	17400	22940	21200	9622	5747	5800
MAX	41690	47140	47910	60160	38960	67730	61460	121000	94400	33990	39230	30340
(WY)	1946	1975	1992	1998	1946	1945	1990	1990	1957	1989	1950	1950
MIN	716	642	1206	1360	2127	2233	2096	3877	3098	1162	1025	909
(WY)	1957	1957	1957	1964	1964	1967	1956	2003	1988	1944	1944	1944

07337000 Red River at Index, AR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1944 - 2004	
ANNUAL TOTAL	1782070		1755690			
ANNUAL MEAN	4882		4797		[1]12970	
HIGHEST ANNUAL MEAN					30420	1990
LOWEST ANNUAL MEAN					4383	1964
HIGHEST DAILY MEAN	27200	Jan 3	24400	Jun 26	268000	May 10 1990
LOWEST DAILY MEAN	1170	Nov 3	1130	Jan 11	384	Nov 28 1956
ANNUAL SEVEN-DAY MINIMUM	1290	Nov 1	1290	Nov 1	397	Oct 19 1956
MAXIMUM PEAK FLOW			25500	Jun 26	[2]270000	May 10 1990
MAXIMUM PEAK STAGE			8.19	Jun 26	[3]32.30	May 10 1990
INSTANTANEOUS LOW FLOW			1110	Jan 11	378	Nov 28 1956
ANNUAL RUNOFF (AC-FT)	3535000		3482000		9395000	
10 PERCENT EXCEEDS	10100		10600		34600	
50 PERCENT EXCEEDS	3690		3120		5900	
90 PERCENT EXCEEDS	1720		1550		2260	

1. Prior to regulation, water years 1937-43, 11,970 ft^3/s
2. Maximum discharge for period of record 297,000 ft^3/s February 23, 1938
3. Maximum gage height for period of record 34.25 ft February 23, 1938, from graph based on gage readings



07337000 Red River at Index, AR—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-1956, April 1980 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Depth at sample location, feet (81903)	Sample location, cross section ft from rt bank (72103)	Sampling depth, feet (00003)	Stream width, feet (00004)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
OCT 2003													
16...	1315	80513	--	--	--	--	762	8.0	89	8.2	1200	20.6	--
JAN 2004													
28...	0830	80513	--	--	--	--	771	11.3	91	7.5	580	6.5	--
28...	0847	80513	2.20	19.0	1.10	370	771	11.2	90	7.5	589	6.5	718
28...	0848	80513	2.00	56.0	1.00	370	771	11.2	90	7.4	590	6.5	755
28...	0850	80513	3.00	93.0	1.20	370	771	11.3	91	7.5	590	6.5	792
28...	0852	80513	13.0	130.0	7.70	370	771	11.2	90	7.5	587	6.5	829
28...	0854	80513	16.5	167.0	8.60	370	771	11.1	90	7.6	586	6.5	866
28...	0856	80513	13.0	204.0	6.60	370	771	11.3	91	7.6	585	6.5	903
28...	0858	80513	7.00	241.0	3.10	370	771	11.5	92	7.6	571	6.5	940
28...	0900	80513	17.5	278.0	9.00	370	771	11.5	93	7.6	565	6.5	977
28...	0902	80513	14.0	315.0	7.00	370	771	11.4	92	7.6	564	6.5	1010
28...	0903	80513	5.00	352.0	2.60	370	771	11.3	91	7.6	564	6.5	1050
MAR													
17...	1420	80513	--	--	--	--	767	10.3	104	8.5	603	15.9	--
MAY													
26...	0800	80513	--	--	--	--	768	7.0	85	8.3	1440	25.3	--
JUN													
16...	1430	80513	--	--	--	--	770	6.8	85	8.1	473	27.4	--
AUG													
17...	1625	80513	9.00	21.0	.50	420	770	8.1	105	8.2	1700	29.0	661
17...	1626	80513	15.0	63.0	.20	420	770	8.0	103	8.2	1700	29.0	703
17...	1627	80513	14.0	105.0	.50	420	770	7.9	102	8.2	1710	29.0	745
17...	1628	80513	12.0	147.0	.60	420	770	7.8	101	8.2	1710	29.0	787
17...	1630	80513	14.2	189.0	2.50	420	770	7.6	98	8.2	1710	29.0	829
17...	1633	80513	7.40	231.0	1.00	420	770	7.7	99	8.2	1710	29.0	871
17...	1635	80513	4.00	273.0	1.50	420	770	7.6	98	8.2	1710	29.1	913
17...	1637	80513	4.80	315.0	1.00	420	770	7.6	99	8.2	1710	29.1	955
17...	1639	80513	6.00	357.0	2.00	420	770	7.5	98	8.2	1710	29.1	997
17...	1640	80513	1.30	399.0	1.20	420	770	7.5	98	8.2	1700	29.3	1040
17...	1645	80513	--	--	--	--	770	7.6	98	8.2	1710	29.0	--

Date	Time	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)
OCT 2003													
16...	1315	280	73.0	24.0	5.80	3	130	50	170	--	150	718	1.0
JAN 2004													
28...	0830	130	35.0	9.50	3.50	2	61.0	50	85.0	--	75.0	334	.90
28...	0847	--	--	--	--	--	--	--	--	--	--	--	--
28...	0848	--	--	--	--	--	--	--	--	--	--	--	--
28...	0850	--	--	--	--	--	--	--	--	--	--	--	--
28...	0852	--	--	--	--	--	--	--	--	--	--	--	--
28...	0854	--	--	--	--	--	--	--	--	--	--	--	--
28...	0856	--	--	--	--	--	--	--	--	--	--	--	--
28...	0858	--	--	--	--	--	--	--	--	--	--	--	--
28...	0900	--	--	--	--	--	--	--	--	--	--	--	--
28...	0902	--	--	--	--	--	--	--	--	--	--	--	--
28...	0903	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
17...	1420	130	38.2	9.60	3.53	2	60.2	48	80.7	--	75.0	348	1.2
MAY													
26...	0800	310	81.0	27.0	5.90	4	160	52	230	--	200	838	.90
JUN													
16...	1430	110	30.0	8.20	4.30	2	45.0	46	59.0	--	56.0	265	1.2
AUG													
17...	1625	--	--	--	--	--	--	--	--	--	--	--	--
17...	1626	--	--	--	--	--	--	--	--	--	--	--	--
17...	1627	--	--	--	--	--	--	--	--	--	--	--	--
17...	1628	--	--	--	--	--	--	--	--	--	--	--	--
17...	1630	--	--	--	--	--	--	--	--	--	--	--	--
17...	1633	--	--	--	--	--	--	--	--	--	--	--	--
17...	1635	--	--	--	--	--	--	--	--	--	--	--	--
17...	1637	--	--	--	--	--	--	--	--	--	--	--	--
17...	1639	--	--	--	--	--	--	--	--	--	--	--	--
17...	1640	--	--	--	--	--	--	--	--	--	--	--	--
17...	1645	330	82.1	29.4	5.26	5	190	55	320	.3	230	1010	.82

Date	Ammonia water, fltrd, mg/L (71846)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (71851)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L (71856)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, unfltrd mg/L (00605)	Orthophosphate, water, fltrd, mg/L (00660)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)
OCT 2003													
16...	.08	.06	--	--	<.02	.033	.010	.94	--	<.01	<.02	.09	--
JAN 2004													
MAR													
17...	.05	.04	--	--	<.02	--	<.010	1.2	--	<.01	<.02	.15	--
MAY													
26...	.14	.11	--	--	<.02	--	<.010	.79	--	<.01	<.02	.10	--
JUN													
16...	.05	.04	.531	.12	.14	.066	.020	1.2	.031	.01	.03	.25	1.3
AUG													
17...	--	<.04	--	--	<.06	--	<.008	--	--	E.01	E.03	.15	--

07337000 Red River at Index, AR—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep-tococci KF MF, col/ 100 mL (31673)	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)
OCT 2003						
16...	92	E92	120	98	128	667
JAN 2004						
28...	190	540	307	81	266	4870
MAR						
17...	150	140	E44	78	235	3910
MAY						
26...	21	36	22	98	203	1830
JUN						
16...	770	E1300	E1240	93	338	6610
AUG						
17...	E10	26	E9	91	288	5480

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

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.8	21.3	22.0	33.7	18.8	23.2	15.0	8.3	10.1	16.9	9.8	13.9
2	21.8	19.8	20.9	25.7	17.0	21.2	11.0	5.5	8.3	18.5	15.5	17.1
3	23.5	15.5	19.3	32.1	16.9	22.2	13.3	7.9	9.8	20.7	16.1	18.7
4	29.4	15.9	21.5	32.9	16.0	22.3	16.5	5.5	9.1	20.7	7.4	15.2
5	21.8	18.7	20.4	30.3	18.7	22.9	14.6	3.4	7.1	7.8	3.3	5.6
6	22.9	20.4	21.6	20.0	13.2	16.4	15.8	1.8	6.4	9.3	0.6	3.6
7	23.9	21.3	22.6	13.2	9.4	11.1	18.1	1.8	7.4	5.3	-1.3	2.5
8	24.0	22.2	23.0	12.7	9.4	11.0	17.2	5.5	11.9	5.8	5.0	5.4
9	23.3	22.5	23.0	12.0	7.7	9.9	15.4	5.4	12.3	14.4	3.2	6.8
10	26.1	20.4	22.4	18.3	10.7	13.9	11.3	4.4	6.5	12.8	0.7	4.8
11	23.8	19.0	20.9	21.6	14.9	19.0	14.1	1.9	6.4	17.6	0.7	6.9
12	28.1	19.6	22.0	21.4	15.7	18.8	8.9	3.5	5.5	18.2	2.9	9.1
13	25.7	20.2	22.4	16.2	11.4	13.0	5.5	3.9	4.7	13.2	8.1	10.4
14	27.9	17.1	21.6	16.4	10.2	13.4	7.7	3.5	5.0	15.2	8.6	11.5
15	29.3	14.9	19.9	17.5	13.4	15.8	18.2	3.2	11.4	11.8	6.5	9.3
16	29.1	16.1	21.2	19.1	15.7	17.3	11.6	4.0	6.6	12.0	8.3	10.4
17	25.3	17.3	20.9	20.5	17.6	19.0	13.6	2.2	6.5	14.7	11.9	13.8
18	29.0	14.5	19.6	22.9	13.2	17.9	12.9	4.8	7.3	13.7	4.7	9.7
19	32.6	15.0	21.1	20.5	11.1	14.5	14.1	3.3	6.6	13.7	1.6	4.8
20	32.3	15.9	22.0	24.4	10.5	15.4	15.7	1.2	6.7	9.5	0.2	4.6
21	31.1	17.6	23.1	23.1	12.0	16.7	18.3	2.9	10.6	8.3	7.2	7.8
22	32.6	19.1	24.0	21.7	15.7	18.6	17.2	10.5	14.0	8.3	7.1	7.7
23	32.9	17.8	23.4	19.8	6.4	14.1	16.7	7.2	10.1	8.6	7.1	7.9
24	33.5	18.1	24.1	15.3	4.3	7.9	16.2	5.2	8.2	9.3	8.5	8.8
25	26.1	13.4	21.6	12.9	3.8	8.1	9.1	3.8	6.2	11.1	9.3	10.1
26	18.0	12.7	14.9	16.1	8.6	12.6	12.6	3.7	7.9	11.2	9.8	10.7
27	18.2	11.0	14.5	19.9	7.4	13.6	15.8	8.1	12.9	9.8	7.7	8.3
28	27.1	12.1	18.1	16.4	5.1	8.6	15.0	8.5	11.6	7.9	6.5	7.3
29	25.2	12.1	18.9	19.3	2.9	8.6	13.8	5.9	8.7	7.6	6.7	6.9
30	30.3	17.5	22.3	21.8	5.4	11.3	13.3	3.2	7.6	7.1	6.3	6.5
31	25.9	20.6	22.8	---	---	---	15.4	4.5	9.3	6.5	5.6	6.2
MONTH	33.5	11.0	21.2	33.7	2.9	15.3	18.3	1.2	8.5	20.7	-1.3	8.8

07337000 Red River at Index, AR—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.0	6.0	6.6	13.0	11.0	11.9	20.0	17.6	18.7	22.5	20.8	21.7
2	7.0	6.5	6.8	13.5	11.9	12.7	19.8	16.5	18.3	21.2	19.5	20.4
3	7.0	5.5	6.3	15.1	13.3	14.1	21.3	13.6	18.0	21.3	19.8	20.5
4	6.8	5.6	6.1	16.3	15.1	15.7	22.0	12.6	17.6	21.7	19.6	20.6
5	5.6	4.8	5.0	16.2	15.6	15.9	20.0	17.0	18.8	22.6	20.7	21.5
6	5.3	4.7	5.0	16.9	15.1	16.0	19.2	17.9	18.5	23.3	21.3	22.2
7	5.6	4.4	5.0	16.8	15.5	16.2	20.1	17.9	18.9	24.5	22.1	23.2
8	5.6	4.4	5.0	16.5	14.9	15.7	21.6	18.0	19.9	24.7	23.3	24.0
9	5.5	5.2	5.3	15.9	14.8	15.3	23.0	17.6	20.7	25.0	23.3	24.2
10	6.2	5.3	5.7	15.3	14.0	14.7	21.0	16.9	18.7	25.5	23.5	24.5
11	6.1	5.9	6.0	15.5	14.1	14.8	17.3	12.6	13.7	25.7	24.3	25.0
12	6.7	5.8	6.1	14.9	14.2	14.5	16.2	13.5	15.5	25.2	23.9	24.3
13	6.3	5.7	6.0	14.4	13.5	13.8	17.0	15.5	16.2	23.9	23.4	23.6
14	5.9	5.0	5.3	14.3	13.0	13.6	17.6	15.0	16.3	23.6	22.4	23.0
15	6.5	4.7	5.5	14.2	13.6	13.9	18.7	16.0	17.3	23.2	20.7	22.2
16	7.1	5.5	6.3	15.3	13.6	14.4	21.0	17.8	19.1	24.8	19.7	22.4
17	8.2	6.3	7.3	16.5	14.1	15.3	22.8	19.1	21.0	25.5	23.2	24.3
18	9.1	7.1	8.1	17.5	16.0	16.7	25.6	18.3	21.6	27.5	24.4	25.7
19	10.4	8.2	9.2	19.4	17.1	18.1	22.9	20.1	21.2	27.8	25.5	26.5
20	12.0	10.3	11.1	21.0	18.4	19.6	22.8	19.7	21.5	28.2	26.0	26.9
21	12.4	10.7	11.6	20.6	18.5	19.3	23.5	20.2	21.8	27.8	25.7	26.9
22	12.5	11.1	11.8	18.5	16.9	17.7	24.3	21.0	22.4	30.6	23.7	26.9
23	12.9	11.2	12.1	18.6	16.2	17.4	25.2	21.5	23.2	29.6	23.3	26.8
24	12.9	11.7	12.3	17.8	1.0	17.5	22.7	19.2	21.0	27.5	25.0	26.1
25	11.7	10.0	10.7	19.0	17.0	18.0	23.1	20.0	21.4	26.7	25.6	25.9
26	11.5	9.5	10.5	21.8	17.8	19.5	23.6	21.6	22.6	27.6	25.1	26.1
27	12.3	10.2	11.2	22.4	17.3	19.9	23.4	21.3	22.5	27.6	25.6	26.6
28	11.9	10.8	11.4	23.4	18.1	20.0	23.4	21.8	22.7	27.9	25.2	26.5
29	11.8	11.1	11.3	21.2	16.4	19.5	22.9	21.8	22.1	27.6	25.7	26.7
30	---	---	---	20.9	19.3	20.0	22.6	21.3	21.8	27.7	26.1	26.8
31	---	---	---	20.0	18.2	19.0	---	---	---	28.9	26.0	27.3
MONTH	12.9	4.4	8.0	23.4	11.0	16.5	25.6	12.6	19.8	30.6	19.5	24.5
		JUNE			JULY			AUGUST			SEPTEMBER	
1	29.7	26.9	28.2	27.3	25.7	26.4	31.0	28.6	29.7	28.7	26.5	27.7
2	30.0	27.6	28.7	27.3	26.3	26.8	31.8	29.3	30.5	29.2	26.6	27.8
3	28.6	26.4	27.5	27.4	26.1	26.8	32.5	30.1	31.2	28.7	27.2	28.0
4	29.3	27.0	28.1	28.7	26.8	27.6	32.8	30.9	31.9	29.1	25.0	26.9
5	28.8	27.1	27.9	29.0	27.9	28.4	32.9	31.4	32.0	33.4	24.5	27.3
6	28.5	26.7	27.5	29.5	28.2	28.8	31.7	29.5	30.4	29.2	27.3	28.1
7	28.2	26.0	27.0	29.3	28.4	28.9	30.1	28.3	29.2	28.1	26.3	27.0
8	27.6	26.6	27.2	30.1	28.4	29.2	29.9	27.9	29.0	27.3	24.8	26.1
9	27.2	25.7	26.4	30.1	28.6	29.4	29.9	28.3	29.1	27.2	24.6	25.8
10	28.3	26.2	27.1	30.6	28.7	29.6	30.7	28.7	29.6	27.6	23.3	25.3
11	29.6	27.2	28.2	31.0	29.3	30.2	30.2	28.7	29.4	32.7	21.5	26.2
12	30.1	27.7	28.9	31.5	29.3	30.4	28.8	27.4	28.2	34.3	21.4	26.8
13	30.6	28.4	29.4	32.0	30.0	30.9	28.4	26.5	27.5	37.1	22.9	28.2
14	29.7	27.9	28.9	32.2	30.4	31.3	27.9	26.2	27.2	32.6	24.9	27.7
15	29.0	27.6	28.0	32.6	30.7	31.6	28.1	26.0	27.0	29.2	26.3	27.5
16	27.6	26.6	27.0	32.5	31.2	31.8	28.3	26.2	27.2	29.7	27.1	28.5
17	28.1	26.1	27.0	32.4	31.1	31.7	28.9	26.6	27.8	31.4	26.0	28.3
18	29.7	27.3	28.3	31.8	30.4	31.2	29.4	27.2	28.2	33.6	22.5	27.3
19	28.6	27.4	28.0	31.8	29.8	30.9	28.8	27.1	27.9	33.9	20.5	26.1
20	28.3	26.7	27.5	32.0	29.8	30.9	27.7	26.4	27.0	29.3	20.6	24.6
21	28.7	27.2	27.9	31.7	30.0	30.9	28.2	25.5	26.8	26.6	23.1	25.1
22	28.1	26.9	27.6	31.9	29.7	30.8	29.3	25.3	27.4	26.6	24.4	25.6
23	28.1	26.7	27.4	32.5	30.3	31.4	29.2	27.4	28.3	27.1	24.4	25.8
24	27.5	26.5	26.9	32.9	30.9	31.8	30.2	27.7	28.8	25.8	22.0	23.5
25	27.7	26.1	26.9	31.9	30.4	31.1	30.7	28.5	29.5	24.5	21.0	22.4
26	27.5	26.5	26.9	30.4	27.7	28.8	31.1	29.0	29.9	30.7	20.2	23.8
27	26.5	25.9	26.1	28.4	26.5	27.4	32.0	27.9	29.7	27.5	20.4	24.0
28	26.8	25.6	26.1	28.3	26.6	27.4	34.2	26.6	28.4	25.1	23.5	24.3
29	26.9	25.9	26.4	27.8	26.5	27.0	32.8	25.3	28.3	24.3	21.3	23.3
30	26.7	26.3	26.5	28.0	26.5	27.2	29.0	26.2	27.6	27.1	18.3	22.7
31	---	---	---	29.9	27.2	28.4	29.0	26.6	27.7	---	---	---
MONTH	30.6	25.6	27.5	32.9	25.7	29.5	34.2	25.3	28.8	37.1	18.3	26.1
YEAR	37.1	-1.3	19.6									

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07342465 South Sulphur River at Commerce, TX

LOCATION.--Lat 33°12'42", long 95°54'50", Hunt County, Hydrologic Unit 11140301, on right bank at downstream side of bridge on south-bound State Highway 50, 13 mi upstream from Dunbar Creek, and 2.8 mi south of Commerce.

DRAINAGE AREA.--150 mi^2.

PERIOD OF RECORD.--Oct. 1991 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 460.74 ft above NGVD of 1929. Satellite telemeter at station.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.59	1.0	3.5	2.7	e4.7	70	2.4	57	e6.3	138	10	0.42
2	0.54	1.2	2.7	2.6	e4.7	84	2.3	64	5.6	68	4.4	0.32
3	0.56	1.3	2.3	3.0	e4.7	43	3.3	20	22	22	3.1	0.26
4	0.61	1.5	2.4	2.8	e4.1	146	2.6	9.4	88	8.1	2.1	0.25
5	0.78	1.9	2.5	2.7	347	1,040	1.7	5.9	35	3.7	1.6	0.26
6	0.80	2.0	2.2	2.3	e81	229	1.5	e4.3	157	2.6	1.7	0.26
7	0.79	2.2	1.8	2.3	e31	77	1.5	3.4	65	1.8	1.6	0.45
8	0.68	2.3	1.9	2.5	e19	35	1.3	e2.9	27	1.3	1.4	0.48
9	0.70	2.4	2.0	3.0	e14	18	1.2	e2.9	49	1.0	1.7	0.38
10	0.82	2.0	2.0	2.4	9.8	10	0.98	2.6	82	0.86	1.5	0.58
11	0.77	2.0	1.9	4.5	33	6.9	1.7	2.4	110	0.73	1.4	0.59
12	0.76	1.7	2.1	4.0	530	5.5	1.8	2.4	48	0.68	1.3	0.66
13	0.79	1.6	3.0	2.8	192	4.6	1.6	2.4	20	0.50	1.0	0.86
14	0.81	2.1	2.3	2.7	66	11	1.4	2.5	11	0.52	0.91	0.81
15	0.83	2.0	2.3	2.5	109	302	1.4	3.0	7.2	0.62	0.84	0.69
16	0.77	1.8	2.0	4.1	290	78	1.3	3.1	5.6	0.68	0.64	0.48
17	0.83	2.2	5.3	697	138	37	1.5	2.6	4.5	0.66	0.69	0.39
18	0.82	3.2	6.6	414	103	19	1.6	2.5	4.2	0.35	0.55	0.45
19	0.84	48	4.9	74	47	12	1.4	2.6	3.5	0.29	0.87	0.44
20	0.99	23	4.7	28	23	8.0	1.5	2.3	33	0.28	1.0	0.69
21	1.0	10	3.7	14	14	5.7	1.5	e2.1	21	0.29	0.75	0.68
22	1.1	6.1	3.9	8.4	8.9	4.9	2.6	e2.3	13	0.23	0.58	0.46
23	1.0	5.3	3.5	5.8	6.8	4.0	2.8	2.1	8.3	0.15	0.55	0.38
24	1.3	3.8	3.0	4.9	111	3.7	9.1	2.3	6.5	0.44	0.63	0.43
25	1.4	2.7	2.8	4.8	228	3.6	292	2.5	10	0.96	0.64	0.64
26	1.2	3.2	2.7	70	299	3.0	82	2.4	37	0.67	0.46	0.62
27	1.3	2.7	2.7	29	91	3.0	29	2.3	96	0.43	0.40	0.57
28	1.4	4.4	3.5	12	36	3.6	12	140	240	0.56	0.45	0.56
29	1.1	3.0	2.8	6.8	21	4.5	6.7	86	443	1.4	0.44	0.42
30	1.0	2.3	2.7	5.3	---	3.5	5.0	23	406	85	0.37	0.37
31	0.92	---	2.5	e3.9	---	2.6	---	10	---	26	0.40	---
TOTAL	27.80	148.9	92.2	1,424.8	2,866.7	2,278.1	476.68	473.2	2,064.7	368.80	43.97	14.85
MEAN	0.90	4.96	2.97	46.0	98.9	73.5	15.9	15.3	68.8	11.9	1.42	0.49
MAX	1.4	48	6.6	697	530	1,040	292	140	443	138	10	0.86
MIN	0.54	1.0	1.8	2.3	4.1	2.6	0.98	2.1	3.5	0.15	0.37	0.25
AC-FT	55	295	183	2,830	5,690	4,520	945	939	4,100	732	87	29

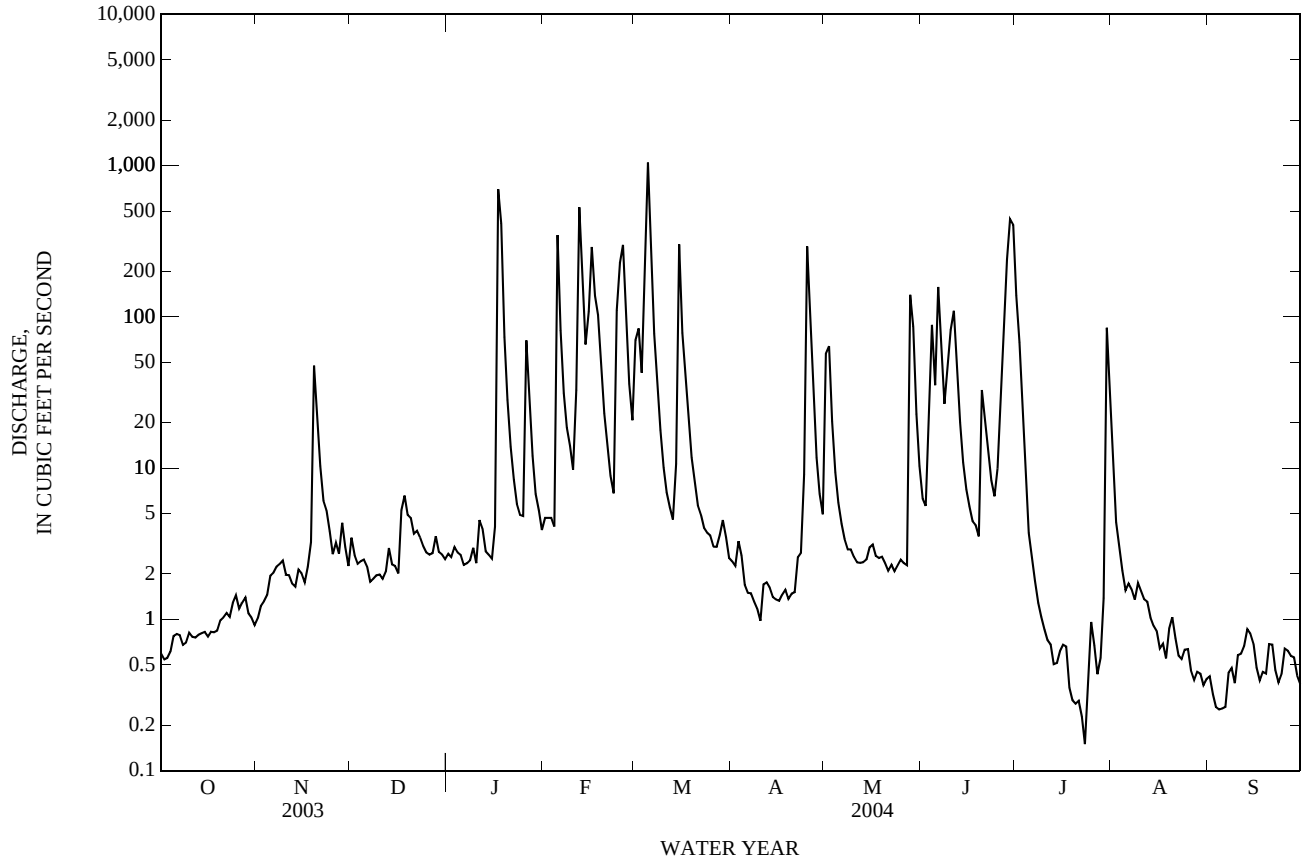
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2004, BY WATER YEAR (WY)

MEAN	152	158	315	127	224	215	144	166	85.0	41.0	4.07	13.2
MAX	509	646	804	513	693	581	425	734	433	333	32.0	91.5
(WY)	(2003)	(1997)	(1992)	(1998)	(2001)	(2001)	(2002)	(1992)	(1992)	(1994)	(1992)	(1994)
MIN	0.01	0.09	0.33	5.83	0.12	8.01	3.11	2.53	0.50	0.00	0.01	0.00
(WY)	(1993)	(1996)	(1996)	(2000)	(1996)	(1996)	(2003)	(1998)	(2001)	(1998)	(1993)	(1993)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1992 - 2004	
ANNUAL TOTAL	9,793.08		10,280.70			
ANNUAL MEAN	26.8		28.1		137	
HIGHEST ANNUAL MEAN					297	1992
LOWEST ANNUAL MEAN					7.81	1996
HIGHEST DAILY MEAN	1,400	Feb 22	1,040	Mar 5	9,880	Dec 16, 2001
LOWEST DAILY MEAN	0.46	Sep 5	0.15	Jul 23	0.00	Oct 2, 1991
ANNUAL SEVEN-DAY MINIMUM	0.52	Sep 23	0.29	Jul 18	0.00	Oct 7, 1991
MAXIMUM PEAK FLOW			1,390	Mar 5	14,900	Dec 4, 1998
MAXIMUM PEAK STAGE			10.65	Mar 5	29.44	Dec 4, 1998
ANNUAL RUNOFF (AC-FT)	19,420		20,390		99,080	
10 PERCENT EXCEEDS	37		71		184	
50 PERCENT EXCEEDS	2.0		2.6		2.6	
90 PERCENT EXCEEDS	0.66		0.55		0.01	

e Estimated

07342465 South Sulphur River at Commerce, TX—Continued



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 mi^2.

PERIOD OF RECORD.--Oct. 1991 to current year. Water-quality records: Chemical data: Oct. 1987 to Sept. 2001. Biochemical data: Oct. 1987 to Sept. 2001.

GAGE.--Water-stage recorder and crest-stage gage. Datum is 476.15 ft above NGVD of 1929. Satellite telemeter at station.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	11	0.00	6.7	0.42	12	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	10	0.00	8.5	0.38	4.7	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	6.4	0.00	3.5	9.7	2.1	0.16	0.00
4	0.00	0.00	0.00	0.00	1.1	27	0.00	1.4	18	1.2	0.08	0.00
5	0.00	0.00	0.00	0.00	150	142	0.00	0.53	5.0	0.59	0.00	0.00
6	0.00	0.00	0.00	0.00	56	32	0.00	0.19	2.0	0.20	0.00	0.00
7	0.00	0.00	0.00	0.00	9.7	13	0.00	0.17	0.77	0.07	0.00	0.00
8	0.00	0.00	0.00	0.00	2.7	5.3	0.00	0.07	1.2	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.79	2.1	0.00	0.03	6.0	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.23	0.94	0.00	0.00	7.9	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	14	0.31	0.00	0.00	4.7	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	108	0.10	0.00	0.00	4.5	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	29	0.01	0.00	0.00	1.7	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	9.1	0.07	0.00	0.00	0.71	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	21	7.7	0.00	0.00	0.25	0.00	0.00	0.00
16	0.00	0.00	0.00	0.06	20	10	0.00	0.00	0.06	0.00	0.00	0.00
17	0.00	0.00	0.00	24	15	4.2	0.00	0.00	0.01	0.00	0.00	0.00
18	0.00	0.00	0.00	31	7.1	1.6	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	4.0	4.6	0.75	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	1.1	1.9	0.25	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.15	0.64	0.06	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.30	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	2.3	0.00	0.00	0.00	0.21	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	57	0.00	3.3	0.00	0.02	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	69	0.00	10	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	62	0.00	11	0.00	0.01	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	18	0.00	3.3	0.00	17	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	8.0	0.00	0.62	20	21	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	5.4	0.00	0.40	14	92	0.38	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.10	3.5	60	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	1.2	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	60.31	672.67	274.79	28.72	59.79	253.84	21.24	0.24	0.00
MEAN	0.00	0.00	0.00	1.95	23.2	8.86	0.96	1.93	8.46	0.69	0.01	0.00
MAX	0.00	0.00	0.00	31	150	142	11	20	92	12	0.16	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	120	1,330	545	57	119	503	42	0.5	0.00

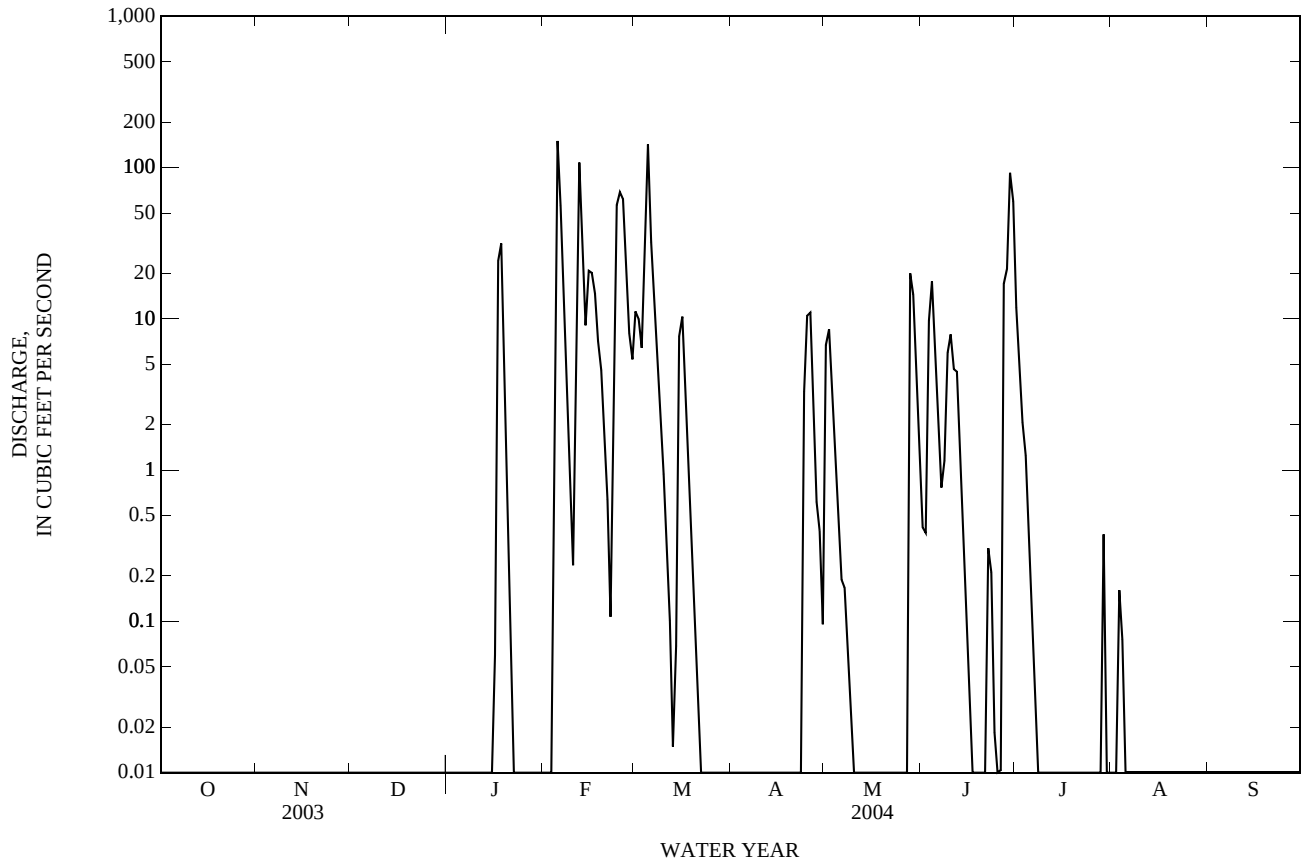
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2004h, BY WATER YEAR (WY)

MEAN	42.0	51.9	102	42.2	76.2	65.6	53.0	50.8	32.3	16.1	2.73	2.46
MAX	179	212	257	144	290	147	171	247	126	119	31.6	11.5
(WY)	(1994)	(1997)	(1992)	(1998)	(1997)	(2001)	(1993)	(1992)	(1992)	(1994)	(1992)	(1995)
MIN	0.00	0.00	0.00	0.98	0.10	5.41	0.03	0.60	0.00	0.00	0.00	0.00
(WY)	(2000)	(2004)	(1996)	(2000)	(1996)	(1996)	(2003)	(2003)	(2002)	(1993)	(1993)	(1993)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1992 - 2004h	
ANNUAL TOTAL	1,987.59		1,371.60			
ANNUAL MEAN	5.45		3.75		44.6	
HIGHEST ANNUAL MEAN					99.8	1992
LOWEST ANNUAL MEAN					2.37	1996
HIGHEST DAILY MEAN	306	Feb 22	150	Feb 5	3,630	Dec 16, 2001
LOWEST DAILY MEAN	0.00	Apr 11	0.00	Oct 1	0.00	Oct 1, 1991
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 16	0.00	Oct 1	0.00	Oct 1, 1991
MAXIMUM PEAK FLOW			203	Mar 5	7,240	Dec 16, 2001
MAXIMUM PEAK STAGE			7.77	Mar 5	a16.78	Dec 16, 2001
ANNUAL RUNOFF (AC-FT)	3,940		2,720		32,350	
10 PERCENT EXCEEDS	5.3		7.9		47	
50 PERCENT EXCEEDS	0.00		0.00		0.38	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

h See PERIOD OF RECORD paragraph.
a From Floodmark.

07342480 Middle Sulphur River at Commerce, TX—Continued



07342495 Jim L. Chapman Lake near Cooper, TX

LOCATION.--Lat 33°20'00", long 95°37'30", Hopkins County, 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 mi^2.

PERIOD OF RECORD.--Oct. 1991 to Sept. 2000 (U.S. Army Corps of Engineers furnished contents), Oct. 2000 to Sept. 2002 (contents), Oct. 2002 to current year. Prior to Oct. 2000, published as "Cooper Lake near Cooper". Precipitation records: Oct. 2001 to Sept. 2002.

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

REMARKS.--Records good. The lake is formed by a rolled earthfill dam, 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 channel, approach channel 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 uses of the dam and lake are for flood control, water supply, and recreation. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	459.0
Top of flood control pool	446.2
Invert, lowest gated outlet	398.0

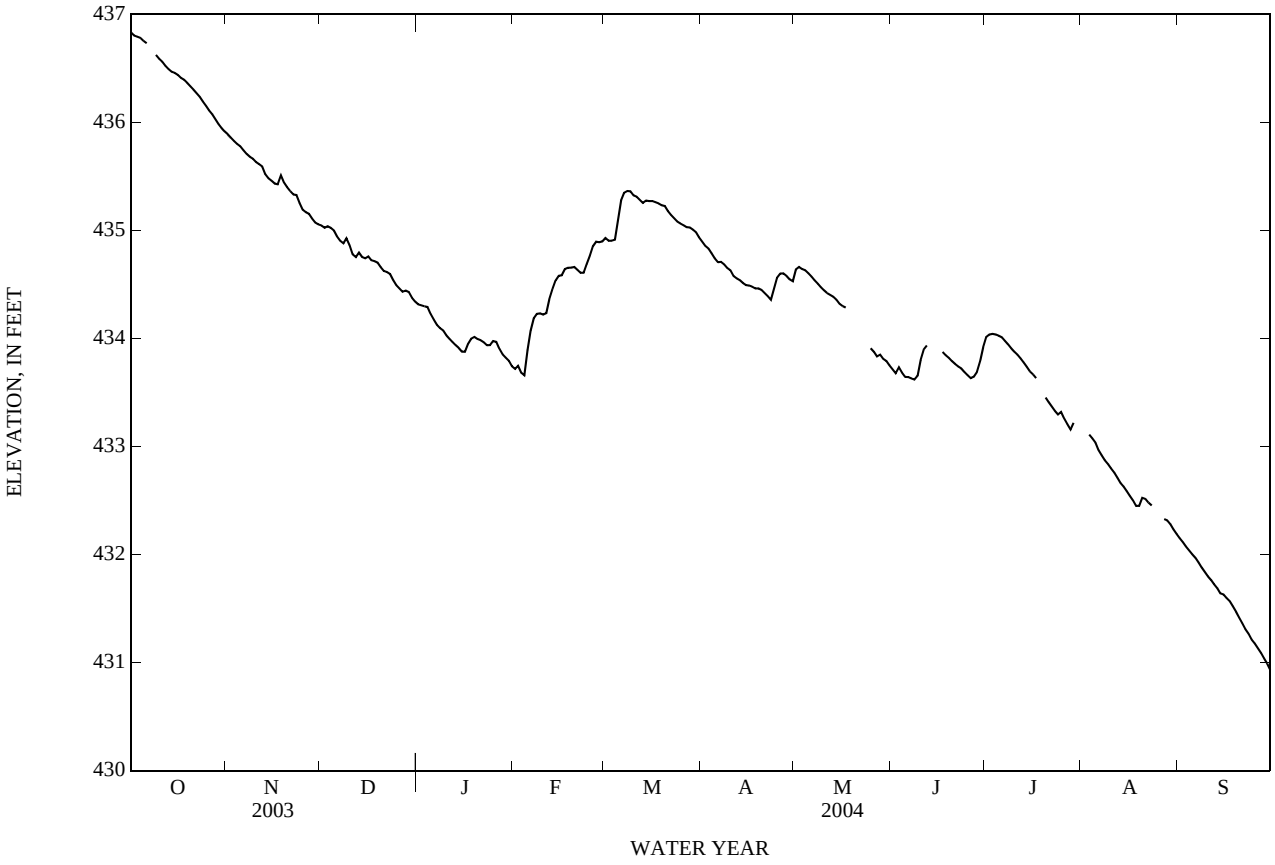
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 461,400 acre-ft, Dec. 18, 2001, elevation, 447.03 ft; minimum contents after initial filling, 191,100 acre-ft, May 11, 1992, elevation, 432.66 ft; minimum elevation, 430.90 ft, Sept. 30, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 436.85 ft, Oct. 1; minimum elevation, 430.90 ft, Sept. 30.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	436.83	435.89	435.05	434.31	433.72	434.93	434.90	434.64	433.71	434.01	---	432.15
2	436.80	435.86	435.02	434.31	433.75	434.90	434.86	434.66	433.68	434.04	---	432.11
3	436.79	435.83	435.04	434.30	433.68	434.90	434.83	434.64	433.73	434.04	433.11	432.07
4	436.78	435.80	435.02	434.29	433.66	434.91	434.79	434.63	433.68	434.04	433.08	432.04
5	436.75	435.78	435.00	434.22	433.89	435.10	434.74	434.60	433.65	434.03	433.04	432.00
6	436.73	435.74	434.94	434.17	434.07	435.28	434.71	434.57	433.64	434.01	432.97	431.97
7	---	435.71	434.90	434.12	434.19	435.35	434.71	434.54	433.63	433.98	432.92	431.93
8	---	435.68	434.88	434.10	434.23	435.37	434.69	434.51	433.62	433.95	432.87	431.88
9	436.62	435.66	434.93	434.07	434.23	435.36	434.65	434.47	433.65	433.91	432.84	431.84
10	436.59	435.63	434.86	434.03	434.22	435.32	434.63	434.45	433.80	433.88	432.80	431.80
11	436.56	435.61	434.78	434.00	434.23	435.31	434.58	434.42	433.90	433.85	432.76	431.77
12	436.52	435.59	434.75	433.97	434.36	435.28	434.56	434.40	433.94	433.82	432.71	431.73
13	436.49	435.52	434.80	433.94	434.46	435.25	434.54	434.39	---	433.78	432.66	431.69
14	436.47	435.48	434.75	433.91	434.54	435.28	434.51	434.36	---	433.74	432.63	431.64
15	436.46	435.46	434.74	433.88	434.58	435.27	434.49	434.32	---	433.69	432.59	431.63
16	436.44	435.43	434.76	433.88	434.59	435.27	434.49	434.30	---	433.67	432.54	431.60
17	436.41	435.43	434.72	433.95	434.64	435.26	434.48	434.29	433.88	433.63	432.50	431.57
18	436.39	435.51	434.71	434.00	434.65	435.25	434.46	---	433.85	---	432.45	431.52
19	436.37	435.44	434.70	434.01	434.66	435.23	434.46	---	433.82	---	432.45	431.47
20	436.33	435.40	434.66	433.99	434.66	435.23	434.45	---	433.79	433.45	432.52	431.42
21	436.30	435.36	434.62	433.98	434.64	435.18	434.42	---	433.76	433.41	432.51	431.36
22	436.27	435.33	434.61	433.96	434.61	435.14	434.39	---	433.74	433.37	432.48	431.31
23	436.24	435.33	434.60	433.94	434.61	435.11	434.36	---	433.72	433.33	432.45	431.27
24	436.19	435.25	434.54	433.94	434.69	435.08	434.46	---	433.69	433.30	---	431.21
25	436.15	435.19	434.49	433.98	434.77	435.07	434.56	433.91	433.66	433.32	---	431.18
26	436.11	435.17	434.46	433.97	434.85	435.05	434.60	433.88	433.63	433.26	---	431.13
27	436.08	435.15	434.43	433.91	434.90	435.03	434.60	433.83	433.65	433.21	432.33	431.09
28	436.03	435.11	434.44	433.85	434.89	435.03	434.58	433.85	433.69	433.16	432.32	431.04
29	435.99	435.07	434.43	433.82	434.90	435.01	434.55	433.81	433.78	433.22	432.28	430.99
30	435.95	435.06	434.38	433.79	---	434.98	434.53	433.79	433.92	---	432.23	430.93
31	435.92	---	434.34	433.74	---	434.94	---	433.75	---	---	432.19	---
MEAN	---	435.48	434.72	434.01	434.41	435.15	434.59	---	---	---	---	431.58
MAX	---	435.89	435.05	434.31	434.90	435.37	434.90	---	---	---	---	432.15
MIN	---	435.06	434.34	433.74	433.66	434.90	434.36	---	---	---	---	430.93

07342495 Jim L. Chapman Lake near Cooper, TX—Continued



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 mi^2.

PERIOD OF RECORD.--June 1942 to current year. Monthly discharge only for some periods, published in WSP 1311. Water-quality records: Chemical data: Oct. 1958 to Sept. 1966, Oct. 1967 to Sept. 2001. Biochemical data: Dec. 1979 to Sept. 2001. Specific conductance data: Oct. 1958 to Sept. 1966, Oct. 1967 to Sept. 1989. Water temperature data: Oct. 1958 to Sept. 1966, Oct. 1967 to Sept. 1989.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 371.91 ft above NGVD of 1929. Prior to Feb. 15, 1985, at site 360 ft to right and 90 ft upstream at same datum. Prior to 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. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since Sept. 28, 1991, at least 10% of contributing drainage area has been regulated. No known diversions. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--49 years (water years 1943-1991), 416 ft^3/s, 301,400 acre-ft/yr.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1943-1991: Maximum discharge 47,200 ft^3/s May 13, 1982 (gage height, 27.21 ft, from floodmark). No flow at times.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	e6.8	e5.9	9.9	7.7	12	17	35	11	7.0	6.5	7.0
2	8.2	e5.8	7.1	9.7	8.3	13	17	32	9.5	6.6	6.2	7.0
3	12	e6.4	7.9	9.5	8.2	10	17	25	10	6.7	6.2	6.9
4	13	e6.2	8.8	9.7	9.7	12	18	21	9.1	6.6	5.5	7.0
5	16	e6.1	8.2	9.6	139	111	18	18	9.4	6.5	5.7	7.3
6	18	e5.4	8.9	9.5	33	25	18	17	9.2	7.0	5.8	7.3
7	7.2	e6.3	9.1	9.1	14	14	20	15	9.0	6.4	5.7	7.2
8	7.1	e5.4	9.0	8.9	11	11	20	14	10	7.1	5.8	7.3
9	7.7	e5.0	8.4	9.1	9.9	9.5	19	13	10	7.5	6.1	7.2
10	e3.7	e5.1	10	9.2	9.5	9.3	19	13	167	7.3	6.2	7.2
11	e3.7	e4.6	10	9.4	12	9.1	21	12	25	7.2	6.5	7.4
12	e3.5	e4.8	11	9.2	93	9.4	21	12	11	7.2	6.2	7.5
13	e3.6	e4.4	11	9.1	22	10	24	13	9.2	6.9	5.9	7.2
14	e3.7	e6.7	10	8.7	13	10	29	12	8.9	6.2	5.8	7.4
15	e4.1	e7.3	11	8.3	22	13	28	11	9.1	6.3	5.8	8.0
16	e4.3	e5.9	11	9.1	37	14	27	11	9.0	6.8	6.1	7.4
17	e4.4	e6.6	11	9.2	23	12	27	11	8.5	6.2	7.8	8.0
18	e4.4	e6.1	10	7.2	22	12	27	11	8.0	5.7	7.8	9.1
19	e4.8	e3.7	10	6.8	12	12	26	10	8.1	5.5	8.7	13
20	e4.8	e3.5	10	6.8	11	12	25	9.9	8.1	6.5	8.3	15
21	e5.2	e3.6	10	7.3	10	13	23	9.8	8.2	6.8	6.5	15
22	e6.7	e3.7	10	7.6	9.6	14	22	13	8.6	6.6	6.4	14
23	e7.8	e3.9	10	7.4	11	15	21	13	8.1	6.7	6.6	14
24	e7.9	e4.1	10	8.2	50	16	27	12	7.8	7.1	6.6	14
25	e7.8	e4.3	10	7.5	62	16	35	11	7.9	7.6	6.6	12
26	e8.2	e4.7	9.9	6.6	41	16	33	12	8.4	7.4	6.8	13
27	e7.7	e4.6	10	6.7	16	16	25	13	9.9	6.9	6.7	12
28	e7.0	e4.6	10	6.9	11	16	22	13	34	6.7	7.1	11
29	e7.2	e4.1	10	7.6	12	16	22	12	30	7.8	6.9	11
30	e7.3	e5.3	9.9	8.0	---	16	22	12	8.1	6.8	6.7	12
31	e7.3	---	9.8	7.7	---	17	---	11	---	6.6	6.9	---
TOTAL	220.0	155.0	297.9	259.5	739.9	511.3	690	447.7	490.1	210.2	202.4	289.4
MEAN	7.10	5.17	9.61	8.37	25.5	16.5	23.0	14.4	16.3	6.78	6.53	9.65
MAX	18	7.3	11	9.9	139	111	35	35	167	7.8	8.7	15
MIN	3.5	3.5	5.9	6.6	7.7	9.1	17	9.8	7.8	5.5	5.5	6.9
AC-FT	436	307	591	515	1,470	1,010	1,370	888	972	417	401	574

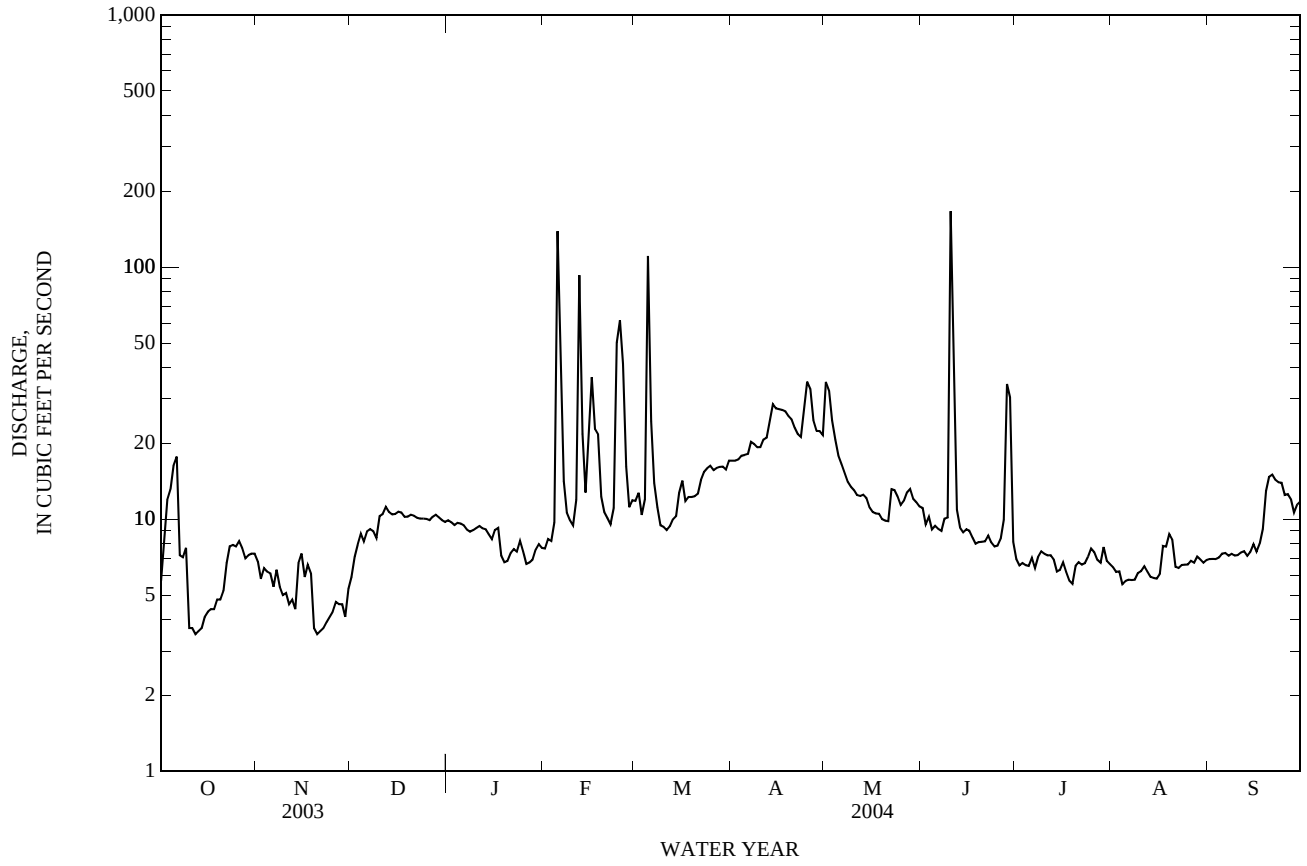
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2004z, BY WATER YEAR (WY)

MEAN	193	454	926	692	685	1,082	706	387	256	148	113	16.1
MAX	1,182	1,280	2,167	2,281	1,748	3,118	2,159	1,902	939	839	1,205	99.5
(WY)	(2003)	(1995)	(1999)	(1998)	(1999)	(2001)	(2002)	(1995)	(1995)	(1992)	(1992)	(1994)
MIN	1.58	2.11	3.39	3.68	0.71	4.17	5.16	13.4	5.49	2.32	0.74	0.47
(WY)	(2000)	(2000)	(1996)	(1996)	(1996)	(1996)	(1996)	(2003)	(2002)	(1996)	(1999)	(1999)

07342500 South Sulphur River near Cooper, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1992 - 2004z	
ANNUAL TOTAL	31,632.9		4,513.4			
ANNUAL MEAN	86.7		12.3		471	
HIGHEST ANNUAL MEAN					901	2001
LOWEST ANNUAL MEAN					5.52	1996
HIGHEST DAILY MEAN	1,760	Jan 1	167	Jun 10	6,300	Dec 17, 2001
LOWEST DAILY MEAN	1.3	Jan 31	3.5	Oct 12	0.00	Oct 1, 1991
ANNUAL SEVEN-DAY MINIMUM	1.3	Jan 29	3.8	Oct 10	0.00	Oct 1, 1991
MAXIMUM PEAK FLOW			483	Jun 10	8,020	Dec 16, 2001
MAXIMUM PEAK STAGE			6.07	Jun 10	20.07	Dec 16, 2001
ANNUAL RUNOFF (AC-FT)	62,740		8,950		341,400	
10 PERCENT EXCEEDS	236		22		1,730	
50 PERCENT EXCEEDS	8.2		9.1		15	
90 PERCENT EXCEEDS	3.5		5.7		2.0	

z Period of regulated streamflow.
e Estimated



07343000 North Sulphur River near Cooper, TX

LOCATION.--Lat 33°28'29", long 95°35'15", Lamar County, Hydrologic Unit 11140301, on right bank at upstream side of highway embankment near right end of upstream 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 mi^2.

PERIOD OF RECORD.--Oct. 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 372.42 ft above NGVD of 1929. 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. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those for Oct. 1 to Dec. 2, which are fair. No known regulation or diversions. No flow at times.

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. In 1928-29, the channel was rectified for a distance of 28 mi upstream and 18 mi downstream from this station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

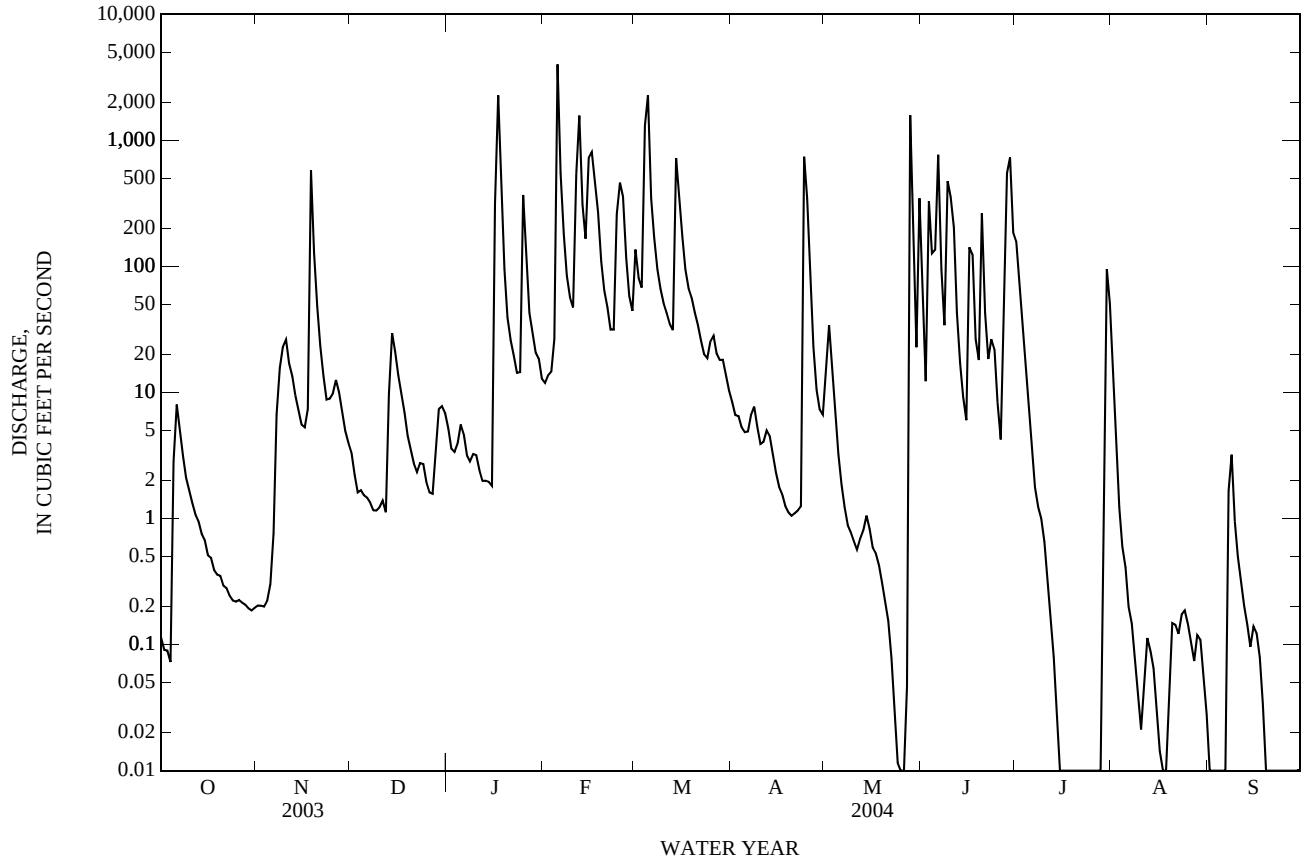
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.11	0.20	3.3	5.2	12	136	8.3	15	44	158	10	0.00
2	0.09	0.20	2.2	3.6	14	81	6.6	34	12	56	3.3	0.00
3	0.09	0.20	1.6	3.4	15	68	6.5	16	330	21	1.2	0.00
4	0.07	0.22	1.7	3.9	27	1,310	5.3	6.6	127	9.7	0.60	0.00
5	2.8	0.30	1.5	5.6	4,010	2,280	4.9	3.3	136	5.2	0.41	0.00
6	8.0	0.76	1.5	4.7	548	347	4.9	1.9	768	2.9	0.20	0.00
7	5.1	6.7	1.3	3.2	180	169	6.6	1.2	95	1.8	0.15	1.7
8	3.1	16	1.2	2.8	84	95	7.7	0.88	34	1.2	0.08	3.2
9	2.1	23	1.2	3.2	57	67	5.4	0.78	474	1.0	0.04	0.95
10	1.7	26	1.2	3.2	47	51	3.9	0.66	355	0.65	0.02	0.50
11	1.3	17	1.4	2.4	542	43	4.1	0.57	204	0.32	0.05	0.31
12	1.1	13	1.1	2.0	1,570	35	5.0	0.70	43	0.16	0.11	0.20
13	0.95	9.5	9.8	2.0	308	31	4.5	0.81	17	0.08	0.09	0.14
14	0.76	7.3	30	2.0	166	725	3.2	1.1	9.2	0.03	0.06	0.10
15	0.67	5.6	21	1.8	729	388	2.3	0.83	6.0	0.00	0.03	0.14
16	0.51	5.3	14	315	810	173	1.8	0.59	142	0.00	0.01	0.12
17	0.49	7.4	9.9	2,280	467	95	1.6	0.53	124	0.00	0.00	0.08
18	0.39	576	6.9	380	270	67	1.3	0.42	27	0.00	0.00	0.03
19	0.36	129	4.5	95	109	57	1.1	0.31	18	0.00	0.04	0.01
20	0.35	48	3.5	39	64	43	1.1	0.21	263	0.00	0.15	0.00
21	0.29	23	2.7	26	47	34	1.1	0.15	43	0.00	0.14	0.00
22	0.28	13	2.3	19	32	26	1.2	0.08	18	0.00	0.12	0.00
23	0.24	8.8	2.8	14	32	20	1.2	0.03	26	0.00	0.17	0.00
24	0.22	8.9	2.7	15	260	19	741	0.01	22	0.00	0.19	0.00
25	0.22	9.8	2.0	369	462	25	347	0.00	8.3	0.00	0.14	0.00
26	0.23	13	1.6	133	358	28	68	0.00	4.2	0.00	0.11	0.00
27	0.22	10	1.6	43	117	20	23	0.05	54	0.00	0.07	0.00
28	0.21	7.0	3.5	30	58	18	10	1,590	549	0.00	0.12	0.00
29	0.19	5.0	7.4	21	44	18	7.3	115	731	0.11	0.11	0.00
30	0.19	4.0	7.8	18	---	13	6.7	23	186	95	0.06	0.00
31	0.20	---	6.9	13	---	10	---	347	---	51	0.03	---
TOTAL	32.53	994.18	160.1	3,859.0	11,439	6,492	1,292.6	2,161.71	4,869.7	404.15	17.80	7.48
MEAN	1.05	33.1	5.16	124	394	209	43.1	69.7	162	13.0	0.57	0.25
MAX	8.0	576	30	2,280	4,010	2,280	741	1,590	768	158	10	3.2
MIN	0.07	0.20	1.1	1.8	12	10	1.1	0.00	4.2	0.00	0.00	0.00
AC-FT	65	1,970	318	7,650	22,690	12,880	2,560	4,290	9,660	802	35	15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2004, BY WATER YEAR (WY)

MEAN	235	260	338	231	397	372	378	445	296	91.0	23.3	106
MAX	1,784	1,406	1,692	1,172	2,099	1,697	3,017	2,461	1,792	872	165	584
(WY)	(1972)	(1958)	(2002)	(1950)	(2001)	(2002)	(1966)	(1982)	(1989)	(1976)	(2001)	(1973)
MIN	0.00	0.00	0.00	0.16	0.81	4.43	2.97	2.43	0.28	0.00	0.00	0.00
(WY)	(1953)	(1956)	(1956)	(1964)	(1976)	(1954)	(1972)	(1972)	(1988)	(1954)	(1952)	(1952)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1950 - 2004	
ANNUAL TOTAL	39,387.04		31,730.25			
ANNUAL MEAN	108		86.7		263	
HIGHEST ANNUAL MEAN					548	2001
LOWEST ANNUAL MEAN					34.7	1996
HIGHEST DAILY MEAN	3,120	May 25	4,010	Feb 5	40,900	Oct 19, 1971
LOWEST DAILY MEAN	0.00	May 13	0.00	May 25	0.00	Oct 1, 1949
ANNUAL SEVEN-DAY MINIMUM	0.12	Jul 27	0.00	Jul 15	0.00	Aug 2, 1951
MAXIMUM PEAK FLOW			8,950	Mar 4	90,600	Oct 19, 1971
MAXIMUM PEAK STAGE			11.31	Mar 4	36.16	Oct 19, 1971
ANNUAL RUNOFF (AC-FT)	78,120		62,940		190,700	
10 PERCENT EXCEEDS	224		175		316	
50 PERCENT EXCEEDS	6.0		3.5		12	
90 PERCENT EXCEEDS	0.21		0.01		0.00	

07343000 North Sulphur River near Cooper, TX—Continued



07343200 Sulphur River near Talco, TX

LOCATION.--Lat 33°23'26", long 95°03'44", Red River County, Hydrologic Unit 11140302, downstream side at left end of bridge on County Road 2152, 1.0 mi downstream from Little Mustang Creek, 2.3 mi downstream from U.S Highway 271, 2.8 mi northeast of Talco.

DRAINAGE AREA.--1,405 mi^2.

PERIOD OF RECORD.--Dec. 1956 to Sept. 1996, Oct. 2000 to current year. Oct. 1997 to Sept. 2000, published as "below Talco" (station 07343210). Water-quality records: Chemical data: Mar. 1965 to Sept. 1995, Oct. 1996 to Jan. 2002. Biochemical data: Jan. 1968 to Sept. 1995, Oct. 1996 to Jan. 2002. Pesticide data: Jan. 1968 to Sept. 1995. Specific conductance data: Oct. 1966 to Sept. 1991. Water temperature data: Oct. 1966 to Sept. 1991.

REVISED RECORDS.--WDR TX-76-1: (P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 275.48 ft above NGVD of 1929. Prior to May 21, 1997, at site 2.3 mi upstream at datum 15.34 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since Sept. 1991, at least 10% of contributing drainage area has been regulated. The River Crest Steam Electric Generating Plant diverts an unknown amount of water upstream from station. Flow may be slightly affected at times by floodwater-retarding structures. These structures control runoff in the Auds and Depot Creek drainage basin.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--35 years (water years 1957-1991) prior to regulation by Jim L. Chapman Lake (station 07342495), 1,408 ft^3/s (1,020,000 acre-ft/yr).

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.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1957-1991: Maximum discharge 48,000 ft^3/s Dec. 11, 1971 (gage height, 21.20 ft); no flow at times.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	14	13	12	28	116	23	213	217	564	109	7.5
2	11	14	12	14	27	120	21	866	154	501	71	7.1
3	11	14	12	16	24	141	20	473	94	325	44	6.7
4	11	15	12	16	28	124	19	215	173	233	29	6.6
5	13	16	11	14	238	713	18	168	202	178	19	6.5
6	14	17	11	13	2,100	2,130	18	131	213	121	13	6.4
7	16	19	10	11	1,270	640	18	86	624	78	10	6.1
8	18	31	10	10	278	209	20	56	383	58	15	5.8
9	18	39	10	10	172	157	21	37	267	48	20	5.7
10	20	38	9.7	10	130	119	21	25	421	41	22	5.3
11	19	36	10	9.9	96	87	20	18	1,130	36	22	5.1
12	18	33	10	9.8	364	68	19	14	1,190	33	21	5.4
13	17	28	11	9.8	1,150	55	17	13	511	29	20	6.0
14	16	23	12	10	406	50	15	12	292	21	21	6.5
15	13	21	14	10	214	266	14	11	216	15	22	13
16	12	19	28	10	403	280	13	11	183	12	21	8.4
17	12	19	39	90	503	180	13	11	160	11	20	7.7
18	12	21	34	914	290	139	12	11	197	8.8	18	7.5
19	12	177	29	447	227	104	12	11	154	7.9	18	7.0
20	12	180	27	189	172	83	11	11	143	7.6	20	6.6
21	12	124	22	132	142	80	11	10	190	7.4	20	6.4
22	12	78	19	81	105	78	11	10	156	7.4	25	6.2
23	14	50	17	55	84	52	11	10	116	7.2	27	6.1
24	14	32	13	44	115	41	77	9.7	104	7.7	24	6.1
25	13	23	11	40	192	36	709	9.4	104	10	21	6.2
26	12	18	10	134	280	34	684	9.5	80	9.6	18	6.2
27	11	15	10	192	277	33	260	9.7	84	14	15	6.1
28	11	13	11	139	189	33	174	64	195	17	12	5.6
29	11	14	11	81	148	31	121	601	352	16	10	4.7
30	13	14	11	52	---	28	71	216	521	17	8.4	4.3
31	14	---	11	37	---	25	---	119	---	86	7.8	---
TOTAL	423	1,155	470.7	2,812.5	9,652	6,252	2,474	3,461.3	8,826	2,527.6	743.2	194.8
MEAN	13.6	38.5	15.2	90.7	333	202	82.5	112	294	81.5	24.0	6.49
MAX	20	180	39	914	2,100	2,130	709	866	1,190	564	109	13
MIN	11	13	9.7	9.8	24	25	11	9.4	80	7.2	7.8	4.3
AC-FT	839	2,290	934	5,580	19,140	12,400	4,910	6,870	17,510	5,010	1,470	386

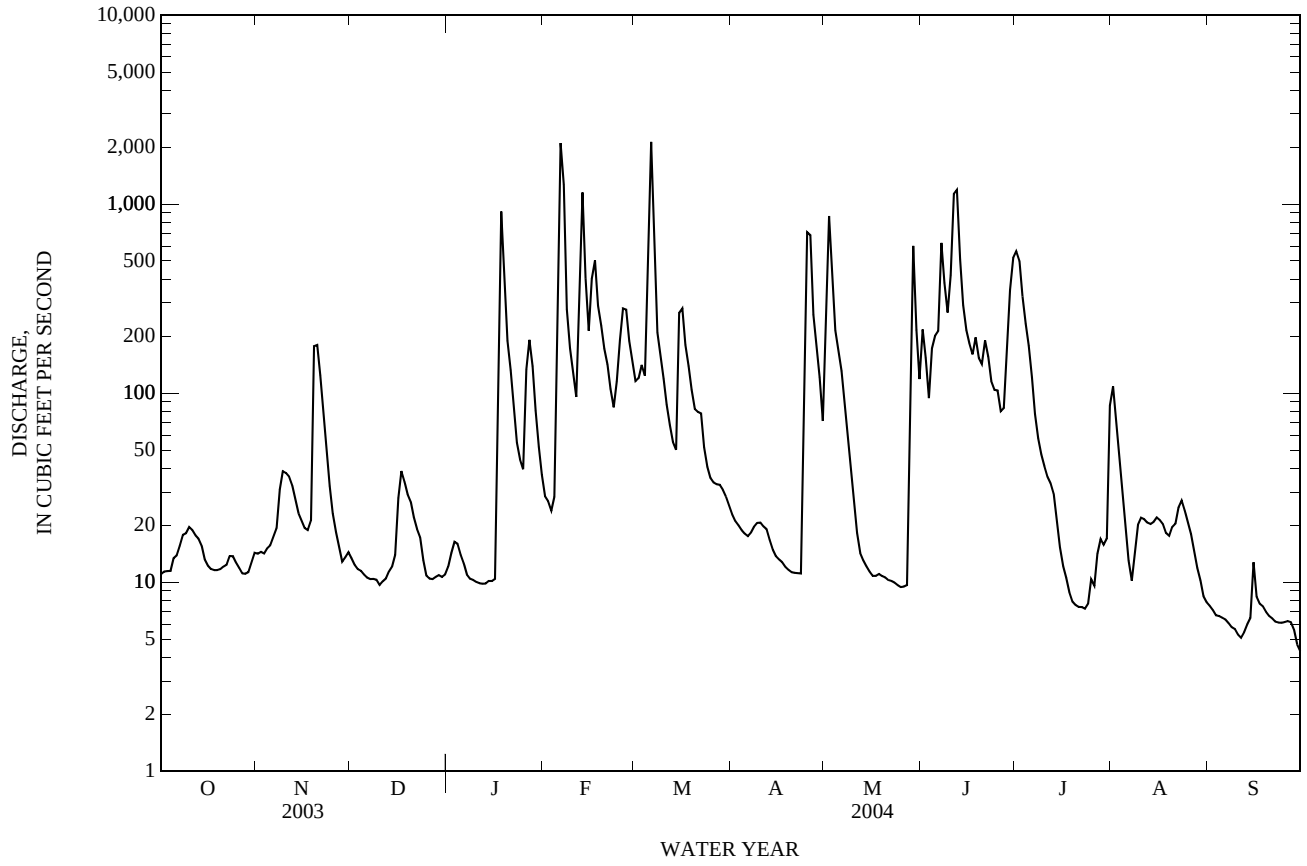
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2004hz, BY WATER YEAR (WY)

MEAN	735	1,604	2,793	1,501	2,097	2,405	1,568	1,233	719	449	216	164
MAX	3,064	5,798	7,249	4,052	6,470	7,354	5,144	6,191	2,279	3,164	1,832	1,086
(WY)	(2003)	(1997)	(2002)	(1998)	(1997)	(2001)	(2002)	(1995)	(2000)	(1992)	(1992)	(2001)
MIN	0.80	9.52	15.2	21.9	12.7	50.3	51.8	88.6	13.3	4.39	0.42	0.65
(WY)	(2000)	(2000)	(2004)	(2000)	(1996)	(1996)	(2003)	(1998)	(1998)	(1993)	(1999)	(1999)

07343200 Sulphur River near Talco, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1992 - 2004hz	
ANNUAL TOTAL	90,567.6		38,992.1			
ANNUAL MEAN	248		107		1,287	
HIGHEST ANNUAL MEAN					2,642	2001
LOWEST ANNUAL MEAN					107	2004
HIGHEST DAILY MEAN	7,410	Feb 23	2,130	Mar 6	64,100	Dec 18, 2001
LOWEST DAILY MEAN	8.2	Jul 28	4.3	Sep 30	0.09	Sep 7, 1999
ANNUAL SEVEN-DAY MINIMUM	8.4	Jul 25	5.6	Sep 24	0.11	Sep 1, 1999
MAXIMUM PEAK FLOW			2,660	Feb 6	79,800	Dec 18, 2001
MAXIMUM PEAK STAGE			19.10	Feb 6	30.99	Dec 18, 2001
ANNUAL RUNOFF (AC-FT)	179,600		77,340		932,700	
10 PERCENT EXCEEDS	341		262		3,510	
50 PERCENT EXCEEDS	28		20		146	
90 PERCENT EXCEEDS	9.6		8.4		9.3	

z Period of regulated streamflow.
h See PERIOD OF RECORD paragraph.



07343460 Lake Sulphur Springs near Sulphur Springs, TX

LOCATION.--Lat 33°10'04", long 95°38'30", Hopkins County, Hydrologic Unit 11140303, on White Oak Dam, next to spillway on White Oak Creek, 2.4 mi from Sulphur Springs.

DRAINAGE AREA.--55.0 mi^2.

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

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

REMARKS.--Records good. The lake is formed by an earthfill dam 6,232 ft long (including service spillway) with an uncontrolled emergency spillway located at left end of dam. The dam was completed and storage began in Jan. 1974. The lake is the property of the Sulphur Springs Water District, and was built to impound water for municipal use. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	474.0
Crest of spillway	462.0
Lowest gated outlet (invert)	441.0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 30,660 acre-ft, June 4, 2000, elevation, 464.41 ft; minimum contents, 13,660 acre-ft, Aug. 25, 2001, elevation 456.52 ft.

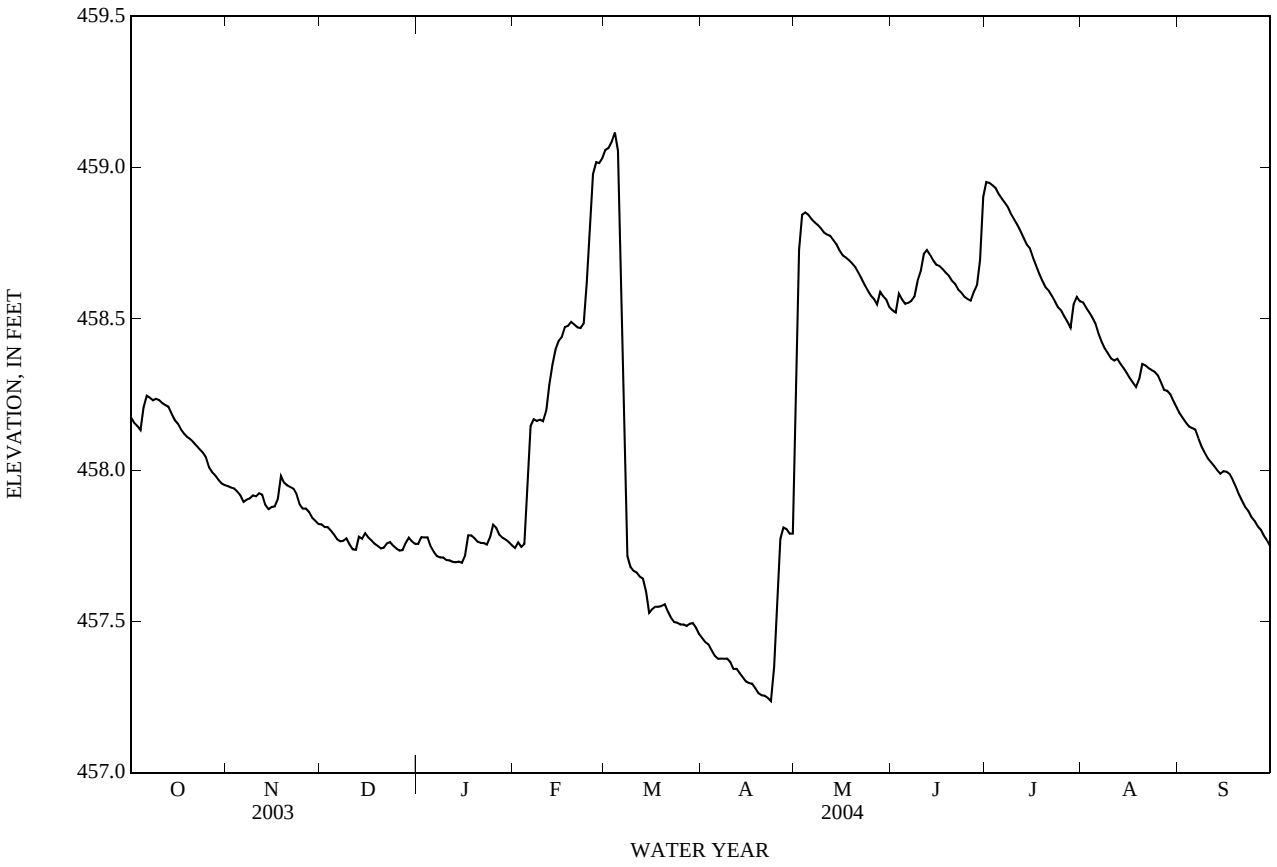
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 459.37 ft, Mar. 4; minimum elevation, 457.21 ft, Apr. 22.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	458.17	457.95	457.82	457.76	457.74	459.06	457.44	458.11	458.53	458.95	458.55	458.19
2	458.16	457.94	457.81	457.78	457.76	459.07	457.43	458.73	458.52	458.95	458.54	458.17
3	458.15	457.94	457.81	457.78	457.75	459.08	457.42	458.84	458.58	458.94	458.52	458.16
4	458.13	457.93	457.80	457.78	457.76	459.12	457.40	458.85	458.56	458.93	458.50	458.14
5	458.21	457.92	457.79	457.75	457.97	459.06	457.39	458.84	458.55	458.91	458.48	458.14
6	458.25	457.90	457.77	457.73	458.15	458.68	457.38	458.83	458.55	458.90	458.45	458.13
7	458.24	457.90	457.76	457.72	458.17	458.13	457.38	458.82	458.56	458.88	458.42	458.10
8	458.23	457.91	457.77	457.71	458.16	457.72	457.38	458.81	458.57	458.87	458.40	458.08
9	458.24	457.92	457.77	457.71	458.17	457.68	457.38	458.80	458.63	458.85	458.39	458.06
10	458.23	457.91	457.75	457.70	458.16	457.67	457.37	458.79	458.66	458.83	458.37	458.04
11	458.22	457.92	457.74	457.70	458.20	457.66	457.34	458.78	458.71	458.81	458.36	458.03
12	458.21	457.92	457.74	457.70	458.28	457.65	457.34	458.77	458.73	458.79	458.37	458.01
13	458.21	457.89	457.78	457.70	458.35	457.64	457.33	458.76	458.71	458.77	458.35	458.00
14	458.19	457.87	457.77	457.70	458.40	457.60	457.31	458.75	458.69	458.75	458.34	457.99
15	458.17	457.88	457.79	457.69	458.43	457.53	457.30	458.73	458.68	458.73	458.32	458.00
16	458.15	457.88	457.78	457.72	458.44	457.54	457.30	458.71	458.68	458.70	458.30	457.99
17	458.13	457.90	457.77	457.78	458.47	457.55	457.29	458.70	458.67	458.68	458.29	457.99
18	458.12	457.98	457.76	457.78	458.48	457.55	457.28	458.69	458.65	458.65	458.27	457.97
19	458.11	457.96	457.75	457.78	458.49	457.55	457.26	458.68	458.64	458.63	458.30	457.94
20	458.10	457.95	457.74	457.76	458.48	457.56	457.26	458.67	458.63	458.60	458.35	457.92
21	458.09	457.94	457.74	457.76	458.47	457.53	457.25	458.65	458.62	458.59	458.35	457.90
22	458.08	457.94	457.76	457.76	458.47	457.51	457.25	458.63	458.60	458.58	458.34	457.88
23	458.07	457.92	457.76	457.75	458.49	457.50	457.24	458.61	458.59	458.56	458.33	457.86
24	458.06	457.89	457.75	457.78	458.62	457.50	457.35	458.59	458.57	458.54	458.32	457.84
25	458.04	457.87	457.74	457.82	458.81	457.49	457.53	458.58	458.57	458.53	458.31	457.83
26	458.01	457.87	457.73	457.81	458.98	457.49	457.77	458.57	458.56	458.51	458.29	457.81
27	457.99	457.86	457.74	457.79	459.02	457.48	457.81	458.55	458.59	458.49	458.26	457.80
28	457.98	457.84	457.76	457.78	459.02	457.49	457.80	458.59	458.61	458.47	458.26	457.78
29	457.97	457.83	457.78	457.77	459.03	457.49	457.79	458.57	458.69	458.55	458.25	457.77
30	457.96	457.82	457.76	457.76	---	457.48	457.79	458.56	458.90	458.57	458.23	457.75
31	457.95	---	457.76	457.75	---	457.46	---	458.54	---	458.56	458.21	---
MEAN	458.12	457.90	457.77	457.75	458.37	457.86	457.42	458.68	458.63	458.71	458.36	457.98
MAX	458.25	457.98	457.82	457.82	459.03	459.12	457.81	458.85	458.90	458.95	458.55	458.19
MIN	457.95	457.82	457.73	457.69	457.74	457.46	457.24	458.11	458.52	458.47	458.21	457.75

WTR YR 2004 MEAN 458.13 MAX 459.12 MIN 457.24

07343460 Lake Sulphur Springs near Sulphur Springs, TX—Continued



07343500 White Oak Creek near Talco, TX

LOCATION.--Lat 33°19'20", long 95°05'33", Titus County, Hydrologic Unit 11140303, 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 mi^2.

PERIOD OF RECORD.--Dec. 1949 to current year. Water-quality records: Chemical data: Oct. 1967 to Sept. 1998. Biochemical data: Nov. 1982 to Sept. 1985, Oct. 1991 to Sept. 1998. Specific conductance: Oct. 1967 to Sept. 1989. Water temperature: Oct. 1967 to Sept. 1989.

REVISED RECORDS.--WSP 1711: Elevation of historical maximum.

GAGE.--Water-stage recorder. Datum of gage is 286.45 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since water year 1973, at least 10% of contributing drainage area has been regulated. There are several small diversions upstream from station for municipal supply. The cities of Sulphur Springs and Mount Vernon discharged wastewater effluent into tributaries above this station. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--22 years (water years 1951-1972) prior to regulation by Lake Sulphur Springs 405 ft^3/s (293,400 acre-ft/yr).

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.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1950-1972: Maximum discharge 48,000 ft^3/s Dec. 11, 1971 (gage height, 21.20 ft). No flow at times.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	2.7	4.3	11	14	124	143	e1,270	24	443	6.7	5.1
2	5.6	3.0	4.1	10	13	76	67	1,350	22	485	6.5	5.1
3	5.2	2.9	4.0	10	11	57	38	1,820	21	390	8.5	5.0
4	4.9	2.9	3.8	10	12	62	27	2,230	19	165	11	5.1
5	6.2	2.7	3.6	12	227	557	21	1,960	19	69	9.5	5.2
6	6.4	2.6	3.4	16	344	751	18	1,700	196	40	8.1	5.2
7	6.6	2.7	3.4	15	254	680	16	e1,290	724	27	7.0	5.0
8	6.9	3.3	3.7	14	313	582	15	e772	647	19	6.4	4.9
9	20	3.1	4.0	13	185	559	14	e353	331	15	6.1	5.0
10	25	3.1	3.9	11	64	554	16	e15	291	13	6.3	4.8
11	18	3.8	4.3	10	30	469	21	e15	404	11	7.1	4.8
12	13	4.1	4.5	9.2	119	192	21	e15	268	10	7.4	5.1
13	11	4.2	5.0	8.6	182	71	20	e22	126	9.1	6.7	5.0
14	9.1	4.5	4.9	8.2	235	46	18	e15	82	8.1	6.0	4.9
15	7.7	5.0	5.1	7.8	275	50	16	e15	50	7.4	5.9	12
16	6.6	5.6	5.2	7.4	181	139	14	e15	38	7.0	6.1	12
17	5.7	6.4	5.1	7.9	110	252	13	e15	36	7.0	5.9	5.2
18	5.0	8.0	5.5	8.2	119	163	13	e15	31	6.7	5.8	5.1
19	4.3	7.4	13	7.7	150	73	12	e15	289	6.3	6.2	5.2
20	3.8	6.8	13	7.2	138	44	12	e15	211	6.0	7.7	5.1
21	3.4	6.5	11	7.4	97	34	12	e15	46	6.0	8.2	4.9
22	3.1	11	9.8	17	55	29	11	e15	33	5.8	8.1	5.0
23	3.0	17	9.7	17	36	48	10	e15	30	5.5	8.2	4.9
24	3.1	13	9.4	15	253	100	99	e15	33	5.5	8.0	4.5
25	3.2	10	9.2	14	456	55	e1,070	e15	23	5.4	9.3	4.5
26	3.1	8.3	9.2	13	604	33	e1,020	e15	17	5.0	9.5	4.5
27	3.0	7.1	9.0	13	619	26	e706	12	20	5.0	8.3	4.5
28	2.8	6.0	8.7	14	473	22	e500	21	85	5.3	7.3	4.5
29	2.5	5.2	8.7	18	244	21	e817	23	222	5.7	6.4	4.2
30	2.3	4.7	8.2	20	---	19	e993	26	352	6.3	5.8	4.0
31	2.4	---	10	16	---	83	---	27	---	6.9	5.3	---
TOTAL	208.9	173.6	206.7	368.6	5,813	5,971	5,773	13,116	4,690	1,807.0	225.3	160.3
MEAN	6.74	5.79	6.67	11.9	200	193	192	423	156	58.3	7.27	5.34
MAX	25	17	13	20	619	751	1,070	2,230	724	485	11	12
MIN	2.3	2.6	3.4	7.2	11	19	10	12	17	5.0	5.3	4.0
AC-FT	414	344	410	731	11,530	11,840	11,450	26,020	9,300	3,580	447	318

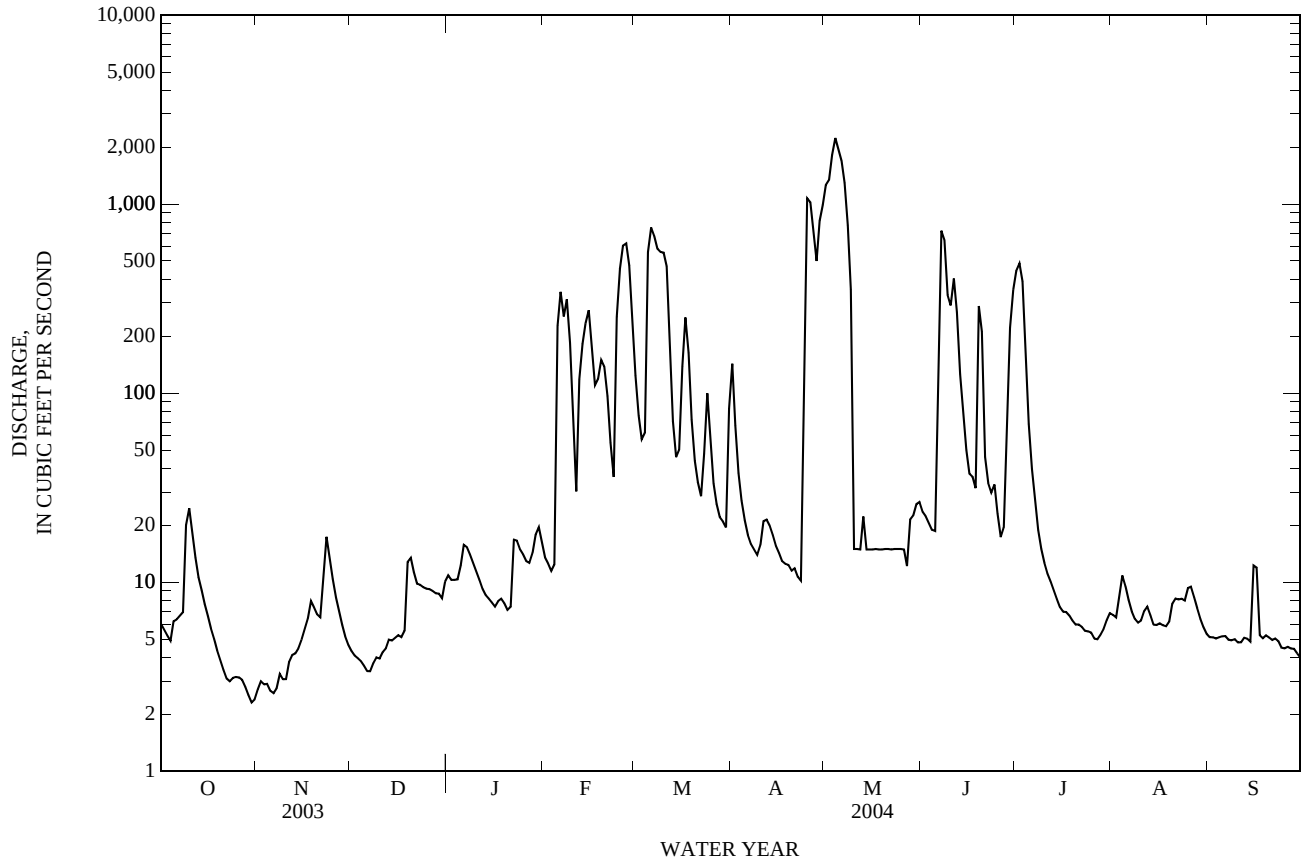
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2004z, BY WATER YEAR (WY)

MEAN	277	687	953	605	853	934	699	631	480	282	69.9	66.1
MAX	1,744	2,984	3,166	3,222	3,381	3,491	2,329	3,166	2,620	3,743	898	867
(WY)	(1982)	(1975)	(2002)	(1980)	(1997)	(1990)	(1973)	(1990)	(1981)	(1992)	(1992)	(1974)
MIN	0.00	0.34	3.22	2.27	5.90	12.2	29.0	7.35	0.83	0.39	0.00	0.00
(WY)	(1979)	(1976)	(1990)	(1976)	(1996)	(1996)	(1981)	(1988)	(1988)	(1978)	(1978)	(1978)

07343500 White Oak Creek near Talco, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1973 - 2004z	
ANNUAL TOTAL	54,064.1		38,513.4			
ANNUAL MEAN	148		105		543	
HIGHEST ANNUAL MEAN					1,160	1992
LOWEST ANNUAL MEAN					55.8	1996
HIGHEST DAILY MEAN	2,580	Feb 25	2,230	May 4	31,700	Jan 24, 1980
LOWEST DAILY MEAN	2.3	Oct 30	2.3	Oct 30	0.00	Aug 30, 1973
ANNUAL SEVEN-DAY MINIMUM	2.7	Oct 28	2.7	Oct 28	0.00	Jul 24, 1978
MAXIMUM PEAK FLOW			2,290	May 4	34,600	Jan 24, 1980
MAXIMUM PEAK STAGE			15.83	May 4	19.86	Jan 24, 1980
ANNUAL RUNOFF (AC-FT)	107,200		76,390		393,400	
10 PERCENT EXCEEDS	293		298		1,550	
50 PERCENT EXCEEDS	20		12		52	
90 PERCENT EXCEEDS	4.3		4.3		1.9	

z Period of regulated streamflow.
e Estimated



07344200 Wright Patman Lake near Texarkana, TX

LOCATION.--Lat 33°18'16", long 94°09'38", Bowie County, Hydrologic Unit 11140302, in intake structure of Wright Patman Dam on the Sulphur River, 0.5 mi upstream from U.S. Highway 59, 10.0 mi southwest of Texarkana, and 44.5 mi upstream from

DRAINAGE AREA.--3,443 mi^2.

PERIOD OF RECORD.--July 1953 to Sept. 2000 (U.S. Army Corps of Engineers furnished contents), Oct. 2000 to Sept. 2002 (contents), Oct. 2002 to current year. Published as Texarkana Reservoir prior to Oct. 1970 and as Lake Texarkana from Oct. 1970 to Sept. 1972. Water-quality Records: Chemical data: Mar. 1967 to Sept. 1984, Feb. 1992 to Sept. 1998.

REVISED RECORDS.--WSP 1561: 1957(M). WSP 1711: 1959(M).

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. July 19 to Dec. 31, 1953, nonrecording gage at site about 125 ft upstream at datum 200 ft higher. Satellite telemeter at station.

REMARKS.--Records good. 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 Dec. 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 mi^2 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 dam is owned by the U.S. Army Corps of Engineers. The lake was built for flood control and for conservation. An unknown amount of water is diverted for industrial and municipal uses. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	286.0
Crest of spillway	259.5
Top of conservation pool	220.6
Lowest gated outlet (invert)	200.0

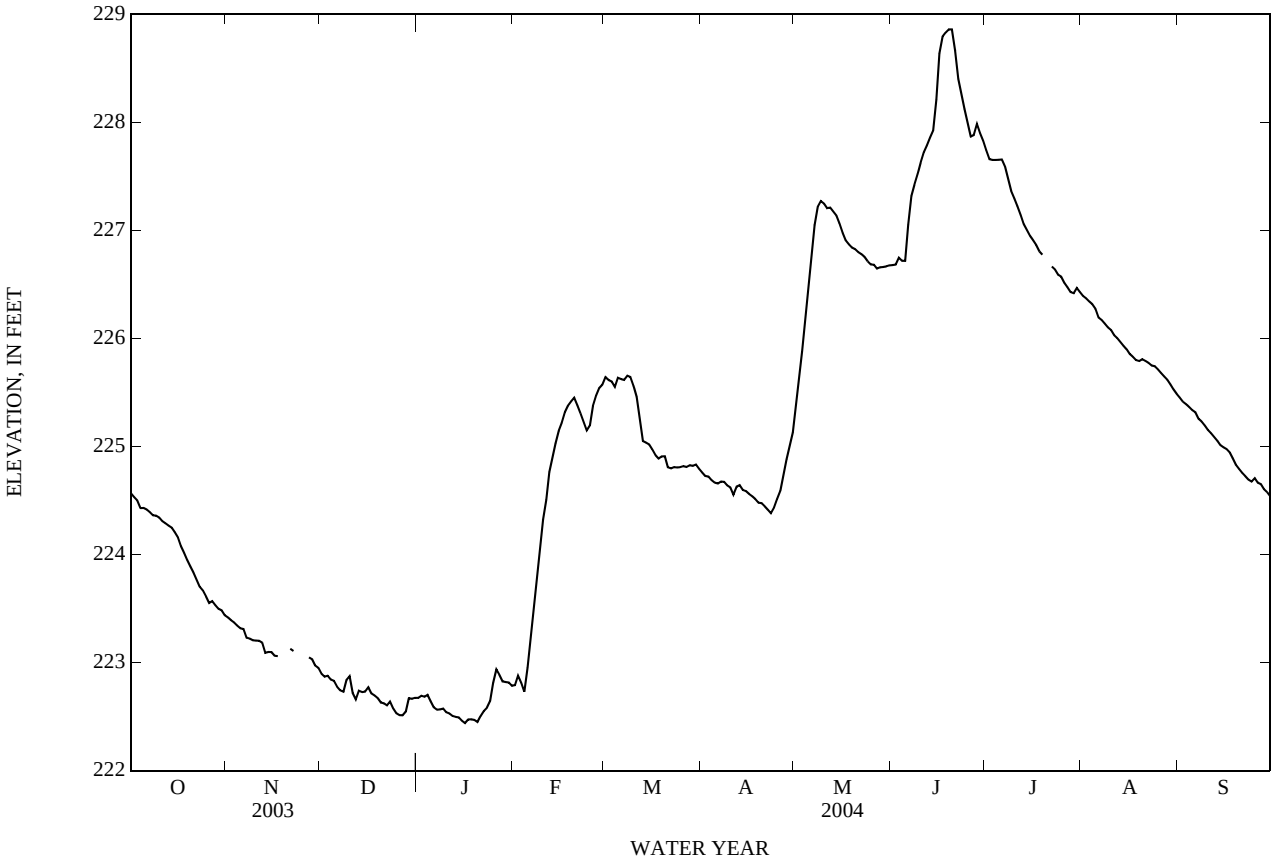
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,912,100 acre-ft, May 9, 1966, elevation, 252.64 ft; minimum since first appreciable storage and after deliberate impoundment began, 3,460 acre-ft, June 27,1956.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 228.97 ft, June 18; minimum elevation, 222.37 ft, Jan. 18.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	224.57	223.42	222.90	222.67	222.79	225.64	224.76	225.39	226.68	227.74	226.39	225.45
2	224.53	223.39	222.87	222.69	222.88	225.62	224.73	225.65	226.68	227.66	226.37	225.41
3	224.50	223.37	222.88	222.68	222.81	225.60	224.72	225.88	226.75	227.65	226.34	225.39
4	224.43	223.34	222.84	222.70	222.73	225.55	224.69	226.20	226.72	227.65	226.32	225.37
5	224.43	223.32	222.83	222.64	222.95	225.64	224.67	226.52	226.72	227.65	226.27	225.34
6	224.42	223.31	222.78	222.59	223.22	225.62	224.66	226.81	227.05	227.66	226.19	225.32
7	224.39	223.23	222.74	222.56	223.49	225.62	224.68	227.05	227.32	227.59	226.17	225.26
8	224.36	223.22	222.73	222.57	223.74	225.66	224.67	227.22	227.42	227.48	226.14	225.23
9	224.36	223.21	222.84	222.57	224.05	225.64	224.64	227.27	227.52	227.36	226.10	225.19
10	224.34	223.20	222.87	222.54	224.32	225.56	224.62	227.25	227.63	227.30	226.08	225.15
11	224.31	223.20	222.72	222.53	224.51	225.46	224.55	227.21	227.72	227.22	226.03	225.12
12	224.29	223.18	222.66	222.51	224.76	225.24	224.63	227.21	227.79	227.14	226.00	225.09
13	224.27	223.09	222.74	222.50	224.90	225.05	224.64	227.18	227.86	227.06	225.97	225.05
14	224.25	223.10	222.73	222.49	225.03	225.04	224.60	227.14	227.92	227.00	225.93	225.01
15	224.21	223.10	222.73	222.46	225.15	225.02	224.59	227.07	228.21	226.95	225.90	224.99
16	224.16	223.06	222.77	222.44	225.22	224.97	224.56	226.98	228.64	226.91	225.86	224.98
17	224.08	223.06	222.72	222.47	225.32	224.92	224.54	226.91	228.79	226.87	225.83	224.95
18	224.02	---	222.70	222.47	225.38	224.89	224.51	226.87	228.83	226.81	225.80	224.89
19	223.95	---	222.67	222.47	225.42	224.91	224.48	226.84	228.86	226.78	225.79	224.83
20	223.89	---	222.63	222.45	225.45	224.91	224.48	226.83	228.86	---	225.81	224.79
21	223.83	223.13	222.62	222.51	225.38	224.81	224.45	226.80	228.67	---	225.79	224.76
22	223.77	223.11	222.60	222.55	225.31	224.80	224.42	226.78	228.40	226.67	225.77	224.73
23	223.70	---	222.64	222.58	225.23	224.81	224.38	226.76	228.26	226.64	225.75	224.69
24	223.67	---	222.57	222.64	225.15	224.81	224.44	226.71	228.12	226.59	225.74	224.68
25	223.61	---	222.53	222.81	225.20	224.81	224.51	226.69	228.00	226.57	225.71	224.71
26	223.55	---	222.51	222.94	225.38	224.82	224.59	226.68	227.87	226.52	225.68	224.67
27	223.57	223.05	222.51	222.89	225.47	224.81	224.73	226.65	227.88	226.48	225.65	224.65
28	223.53	223.03	222.55	222.83	225.54	224.83	224.88	226.66	227.99	226.43	225.62	224.61
29	223.50	222.97	222.67	222.82	225.57	224.82	225.01	226.66	227.90	226.42	225.57	224.58
30	223.48	222.95	222.67	222.82	---	224.83	225.13	226.67	227.83	226.47	225.53	224.54
31	223.44	---	222.67	222.79	---	224.79	---	226.68	---	226.43	225.49	---
MEAN	224.05	---	222.71	222.62	224.56	225.15	224.63	226.75	227.83	---	225.92	224.98
MAX	224.57	---	222.90	222.94	225.57	225.66	225.13	227.27	228.86	---	226.39	225.45
MIN	223.44	---	222.51	222.44	222.73	224.79	224.38	225.39	226.68	---	225.49	224.54

07344200 Wright Patman Lake near Texarkana, TX—Continued



07344484 Lake Cypress Springs near Mount Vernon, TX

LOCATION.--Lat 33°03'22", long 95°08'21", Franklin County, Hydrologic Unit 11140305, in brick meter house located on upstream side and near center of dam on Big Cypress Creek, 1.5 mi upstream from Andy's Creek, 2.6 mi downstream from Panther Creek, and 10.3 mi southeast of Mount Vernon.

DRAINAGE AREA.--75.0 mi^2.

PERIOD OF RECORD.--Feb. 1974 to Sept. 1991, June 1998 to Sept. 2002 (contents), Oct. 2002 to current year. Water-quality records: Chemical data: Oct. 1974 to Sept. 1984.

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

REMARKS.--Records good except those for June 8 to Sept. 30, which are fair. The lake is formed by a rolled earthfill dam 5,230 ft long. The dam is owned by the Franklin County Water District and the Texas Water Development Board. Deliberate impoundment began July 7, 1970, and the dam was completed Feb. 15, 1971. The spillway is an excavated channel through natural ground 1,000 ft wide located to the left of left end of dam. The service spillway is a rectangular 23x23 ft drop inlet located near the right end of dam. The low-flow outlet works consist of an 18 in diameter concrete pipe that has duplicate valve controls and discharges into the service spillway conduit. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	397.0
Crest of spillway	385.0
Lowest gated outlet (invert)	317.75

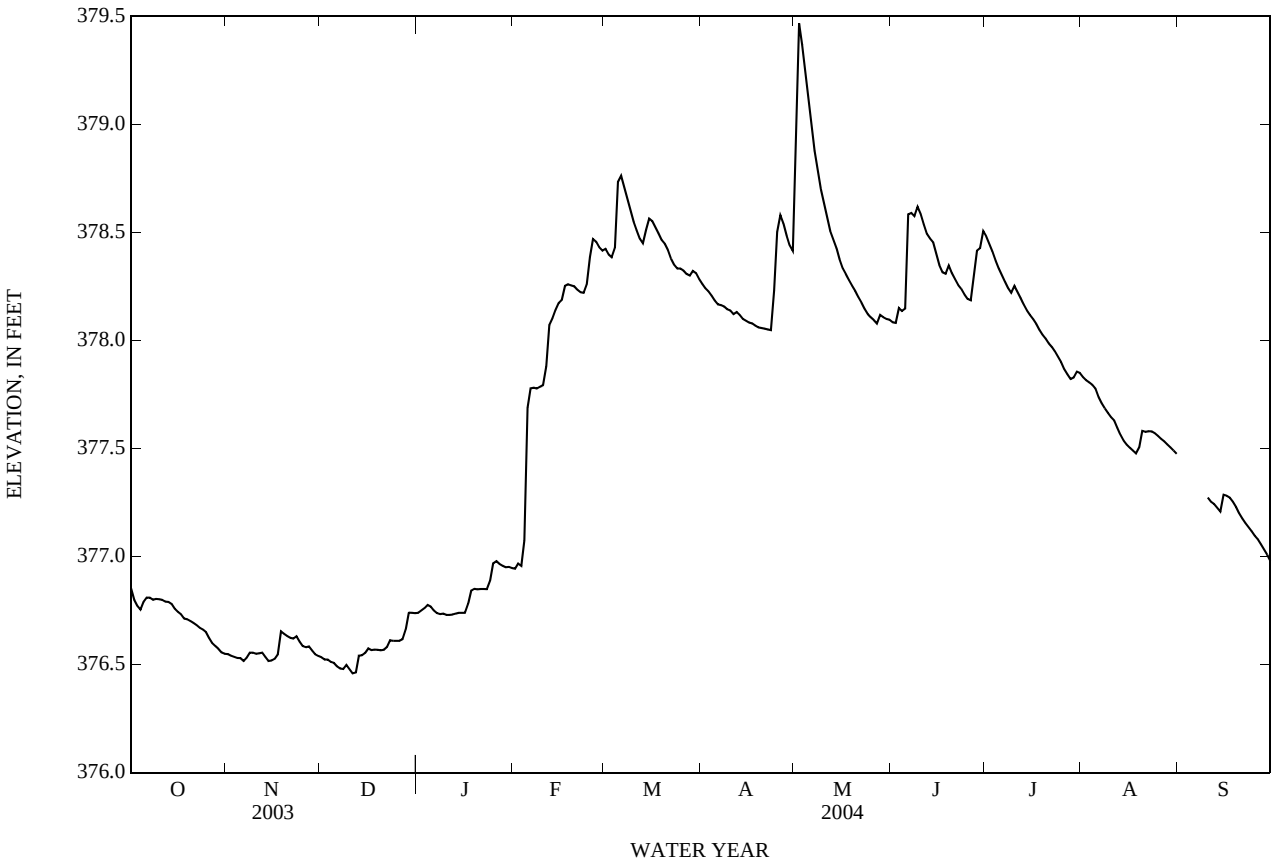
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 85,050 acre-ft, Dec. 26, 1988, elevation, 381.33 ft; minimum contents, 59,440 acre-ft, Nov. 12-14, 1978, elevation, 373.79 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 379.49 ft, May 2; minimum elevation, 376.43 ft, Dec. 12.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	376.85	376.55	376.53	376.74	376.94	378.42	378.26	379.01	378.08	378.48	377.83	---
2	376.80	376.54	376.52	376.75	376.97	378.40	378.24	379.47	378.08	378.45	377.82	---
3	376.77	376.54	376.52	376.76	376.96	378.38	378.23	379.37	378.15	378.41	377.81	---
4	376.75	376.53	376.51	376.78	377.07	378.43	378.21	379.22	378.14	378.37	377.79	---
5	376.79	376.53	376.51	376.77	377.69	378.73	378.18	379.10	378.15	378.33	377.78	---
6	376.81	376.52	376.49	376.75	377.78	378.76	378.17	378.98	378.58	378.30	377.74	---
7	376.81	376.53	376.48	376.74	377.78	378.71	378.16	378.88	378.59	378.27	377.71	---
8	376.80	376.56	376.48	376.73	377.78	378.66	378.16	378.78	378.58	378.24	377.69	---
9	376.80	376.56	376.50	376.74	377.79	378.60	378.14	378.70	378.62	378.22	377.66	---
10	376.80	376.55	376.48	376.73	377.79	378.55	378.14	378.63	378.59	378.25	377.65	377.27
11	376.80	376.55	376.46	376.73	377.88	378.51	378.12	378.57	378.54	378.22	377.63	377.25
12	376.79	376.56	376.46	376.73	378.07	378.47	378.13	378.51	378.49	378.20	377.60	377.24
13	376.79	376.54	376.54	376.74	378.10	378.45	378.12	378.47	378.47	378.17	377.56	377.23
14	376.78	376.52	376.54	376.74	378.14	378.51	378.10	378.43	378.45	378.14	377.54	377.21
15	376.76	376.52	376.55	376.74	378.17	378.56	378.09	378.38	378.40	378.12	377.52	377.29
16	376.74	376.53	376.57	376.74	378.19	378.55	378.08	378.33	378.35	378.10	377.50	377.28
17	376.73	376.55	376.57	376.78	378.25	378.52	378.08	378.31	378.32	378.08	377.49	377.27
18	376.71	376.65	376.57	376.84	378.26	378.50	378.07	378.28	378.31	378.05	377.48	377.25
19	376.71	376.64	376.57	376.85	378.25	378.47	378.06	378.25	378.35	378.03	377.51	377.23
20	376.70	376.63	376.57	376.85	378.25	378.45	378.06	378.23	378.31	378.01	377.58	377.20
21	376.69	376.62	376.57	376.85	378.23	378.42	378.05	378.20	378.28	377.99	377.58	377.18
22	376.68	376.62	376.58	376.85	378.22	378.38	378.05	378.18	378.26	377.97	377.58	377.16
23	376.67	376.63	376.61	376.85	378.22	378.35	378.05	378.15	378.24	377.95	377.58	377.14
24	376.66	376.61	376.61	376.89	378.26	378.33	378.23	378.12	378.21	377.92	377.57	377.12
25	376.65	376.59	376.61	376.97	378.39	378.33	378.50	378.11	378.19	377.90	377.56	377.10
26	376.62	376.58	376.61	376.98	378.47	378.32	378.58	378.09	378.19	377.87	377.55	377.08
27	376.60	376.58	376.62	376.97	378.46	378.31	378.54	378.08	378.29	377.84	377.53	377.06
28	376.59	376.56	376.66	376.96	378.43	378.30	378.49	378.12	378.42	377.82	377.52	377.03
29	376.57	376.55	376.74	376.95	378.42	378.32	378.44	378.11	378.43	377.83	377.51	377.01
30	376.56	376.54	376.74	376.95	---	378.31	378.41	378.10	378.51	377.86	377.49	376.98
31	376.55	---	376.74	376.95	---	378.29	---	378.10	---	377.85	377.48	---
MEAN	376.72	376.57	376.56	376.82	377.97	378.46	378.20	378.49	378.35	378.10	377.61	---
MAX	376.85	376.65	376.74	376.98	378.47	378.76	378.58	379.47	378.62	378.48	377.83	---
MIN	376.55	376.52	376.46	376.73	376.94	378.29	378.05	378.08	378.08	377.82	377.48	---

07344484 Lake Cypress Springs near Mount Vernon, TX—Continued



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.--Dec. 1977 to Sept. 2004 (discontinued).

REVISED RECORDS.--WDR TX-89-1: 1983-88 (M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 343.90 ft above NGVD of 1929. Satellite telemeter at station.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

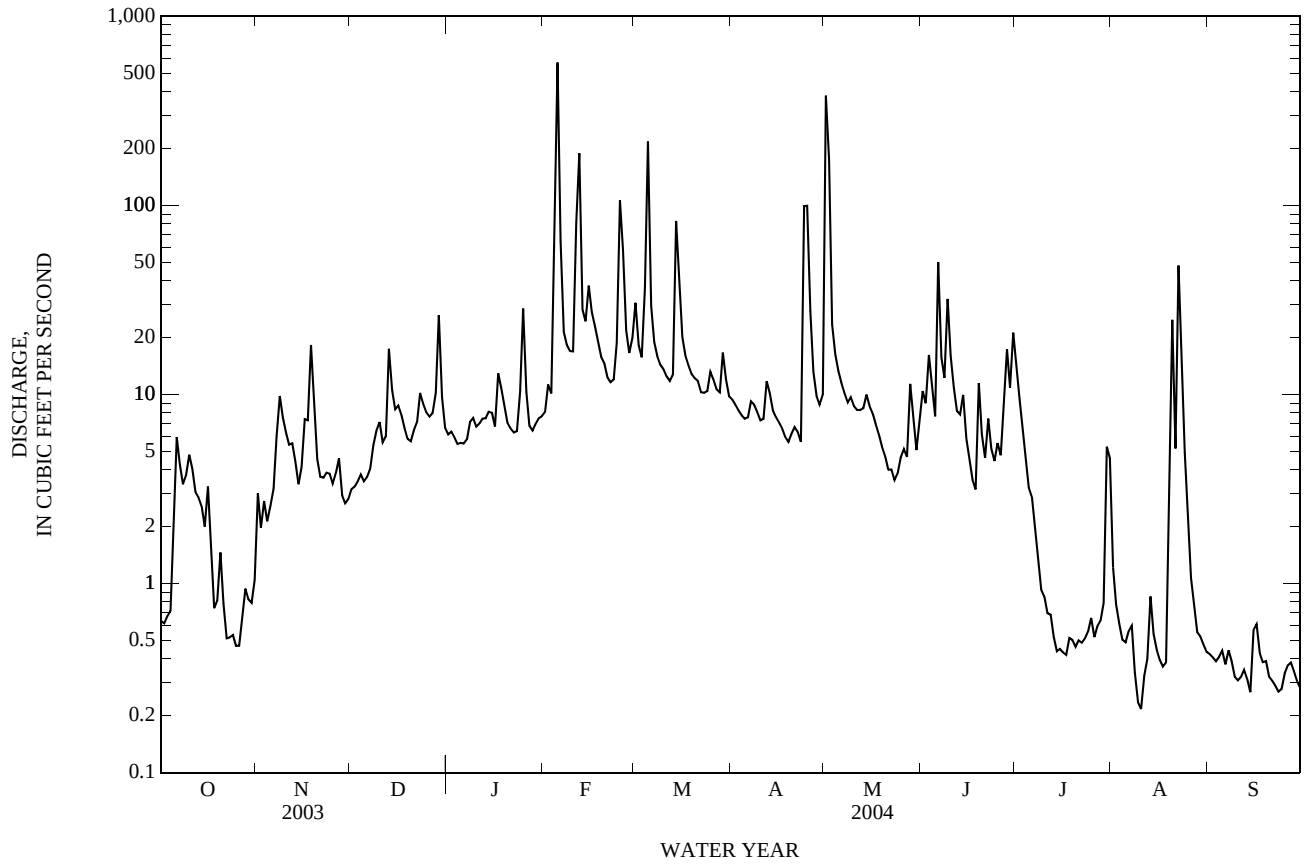
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.63	3.0	3.2	6.1	8.1	31	9.4	381	10	15	1.2	0.42
2	0.62	2.0	3.3	6.4	11	18	8.8	174	9.0	9.6	0.77	0.41
3	0.67	2.7	3.5	5.9	10	16	8.2	23	16	7.0	0.61	0.39
4	0.72	2.1	3.8	5.5	86	37	7.8	16	11	4.8	0.50	0.41
5	2.4	2.6	3.5	5.5	570	218	7.4	13	7.7	3.2	0.49	0.44
6	6.0	3.2	3.7	5.5	64	30	7.6	11	50	2.9	0.56	0.37
7	4.3	6.0	4.0	5.8	21	19	9.2	10	16	1.9	0.60	0.44
8	3.3	9.8	5.4	7.2	18	16	8.8	9.1	12	1.3	0.34	0.39
9	3.7	7.6	6.4	7.5	17	14	8.1	9.7	32	0.93	0.24	0.32
10	4.8	6.3	7.1	6.8	17	14	7.3	8.7	16	0.85	0.22	0.31
11	4.1	5.4	5.6	7.0	81	12	7.4	8.3	11	0.70	0.33	0.32
12	3.0	5.5	6.0	7.5	189	12	12	8.3	8.2	0.68	0.40	0.35
13	2.9	4.4	17	7.5	28	13	10	8.5	7.9	0.52	0.86	0.31
14	2.6	3.3	11	8.1	24	83	8.2	10	9.9	0.44	0.54	0.27
15	2.0	4.1	8.3	8.0	38	38	7.6	8.7	5.8	0.45	0.45	0.57
16	3.3	7.4	8.7	6.8	27	20	7.1	7.9	4.6	0.43	0.39	0.61
17	1.6	7.3	7.8	13	23	16	6.6	6.9	3.5	0.42	0.36	0.43
18	0.74	18	6.6	11	19	14	6.0	6.1	3.1	0.52	0.38	0.38
19	0.81	8.7	5.8	8.7	16	13	5.6	5.3	12	0.50	1.9	0.39
20	1.5	4.6	5.7	7.1	15	12	6.2	4.7	6.1	0.46	25	0.32
21	0.78	3.7	6.5	6.6	12	12	6.7	4.0	4.6	0.50	5.2	0.31
22	0.51	3.6	7.2	6.3	12	10	6.3	4.0	7.5	0.49	48	0.29
23	0.52	3.9	10	6.4	12	10	5.6	3.5	5.2	0.51	16	0.27
24	0.53	3.8	8.9	10	19	10	99	3.8	4.5	0.56	5.0	0.28
25	0.47	3.4	8.0	28	106	13	99	4.6	5.5	0.66	2.3	0.34
26	0.47	3.9	7.6	10	58	12	28	5.2	4.8	0.52	1.1	0.37
27	0.65	4.6	8.0	6.8	22	11	13	4.7	8.6	0.60	0.75	0.38
28	0.94	2.9	10	6.5	17	10	9.8	11	17	0.64	0.55	0.34
29	0.83	2.7	26	7.0	20	17	8.8	7.9	11	0.79	0.53	0.30
30	0.79	2.8	9.7	7.5	---	12	10	5.1	21	5.3	0.48	0.28
31	1.0	---	6.7	7.7	---	9.8	---	7.1	---	4.6	0.44	---
TOTAL	57.18	149.3	235.0	249.7	1,560.1	772.8	445.5	791.1	341.5	67.77	116.49	11.01
MEAN	1.84	4.98	7.58	8.05	53.8	24.9	14.8	25.5	11.4	2.19	3.76	0.37
MAX	6.0	18	26	28	570	218	99	381	50	15	48	0.61
MIN	0.47	2.0	3.2	5.5	8.1	9.8	5.6	3.5	3.1	0.42	0.22	0.27
AC-FT	113	296	466	495	3,090	1,530	884	1,570	677	134	231	22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2004, BY WATER YEAR (WY)

MEAN	15.0	21.1	32.3	22.3	31.4	30.8	20.6	24.4	16.5	8.91	3.48	4.96
MAX	80.5	143	103	62.7	103	97.5	54.9	68.2	70.6	32.2	24.4	41.7
(WY)	(1992)	(1995)	(1983)	(1993)	(2001)	(2001)	(1990)	(1991)	(2000)	(1981)	(1997)	(1979)
MIN	0.68	2.51	2.99	2.96	5.31	8.15	3.64	1.64	0.27	0.01	0.00	0.14
(WY)	(1979)	(1990)	(1979)	(2000)	(1996)	(1986)	(1978)	(1988)	(1984)	(1978)	(1985)	(1984)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1978 - 2004	
ANNUAL TOTAL	4,131.17		4,797.45			
ANNUAL MEAN	11.3		13.1		19.6	
HIGHEST ANNUAL MEAN					36.1	2001
LOWEST ANNUAL MEAN					5.21	1996
HIGHEST DAILY MEAN	217	Feb 22	570	Feb 5	2,800	Nov 5, 1994
LOWEST DAILY MEAN	0.08	Jun 1	0.22	Aug 10	0.00	Jun 28, 1978
ANNUAL SEVEN-DAY MINIMUM	0.10	May 30	0.31	Sep 20	0.00	Jun 28, 1978
MAXIMUM PEAK FLOW			1,170	Feb 5	7,520	Dec 2, 1982
MAXIMUM PEAK STAGE			13.02	Feb 5	14.39	Dec 2, 1982
ANNUAL RUNOFF (AC-FT)	8,190		9,520		14,210	
10 PERCENT EXCEEDS	18		19		32	
50 PERCENT EXCEEDS	5.8		6.2		7.7	
90 PERCENT EXCEEDS	0.57		0.44		0.54	

07344486 Brushy Creek at Scroggins, TX—Continued



07344488 Monticello Reservoir near Mount Pleasant, TX

LOCATION.--Lat 33°04'48", long 95°02'36", Titus County, Hydrologic Unit 11140305, on old intake structure 0.25 mi upstream from Monticello Dam on Blundell Creek, approximately 11.0 mi southwest of Mount Pleasant, and approximately 16.0 mi southeast of Mount Vernon.

DRAINAGE AREA.--36.0 mi^2.

PERIOD OF RECORD.--July 1998 to Sept. 2002 (contents), Oct. 2002 to current year.

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

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 3,200 ft long, including spillways. Construction began in 1971, and deliberate impoundment began in 1973, with lake at normal pool level in 1974. The spillway is an excavated channel cut through natural ground. The spillway is 1,000 ft wide, and located to the left of the left end of the dam. The service spillway is 204.0 ft wide with flow controlled by four 40.0 by 14.0 ft tainter gates. The dam, owned and operated by Texas Utilities Services, Inc., provides cooling water for electrical generation at the Moticello Steam Electric Station. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	352.0
Crest of uncontrolled spillway	343.5
Crest of gated spillway	340.0
Lowest gated outlet (invert)	328.0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 37,980 acre-ft, Feb. 16, 2001, elevation, 341.58 ft; minimum contents, 31,910 acre-ft, Jan. 5, 2000, and Jan. 22, 2002, elevation, 338.57 ft; maximum elevation, 341.79 ft, June 6, 2004, minimum elevation, 338.55 ft, Nov. 27, 2002.

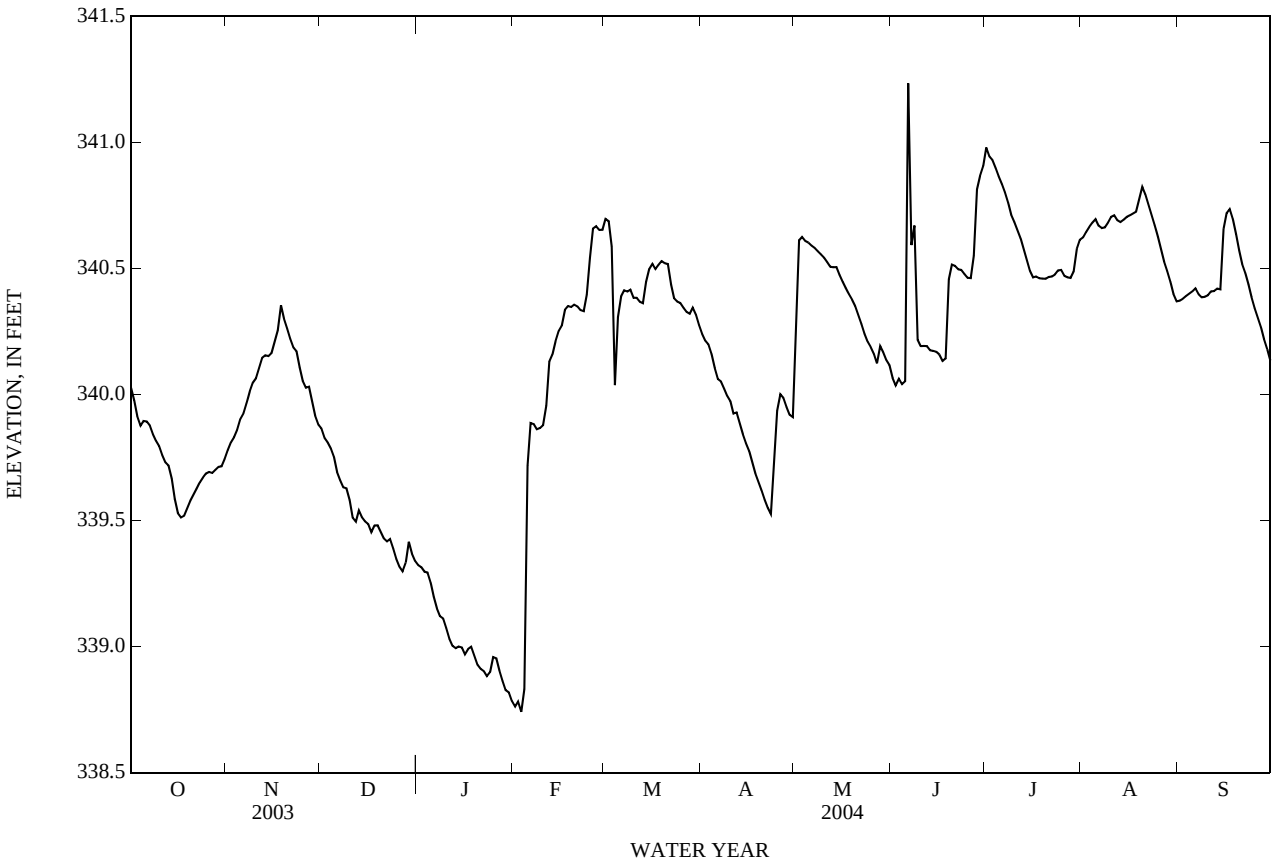
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 341.79 ft, June 6; minimum elevation, 338.68 ft, Feb. 4.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340.03	339.78	339.87	339.32	338.76	340.70	340.24	340.33	340.07	340.98	340.62	340.37
2	339.98	339.81	339.83	339.31	338.78	340.69	340.21	340.61	340.04	340.94	340.64	340.38
3	339.91	339.83	339.81	339.30	338.74	340.59	340.20	340.62	340.06	340.93	340.66	340.39
4	339.88	339.86	339.79	339.29	338.83	340.04	340.16	340.61	340.04	340.90	340.68	340.40
5	339.89	339.90	339.75	339.25	339.72	340.31	340.11	340.60	340.05	340.87	340.70	340.41
6	339.89	339.93	339.69	339.20	339.89	340.39	340.06	340.59	341.23	340.83	340.67	340.42
7	339.88	339.97	339.66	339.15	339.88	340.41	340.05	340.58	340.59	340.80	340.66	340.40
8	339.84	340.01	339.63	339.12	339.86	340.41	340.02	340.57	340.67	340.76	340.66	340.39
9	339.82	340.05	339.63	339.11	339.87	340.42	339.99	340.56	340.22	340.71	340.68	340.39
10	339.79	340.06	339.58	339.07	339.88	340.38	339.97	340.54	340.19	340.68	340.70	340.39
11	339.76	340.10	339.51	339.03	339.96	340.38	339.92	340.53	340.19	340.65	340.71	340.41
12	339.73	340.15	339.50	339.00	340.13	340.37	339.93	340.51	340.19	340.62	340.69	340.41
13	339.72	340.15	339.54	338.99	340.16	340.36	339.89	340.50	340.18	340.58	340.68	340.42
14	339.67	340.15	339.51	339.00	340.21	340.45	339.84	340.51	340.17	340.53	340.69	340.42
15	339.59	340.17	339.50	339.00	340.25	340.50	339.81	340.47	340.17	340.49	340.70	340.66
16	339.53	340.21	339.49	338.97	340.27	340.52	339.78	340.45	340.16	340.46	340.71	340.72
17	339.51	340.25	339.45	338.99	340.34	340.50	339.73	340.42	340.13	340.47	340.72	340.74
18	339.52	340.35	339.48	339.00	340.35	340.51	339.69	340.40	340.14	340.46	340.72	340.70
19	339.55	340.30	339.48	338.96	340.35	340.53	339.65	340.38	340.46	340.46	340.78	340.64
20	339.58	340.26	339.45	338.93	340.36	340.52	339.62	340.35	340.52	340.46	340.82	340.57
21	339.60	340.22	339.43	338.91	340.35	340.52	339.58	340.32	340.51	340.47	340.79	340.52
22	339.63	340.19	339.42	338.90	340.33	340.44	339.55	340.28	340.50	340.47	340.75	340.48
23	339.65	340.17	339.43	338.88	340.33	340.38	339.53	340.24	340.49	340.48	340.71	340.44
24	339.67	340.11	339.39	338.90	340.39	340.37	339.73	340.21	340.48	340.49	340.67	340.39
25	339.69	340.05	339.35	338.96	340.54	340.36	339.94	340.19	340.46	340.49	340.63	340.34
26	339.69	340.03	339.32	338.95	340.66	340.34	340.00	340.16	340.46	340.47	340.58	340.31
27	339.69	340.03	339.30	338.91	340.67	340.33	339.99	340.12	340.55	340.47	340.53	340.27
28	339.70	339.97	339.33	338.86	340.65	340.32	339.95	340.19	340.81	340.46	340.49	340.22
29	339.71	339.92	339.42	338.83	340.65	340.34	339.92	340.17	340.87	340.49	340.45	340.18
30	339.72	339.88	339.37	338.82	---	340.32	339.91	340.14	340.91	340.58	340.40	340.14
31	339.74	---	339.34	338.78	---	340.28	---	340.12	---	340.61	340.37	---
MEAN	339.73	340.06	339.52	339.02	340.04	340.42	339.90	340.40	340.38	340.61	340.65	340.43
MAX	340.03	340.35	339.87	339.32	340.67	340.70	340.24	340.62	341.23	340.98	340.82	340.74
MIN	339.51	339.78	339.30	338.78	338.74	340.04	339.53	340.12	340.04	340.46	340.37	340.14

CAL YR 2003 MEAN 339.81 MAX 340.75 MIN 338.90
WTR YR 2004 MEAN 340.10 MAX 341.23 MIN 338.74

07344488 Monticello Reservoir near Mount Pleasant, TX—Continued



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 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Apr. 12, 1978, a nonrecording gage was located at same site and datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily contents, which are fair. The lake is formed by a rolled earthfill dam 10,800 ft long, including spillways. Deliberate impoundment began Aug. 8, 1977, and dam was completed by Apr. 1978. The spillway is an excavated channel cut through natural ground. The spillway is 4,500 ft wide, located to 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 mi^2 above this station is controlled by Lake Cypress Springs on Big Cypress Creek and 36.0 mi^2 is controlled by Monticello Reservoir on Blundell Creek, a tributary to Big Cypress Creek. Conservation pool storage is 192,350 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	349.0
Crest of uncontrolled spillway	341.3
Crest of gated spillway	316.5
Lowest gated outlet (invert)	294.5

COOPERATION.--Capacity Table 1-C was provided by URS/Forest and Cotton, Inc., Consulting Engineers. Capacity Table 2-C, provided by the U.S. Army Corps of Engineers, was put into effect Oct. 1, 1996. Capacity Table 3-C, provided by the Texas Water Development Board, was put into effect Oct. 1, 2000.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 224,400 acre-ft, Nov. 5, 1994, elevation, 338.65 ft; minimum contents after initial filling, 133,100 acre-ft, Nov. 25, 1982, elevation, 327.92 ft, using Table 1-C.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 210,900 acre-ft, June 6, elevation, 338.18 ft; minimum contents, 178,100 acre-ft, Dec. 12, elevation, 334.46 ft.

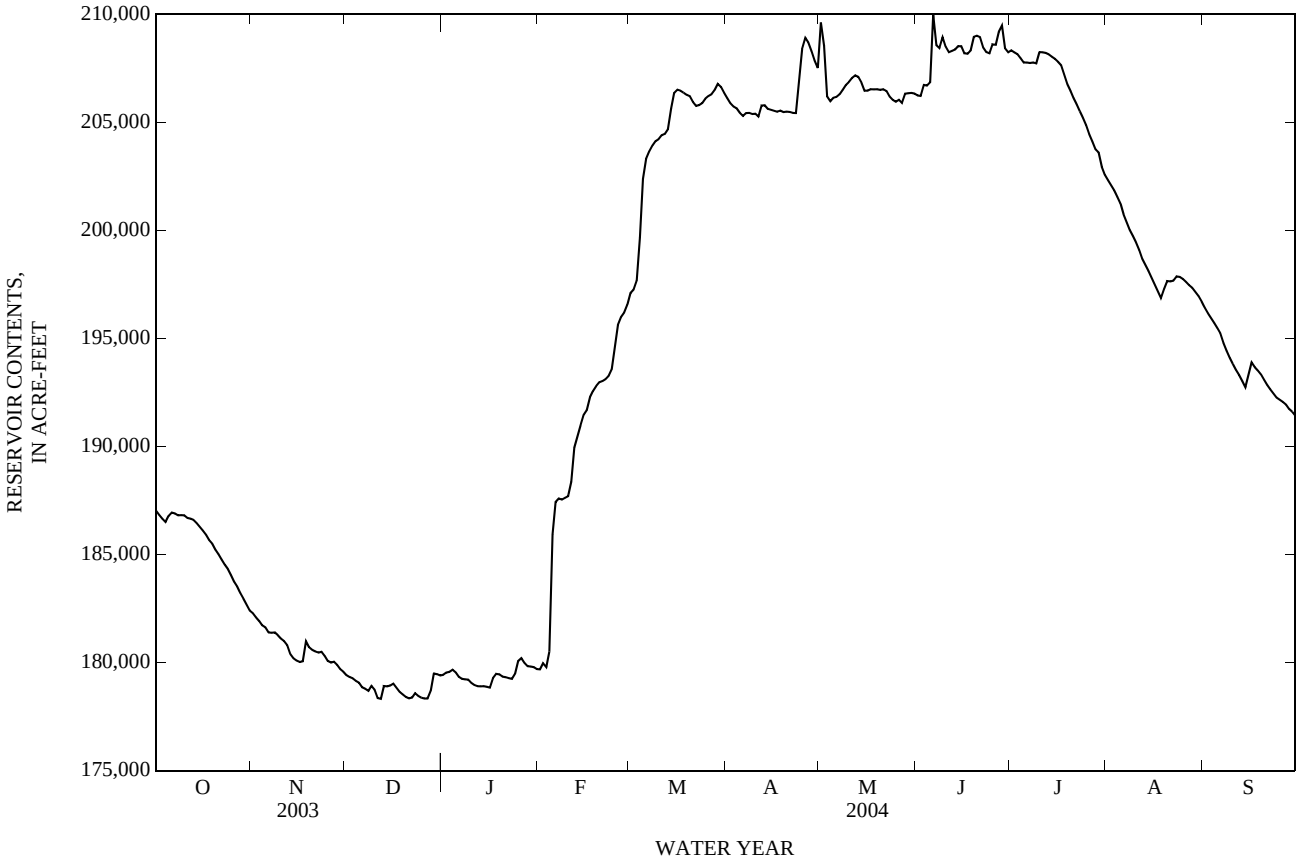
RESERVOIR STORAGE, ACRE FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	187,000	182,300	179,400	179,400	179,700	197,100	206,100	209,600	206,200	208,300	202,300	196,400
2	186,800	182,100	179,300	179,500	180,000	197,300	205,900	208,500	206,200	208,200	202,100	196,200
3	186,700	181,900	179,300	179,600	179,800	197,700	205,700	206,200	206,700	208,200	201,800	196,000
4	186,500	181,700	179,200	179,700	180,500	199,700	205,700	206,000	206,700	208,000	201,600	195,700
5	186,800	181,600	179,100	179,500	185,900	202,400	205,400	206,100	206,900	207,800	201,200	195,500
6	186,900	181,400	178,900	179,300	187,400	203,300	205,300	206,200	210,000	207,800	200,700	195,200
7	186,900	181,400	178,800	179,200	187,600	203,700	205,400	206,300	208,600	207,700	200,400	194,800
8	186,800	181,400	178,700	179,200	187,500	203,900	205,400	206,500	208,400	207,800	200,000	194,400
9	186,800	181,300	178,900	179,200	187,600	204,100	205,400	206,700	208,900	207,700	199,700	194,100
10	186,800	181,100	178,700	179,100	187,700	204,200	205,400	206,900	208,500	208,300	199,500	193,800
11	186,700	181,000	178,400	179,000	188,400	204,400	205,300	207,100	208,200	208,200	199,100	193,500
12	186,700	180,800	178,300	178,900	190,000	204,500	205,800	207,200	208,300	208,200	198,700	193,300
13	186,600	180,400	178,900	178,900	190,500	204,700	205,800	207,100	208,400	208,100	198,400	193,000
14	186,500	180,200	178,900	178,900	191,000	205,600	205,600	206,800	208,500	208,000	198,100	192,800
15	186,300	180,100	178,900	178,900	191,500	206,400	205,600	206,500	208,500	207,900	197,800	e193,400
16	186,100	180,000	179,000	178,800	191,700	206,500	205,500	206,500	208,200	207,800	197,500	193,900
17	185,900	180,100	178,800	179,300	192,300	206,500	205,500	206,500	208,200	207,600	197,200	193,700
18	185,700	181,000	178,700	179,500	192,600	206,400	205,500	206,500	208,300	207,200	196,900	193,500
19	185,500	180,700	178,500	179,500	192,800	206,300	205,500	206,500	209,000	206,800	e197,300	193,300
20	185,200	180,600	178,400	179,400	193,000	206,200	205,500	206,500	209,000	206,500	197,700	193,100
21	185,000	180,500	178,300	179,300	193,000	205,900	205,500	206,500	208,900	206,100	197,600	192,800
22	184,800	180,500	178,400	179,300	193,100	205,800	205,400	206,500	208,500	205,800	197,700	192,600
23	184,500	180,500	178,600	179,300	193,300	205,800	205,400	206,200	208,300	205,500	197,900	e192,400
24	184,300	180,300	178,500	179,500	193,600	205,900	206,900	206,000	208,200	205,200	197,900	192,300
25	184,100	180,100	178,400	180,100	194,600	206,100	208,400	206,000	208,600	204,900	197,800	192,200
26	183,700	180,000	178,300	180,200	195,600	206,200	208,900	206,000	208,600	204,400	197,600	192,100
27	183,500	180,000	178,300	180,000	196,000	206,300	208,700	205,900	209,200	204,100	197,500	191,900
28	183,200	179,900	178,700	179,800	196,200	206,500	208,300	206,300	209,500	203,800	197,300	191,700
29	183,000	179,700	179,500	179,800	196,600	206,800	207,900	206,300	208,400	203,600	197,200	191,600
30	182,700	179,600	179,500	179,800	---	206,600	207,500	206,400	208,200	202,900	197,000	191,400
31	182,400	---	179,400	179,700	---	206,400	---	206,300	---	202,600	196,700	---
MEAN	185,500	180,700	178,800	179,400	190,000	204,500	206,100	206,600	208,300	206,600	198,700	193,600
MAX	187,000	182,300	179,500	180,200	196,600	206,800	208,900	209,600	210,000	208,300	202,300	196,400
MIN	182,400	179,600	178,300	178,800	179,700	197,100	205,300	205,900	206,200	202,600	196,700	191,400

CAL YR 2003 MEAN 196,300 MAX 207,900 MIN 178,300
WTR YR 2004 MEAN 194,900 MAX 210,000 MIN 178,300

e Estimated

07344489 Lake Bob Sandlin near Mount Pleasant, TX—Continued



07344493 Big Cypress Creek at U.S. Highway 271 near Pittsburg, TX

LOCATION.--Lat 33°04'22.55", long 94°57'54.82", Camp County, Hydrologic Unit 11140305, located on upstream side of bridge on State Highway 271, .25 mi downstream of Lake Bob Sandlin.

DRAINAGE AREA.--278 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Aug. 2004.

REMARKS.--Miscellaneous sample.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
AUG													
25...	1440	774	6.4	82	7.1	1,740	28.4	2.8	2.9	.05	51.6	51.7d	.076

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Orthophosphate, water, fltrd, mg/L (00660)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)
AUG							
25...	2.8	2.9	18.0	5.87d	6.38doc	6.00doc	55

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
o -- Result determined by alternate method

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07344500 Big Cypress Creek near Pittsburg, TX

LOCATION.--Lat 33°01'15", long 94°52'55", Titus County, 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.--370 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Apr. 1943 to Dec. 1962, published as "Cypress Creek near Pittsburg", Oct. 1967 to Sept. 1989 (daily mean discharge), Oct. 1989 to current year, (peak discharges greater than base discharge). Gage-height records collected at this site from Sept. 1963 to Dec. 1967, are published in reports by the U.S. Army Corps of Engineers.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 247.49 ft above NGVD of 1929. Prior to Nov. 12, 1954, water-stage recorder at site 1,900 ft downstream at present datum. Satellite telemeter at station.

REMARKS.--Records fair. Since July 1970, at least 10% of contributing drainage area has been regulated. Wastewater effluent was returned to a tributary above this station by the city of Mount Pleasant, and wastewater effluent was returned to a tributary below this station by the city of Pittsburg. No known diversions.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--22 years (water years 1944-1962, 1968-1970), prior to regulation by Lake Cypress Springs, 349 ft^3/s, 253,000 acre-ft/ yr.

AVERAGE DISCHARGE FOR REGULATED PERIOD.--19 years (water years 1971-1989) regulated, 237 ft^3/s (171,900 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Jan. 1938 reached a stage of about 25 ft from information by local resident. Maximum stage since at least 1895, that of Mar. 30, 1945.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1944-1962, 1968-1970: Maximum discharge, 58,500 ft^3/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 ft^3/s; no flow Aug. 20 to Oct. 3, 1954, July 19 to Nov. 4, 1956.

EXTREMES FOR REGULATED PERIOD.--Maximum discharge, 50,400 ft^3/s, Mar. 17, 1987, gage height, 23.65 ft; no flow at times.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 3	0300	3,990	14.32	Jun 7	0800	*7,600	*16.31

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07344500 Big Cypress Creek near Pittsburg, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Mar. 1965 to Aug. 1989, Oct. 1998 to current year.
BIOCHEMICAL DATA: Jan. 1983 to Sept. 1985, Oct. 1998 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct. 1968 to Sept. 1989.
WATER TEMPERATURE: Oct. 1968 to Sept. 1989.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 989 microsiemens/cm, Aug. 29, 1987; minimum daily, 48 microsiemens/cm, Nov. 27, 1988.
WATER TEMPERATURE: Maximum daily, 32.0°C, Aug. 20, 1969; minimum daily, 0.0°C on several days during winter months of 1982-84.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
FEB													
23...	1427	27	19	763	9.4	88	7.1	440	12.5	61	110	29.6	7.89
APR													
21...	1028	11	28	764	7.3	79	7.3	659	19.5	64	140	41.9	7.97
JUL													
20...	1130	7.9	6.0	772	5.3	65	7.2	971	25.4	150	210	68.8	10.3
AUG													
25...	1333	15	11	774	5.9	74	7.2	700	27.2	97	150	51.7	5.60

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)
FEB													
23...	9.43	2	37.8	41	46	E56	<1	41.5	<.2	11.8	76.4	261	276
APR													
21...	14.9	3	67.4	48	74	90	<1	65.4	.2	9.49	98.7	391	419
JUL													
20...	25.4	3	97.5	46	64	78	<1	88.6	.2	8.2	154	604	--
AUG													
25...	19.8	2	65.0	44	55	67	<1	57.4	<.2	9.58	102	429	450

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L (00660)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)
FEB													
23...	12	--	--	<.04	3.65	3.67	.020	2.80	.912d	1.01oc	--	--	10.0
APR													
21...	24	--	--	<.20d	--	7.79d	E.035nd	5.51	1.80	1.88oc	--	--	9.9
JUL													
20...	<10	--	--	E.02n	22.8	22.9d	.026	10.4	3.39doc	3.50doc	--	--	8.5
AUG													
25...	<10	.99	1.2	<.04	17.2	17.2d	.056	9.36	3.05d	3.11doc	3.16doc	18	10.5

07344500 Big Cypress Creek near Pittsburg, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)
FEB													
23...	<2.0	9	<.20	E1n	55	<.06	E.02n	<.8	.667	2.2	72	E.08n	91.9
APR													
21...	<2.0	2	E.17n	Mn	52	<.06	<.04	<.8	1.55	2.4	14	E.06n	196
JUL													
20...	E2.1e	12	.24	E2n	77	<.06	.04	<.8	.945	5.0	--	E.05n	55.9
AUG													
25...	<2.0	E1n	.24	<2	43	<.06	.05	<.8	.655	3.2	7	<.08	23.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Mercury water, fltrd, ug/L (71890)	Molyb-denum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
FEB							
23...	<.02	1.4	3.98	E1n	<.2	6.4	.09
APR							
21...	<.02	2.2	3.91	<3	<.2	3.8	.15
JUL							
20...	<.02	8.9	4.61	<3	<.2	2.9	.12
AUG							
25...	<.02	9.9	4.12	<3	<.2	4.1	.05

Remark codes used in this table:
< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
e -- See field comment
n -- Below the LRL and above the LT-MDL
o -- Result determined by alternate method

07345480 Big Cypress Creek near Ellison Creek Reservoir near Lone Star, TX

LOCATION.--Lat 32°54'47.61", long 94°44'06.93", Morris County, Hydrologic Unit 11140305, adjacent to Farm to Masrket 997 1.5 mi north of State Highway 557 and US Highway 259, .75 mi upstream of Ellison Creek Reservoir outflow.

DRAINAGE AREA.--Undetermined.

PERIOD OF DAILY RECORD.--
CHEMICAL DATA: Aug. 2004.

REMARKS.--Miscellaneous sample.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
AUG													
25...	1145	774	4.0	49	7.1	451	25.6	.99	1.5	.13	9.91	9.96d	.050

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Orthophosphate, water, fltrd, mg/L (00660)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)
AUG							
25...	.86	1.3	3.80	1.24d	1.23doc	1.42oc	11

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
o -- Result determined by alternate method

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07345900 Lake O' the Pines near Jefferson, TX

LOCATION.--Lat 32°45'18", long 94°29'57", 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 mi^2.

WATER-STAGE RECORDS

PERIOD OF RECORD.--Aug. 1957 to Sept. 2000 (U.S. Army Corps of Engineers furnished contents), Oct. 2000 to Sept. 2002 (contents), Oct. 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Nov. 12, 1957, non-recording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good. 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 lake was built for conservation, flood control, and water supply. The dam is owned by the U.S. Army Corps of Engineers. During the current year, an unknown amount of water was diverted from the lake for municipal and industrial uses. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	277.0
Crest of spillway	249.5
Top of conservation pool	228.5
Crest of intake to wet well (14 in)	202.5
Lowest gated outlet (invert)	200.0

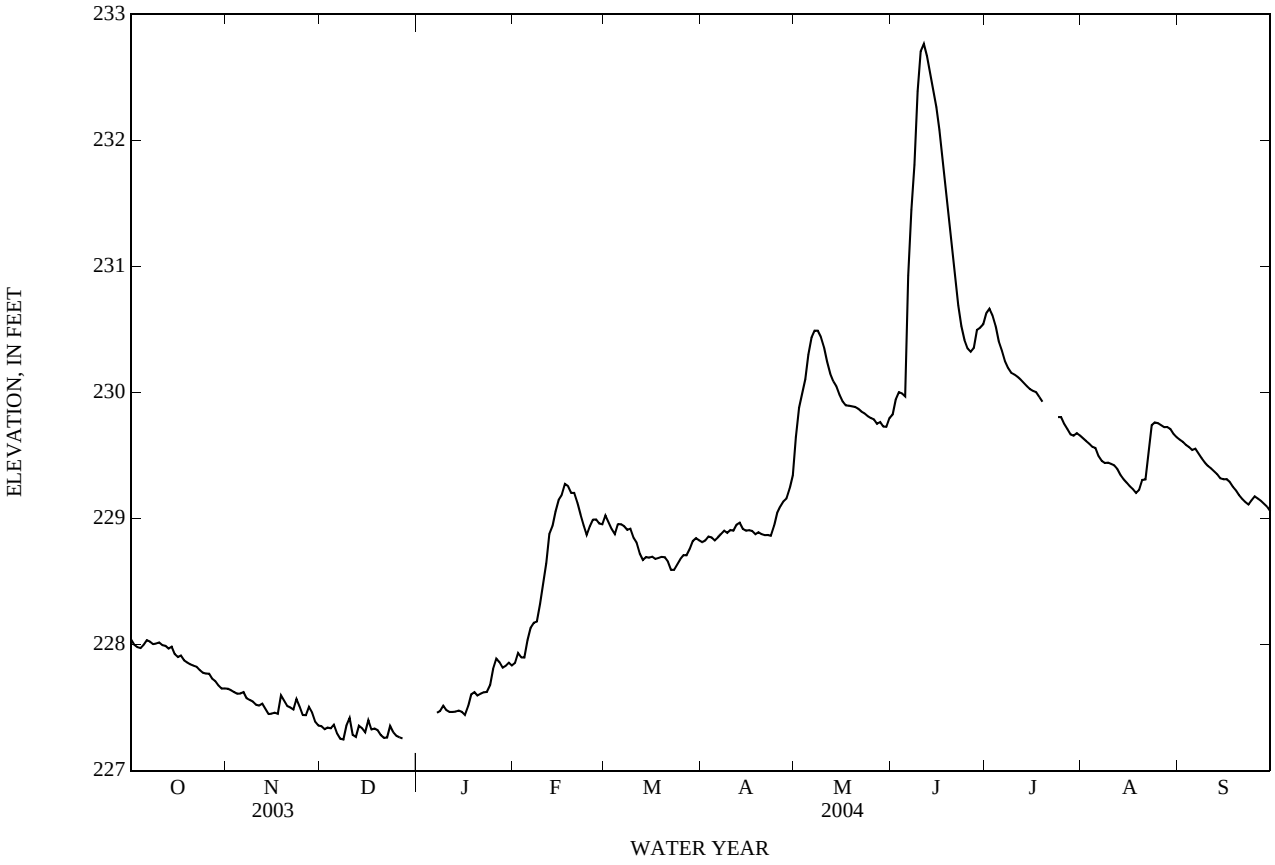
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 694,360 acre-ft, May 5, 1966, elevation, 245.41 ft; minimum since Dec. 1959, 210,100 acre-ft, Oct. 6, 1984, elevation, 225.98 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 232.80 ft, June 11; minimum elevation, 227.20 ft, Dec. 9, 12.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	228.04	227.65	227.35	---	227.85	229.03	228.81	229.65	229.82	230.63	229.64	229.63
2	228.00	227.64	227.33	---	227.93	228.97	228.83	229.88	229.94	230.66	229.62	229.61
3	227.98	227.62	227.34	---	227.90	228.92	228.86	229.99	230.00	230.61	229.59	229.58
4	227.97	227.61	227.34	---	227.90	228.88	228.85	230.11	229.99	230.53	229.57	229.57
5	228.00	227.61	227.36	---	228.04	228.96	228.83	230.30	229.97	230.41	229.56	229.54
6	228.03	227.62	227.29	---	228.13	228.96	228.85	230.44	230.93	230.33	229.50	229.55
7	228.02	227.57	227.25	227.46	228.17	228.94	228.88	230.49	231.45	230.25	229.46	229.52
8	228.00	227.56	227.25	227.47	228.18	228.91	228.90	230.49	231.81	230.19	229.44	229.48
9	228.01	227.55	227.36	227.52	228.32	228.92	228.89	230.44	232.39	230.16	229.44	229.44
10	228.02	227.52	227.42	227.48	228.47	228.85	228.91	230.36	232.71	230.14	229.43	229.42
11	228.00	227.52	227.28	227.47	228.65	228.81	228.90	230.25	232.77	230.13	229.42	229.40
12	227.99	227.53	227.27	227.47	228.88	228.72	228.95	230.15	232.67	230.10	229.39	229.38
13	227.97	227.49	227.36	227.47	228.94	228.67	228.97	230.09	232.54	230.08	229.35	229.35
14	227.98	227.45	227.34	227.48	229.06	228.69	228.92	230.05	232.41	230.05	229.31	229.32
15	227.93	227.45	227.30	227.47	229.15	228.69	228.90	229.98	232.26	230.03	229.28	229.31
16	227.90	227.46	227.40	227.44	229.19	228.70	228.91	229.93	232.08	230.01	229.26	229.31
17	227.91	227.45	227.33	227.51	229.28	228.68	228.90	229.90	231.86	230.00	229.23	229.29
18	227.87	227.60	227.33	227.61	229.26	228.69	228.88	229.89	231.62	229.96	229.20	229.25
19	227.86	227.56	227.32	227.62	229.20	228.70	228.89	229.89	231.39	229.93	229.23	229.22
20	227.84	227.51	227.28	227.60	229.20	228.69	228.88	229.89	231.15	---	229.31	229.19
21	227.83	227.50	227.26	227.61	229.12	228.66	228.87	229.87	230.92	---	229.31	229.16
22	227.82	227.48	227.26	227.62	229.03	228.59	228.87	229.85	230.69	---	229.53	229.13
23	227.80	227.57	227.36	227.62	228.95	228.59	228.86	229.83	230.53	---	229.74	229.11
24	227.78	227.51	227.30	227.68	228.87	228.64	228.94	229.81	230.42	229.81	229.76	229.14
25	227.77	227.44	227.28	227.81	228.94	228.68	229.04	229.80	230.35	229.80	229.76	229.18
26	227.77	227.44	227.26	227.89	228.99	228.71	229.10	229.79	230.32	229.75	229.74	229.16
27	227.73	227.51	227.26	227.86	228.99	228.71	229.14	229.75	230.35	229.71	229.72	229.14
28	227.71	227.46	---	227.82	228.96	228.76	229.16	229.77	230.50	229.67	229.73	229.12
29	227.68	227.39	---	227.83	228.95	228.82	229.24	229.73	230.51	229.66	229.71	229.09
30	227.65	227.36	---	227.86	---	228.84	229.34	229.73	230.54	229.68	229.67	229.06
31	227.65	---	---	227.83	---	228.83	---	229.80	---	229.66	229.64	---
MEAN	227.89	227.52	---	---	228.71	228.78	228.94	230.00	231.16	---	229.50	229.32
MAX	228.04	227.65	---	---	229.28	229.03	229.34	230.49	232.77	---	229.76	229.63
MIN	227.65	227.36	---	---	227.85	228.59	228.81	229.65	229.82	---	229.20	229.06

07345900 Lake O' the Pines near Jefferson, TX—Continued



07345900 Lake O' the Pines near Jefferson, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1969 to Sept. 1984, Oct. 1998 to current year.
BIOCHEMICAL DATA: Oct. 1969 to Sept. 1984, Oct. 1998 to current year.
PESTICIDE DATA: Aug. 1999 to current year.

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

324518094300801 -- LAKE O THE PINES SITE AC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sampling depth, feet (00003)	Transparency Secchi disc, meters (00078)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
FEB													
24...	1101	--	1.00	--	--	--	--	--	--	--	--	--	--
24...	1102	1.00	1.00	762	10.8	96	6.7	124	--	10.0	14	24	4.70
FEB													
24-24	1102	--	--	--	--	--	--	--	--	--	--	--	--
24...	1112	10.0	--	762	10.8	95	6.6	125	--	9.5	--	--	--
24...	1123	20.0	--	762	10.5	92	6.6	125	--	9.5	--	--	--
24...	1133	30.0	--	762	10.1	88	6.6	125	--	9.5	--	--	--
24...	1142	43.0	--	762	10.3	90	6.5	125	--	9.5	14	24	4.71
APR													
20...	0927	1.00	1.13	770	9.6	103	7.3	133	--	19.5	15	25	5.21
APR													
20-20	0927	--	--	--	--	--	--	--	--	--	--	--	--
20...	0928	1.85	1.13	--	--	--	--	--	--	--	--	--	--
20...	0938	10.0	--	770	9.3	99	7.1	134	--	19.0	--	--	--
20...	0949	20.0	--	770	7.8	82	6.6	135	--	18.5	--	--	--
20...	1001	30.0	--	770	6.8	71	6.5	134	--	18.0	--	--	--
20...	1011	43.0	--	770	5.7	59	6.4	135	--	17.5	--	26	5.58
AUG													
25-25	0903	--	--	--	--	--	--	--	--	--	--	--	--
25...	0931	1.00	.88	774	7.2	91	7.3	129	33.0	28.5	10	26	5.24
25...	0932	1.45	.88	--	--	--	--	--	--	--	--	--	--
25...	0946	10.0	--	774	6.5	83	7.1	129	33.0	28.5	--	--	--
25...	1001	20.0	--	774	2.9	37	6.7	131	33.0	27.5	--	--	--
25...	1016	30.0	--	774	E.2	--	6.9	161	33.0	26.0	--	--	--
25...	1030	44.0	--	774	E.4	--	6.9	193	33.0	33.0	--	33	7.70

324518094300801 -- LAKE O THE PINES SITE AC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt Gran, field, mg/L as CaCO3 (29802)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt Gran titr., field, mg/L (63786)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt Gran titr., lab, mg/L (63789)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)
FEB													
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	2.94	3.90	1	10.7	45	10.2	--	E12	--	<1	--	12.9	<.2
FEB													
24-24	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	2.96	3.92	1	10.7	45	10.0	--	E12	--	<1	--	13.1	<.2
APR													
20...	2.86	3.91	1	12.0	47	10.1	--	E12	--	<1	--	12.9	<.2
APR													
20-20	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	3.02	3.95	1	12.0	45	28.6	--	E35	--	<1	--	13.0	<.2
AUG													
25-25	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	3.04	4.04	1	11.8	45	--	16	--	E19	--	<1	11.6	<.2
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	3.28	4.28	.9	11.8	40	54.9	--	67	--	<1	--	11.9	<.2

07345900 Lake O' the Pines near Jefferson, TX—Continued

324518094300801 -- LAKE O THE PINES SITE AC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L (00660)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Pheophy tin a, phyto-plank-ton, acid m, ug/L (32218)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	Chloro-phyll a phyto-plank-ton, acid m, ug/L (32211)
FEB													
24...	--	--	--	--	--	--	--	--	--	.004	--	--	.010
24...	11.2	21.5	74	<.04	<.06	<.008	--	<.006	.007	.004	E7k	E3k	.010
FEB													
24-24	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	11.4	21.7	75	E.02n	<.06	<.008	--	<.006	.008	--	--	--	--
APR													
20...	6.4	22.9	72	<.04	<.06	<.008	--	<.006	.004	--	<1k	<1k	--
APR													
20-20	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	<.0002	--	--	.017
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	7.9	22.3	85	.12	E.03n	<.008	--	<.006	.007	--	--	--	--
AUG													
25-25	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	6.8	18.1	70	<.04	<.06	<.008	--	<.006	.009	--	E4k	E6k	--
25...	--	--	--	--	--	--	--	--	--	.013	--	--	.022
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	.09	<.06	<.008	--	<.006	.007	--	--	--	--
25...	--	--	--	.99	<.06	<.008	.135	.044	.052	--	--	--	--
25...	12.6	6.3	106	2.26d	<.06	<.008	1.07	.349d	.21oc	--	--	--	--

324518094300801 -- LAKE O THE PINES SITE AC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)
FEB													
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	E5n	5.9	--	--	--	--	--	--	--	--	--	--	--
FEB													
24-24	--	--	<.006	E.010	<.006	<.005	<.005	.035	<.050	<.010	<.004	<.041	<.020
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	8	44.0	--	--	--	--	--	--	--	--	--	--	--
APR													
20...	E3n	1.6	--	--	--	--	--	--	--	--	--	--	--
APR													
20-20	--	--	<.006	E.008	<.006	<.005	<.005	.029	<.050	<.010	<.004	<.041	<.020
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	7	181	--	--	--	--	--	--	--	--	--	--	--
AUG													
25-25	--	--	<.006	E.007	<.006	<.005	<.005	.058	<.050	<.010	<.004	<.041	<.020
25...	15	79.0	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	9	14.8	--	--	--	--	--	--	--	--	--	--	--
25...	1,280	3,990	--	--	--	--	--	--	--	--	--	--	--
25...	5,210	5930d	--	--	--	--	--	--	--	--	--	--	--

07345900 Lake O' the Pines near Jefferson, TX—Continued

324518094300801 -- LAKE O THE PINES SITE AC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulfinyl fipronil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Desulfinyl-fipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)
FEB													
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
24-24	<.005	<.006	<.018	<.003	<.012	<.005	<.020	<.02	<.004	<.009	<.005	<.029	<.013
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
20-20	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005	<.029	<.013
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
25-25	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005	<.029	<.013
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--

324518094300801 -- LAKE O THE PINES SITE AC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)
FEB													
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
24-24	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.013	<.006	<.003	<.007	<.003	<.010
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
20-20	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.013	<.006	<.003	<.007	<.003	<.010
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
25-25	<.024	<.016	<.003	<.004	<.035	<.027	<.015	E.009n	<.006	<.003	<.007	<.003	<.010
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--

07345900 Lake O' the Pines near Jefferson, TX—Continued

324518094300801 -- LAKE O THE PINES SITE AC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Propyzamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)
FEB													
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
24-24	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	.007	.02	<.034	<.02	<.010
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
20-20	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005	.02	<.034	<.02	<.010
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
25-25	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	.013	E.01n	<.034	<.02	<.010
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--

324518094300801 -- LAKE O THE PINES SITE AC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Triallate, water, fltrd 0.7u GF ug/L (82678)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)	Xylenes water unfltrd ug/L (81551)	Benzene water unfltrd ug/L (34030)	Ethylbenzene water unfltrd ug/L (34371)	meta- + para-Xylene, water, unfltrd ug/L (85795)	o-Xylene, water, unfltrd ug/L (77135)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	Toluene water unfltrd ug/L (34010)
FEB									
24...	--	--	--	--	--	--	--	--	--
24...	--	--	E.1	<.1	<.1	E.1	<.1	<.2	.1
FEB									
24-24	<.002	<.009	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
APR									
20...	--	--	<.2	<.1	<.1	<.2	<.1	E.1	<.1
APR									
20-20	<.002	<.009	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
AUG									
25-25	<.002	<.009	--	--	--	--	--	--	--
25...	--	--	<.2	<.1	<.1	<.2	<.1	<.2	<.1
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--

07345900 Lake O' the Pines near Jefferson, TX—Continued

324509094303901 -- LAKE O THE PINES SITE AR
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sampling depth, feet (00003)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
FEB									
24...	1155	1.00	762	11.4	101	6.8	124	--	10.0
24...	1158	10.0	762	11.2	99	6.8	124	--	10.0
24...	1201	25.0	762	11.4	101	6.8	124	--	10.0
APR									
20...	1029	1.00	770	9.7	105	7.3	134	--	19.5
20...	1032	10.0	770	9.7	104	7.2	133	--	19.0
20...	1036	20.0	770	6.3	66	6.5	136	--	18.0
20...	1040	26.0	770	5.5	57	6.4	137	--	17.5
AUG									
25...	1040	1.00	775	7.6	88	7.4	129	32.0	23.5
25...	1042	10.0	775	6.3	80	7.0	129	32.0	28.5
25...	1044	20.0	775	E.9	--	6.6	132	32.0	27.5
25...	1047	28.0	775	E.5	--	6.9	155	32.0	27.0

324613094323001 -- LAKE O THE PINES SITE BC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sampling depth, feet (00003)	Transparency Secchi disc, meters (00078)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L (00660)
FEB													
24...	1230	1.00	1.04	761	11.8	106	7.1	124	10.5	<.04	<.06	<.008	--
24...	1235	10.0	--	761	11.3	100	6.9	125	10.0	--	--	--	--
24...	1244	20.0	--	761	10.7	94	6.7	129	9.5	--	--	--	--
24...	1248	30.0	--	761	10.6	93	6.7	129	9.5	--	--	--	--
24...	1252	40.0	--	761	10.5	92	6.7	129	9.5	E.03n	E.03n	<.008	--
APR													
20...	1057	1.00	1.07	770	9.9	107	7.5	135	19.5	<.04	<.06	<.008	--
20...	1102	10.0	--	770	9.8	106	7.4	135	19.5	--	--	--	--
20...	1107	20.0	--	770	8.9	95	6.9	138	19.0	--	--	--	--
20...	1112	30.0	--	770	6.4	67	6.5	145	18.0	--	--	--	--
20...	1116	44.0	--	770	5.6	58	6.4	148	17.5	.06	E.03n	<.008	--
AUG													
25...	1102	1.00	.85	776	7.5	95	7.3	129	28.5	<.04	<.06	<.008	--
25...	1108	10.0	--	776	6.2	78	7.0	129	28.0	--	--	--	--
25...	1114	20.0	--	776	4.4	56	6.8	130	28.0	.07	<.06	<.008	--
25...	1120	30.0	--	776	1.1	14	6.7	134	27.0	--	--	--	--
25...	1126	45.0	--	776	E.3	--	7.0	193	25.0	2.32d	<.06	<.008	1.02

07345900 Lake O' the Pines near Jefferson, TX—Continued

324613094323001 -- LAKE O THE PINES SITE BC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
FEB				
24...	<.006	.006	9	1.3
24...	--	--	--	--
24...	--	--	--	--
24...	--	--	--	--
24...	<.006	.009	14	29.1
APR				
20...	<.006	.004	<6	E.7n
20...	--	--	--	--
20...	--	--	--	--
20...	--	--	--	--
20...	<.006	.006	11	134
AUG				
25...	<.006	.005	<6	2.2
25...	--	--	--	--
25...	<.006	.007	60	97.2
25...	--	--	--	--
25...	.333d	.20oc	5,180	6160d

324738094325101 -- LAKE O THE PINES SITE CC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam-pling depth, feet (00003)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)
FEB								
24...	1304	1.00	760	10.4	97	6.8	110	12.0
24...	1307	10.0	760	10.5	94	6.6	123	10.5
24...	1310	20.0	760	9.6	84	6.7	125	9.5
APR								
20...	1139	1.00	769	8.9	98	7.1	130	20.5
20...	1142	10.0	769	8.6	95	7.0	131	20.5
20...	1145	20.0	769	8.0	88	6.9	130	20.5
AUG								
25...	1143	1.00	776	8.8	113	8.5	129	29.5
25...	1145	10.0	776	7.3	93	7.3	127	29.0
25...	1147	23.0	776	2.4	30	6.6	125	28.0

324806094350001 -- LAKE O THE PINES SITE DC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam-pling depth, feet (00003)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)
FEB								
24...	1347	1.00	760	10.6	99	6.8	101	12.0
24...	1349	10.0	760	11.1	101	6.8	124	11.0
24...	1351	24.0	760	10.8	98	6.8	127	11.0
APR								
20...	1312	1.00	768	9.0	100	7.2	139	21.0
20...	1314	10.0	768	8.5	94	7.0	132	20.5
20...	1316	24.0	768	8.2	90	7.0	129	20.5
AUG								
25...	1213	1.00	774	7.9	101	7.5	124	29.0
25...	1215	10.0	774	6.8	86	7.0	120	28.5
25...	1217	23.0	774	4.1	52	6.7	115	28.0

07345900 Lake O' the Pines near Jefferson, TX—Continued

324726094363801 -- LAKE O THE PINES SITE EC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sampling depth, feet (00003)	Transparency Secchi disc, meters (00078)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
FEB													
24...	1416	1.00	--	760	11.6	105	7.2	137	--	11.0	18	28	5.73
24...	1421	10.0	--	760	11.6	105	7.2	137	--	11.0	--	--	--
24...	1426	20.0	--	760	11.2	102	7.0	138	--	11.0	--	--	--
24...	1432	34.0	--	760	9.1	81	6.6	139	--	10.0	18	28	5.89
APR													
20...	1346	1.00	--	769	9.8	107	7.4	151	--	20.0	19	30	6.72
20...	1351	10.0	--	769	9.5	104	7.1	151	--	20.0	--	--	--
20...	1357	20.0	--	769	8.1	87	6.7	153	--	19.5	--	--	--
20...	1403	34.0	--	769	5.5	59	6.5	155	--	19.0	19	31	7.05
AUG													
25...	1247	1.00	.79	778	8.2	104	7.8	127	31.0	28.5	11	25	4.75
25...	1256	10.0	--	778	7.7	97	7.4	127	31.0	28.5	--	--	--
25...	1305	20.0	--	778	2.6	33	6.6	130	31.0	28.0	--	--	--
25...	1314	34.0	--	778	E.4	--	6.6	135	31.0	27.5	5	25	4.97

324726094363801 -- LAKE O THE PINES SITE EC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt Gran, field, mg/L as CaCO3 (29802)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt Gran titr., field, mg/L (63786)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt Gran titr., lab, mg/L (63789)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
FEB													
24...	3.21	4.24	1	12.0	44	9.7	--	E12	--	<1	13.8	<.2	9.4
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	3.29	4.33	1	12.3	44	10.1	--	E12	--	<1	13.8	<.2	9.8
APR													
20...	3.27	4.29	1	13.3	45	11.2	--	E14	--	<1	14.0	<.2	5.0
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	3.37	4.37	1	13.6	44	12.2	--	E15	--	<1	13.8	<.2	6.4
AUG													
25...	3.08	4.17	1	11.7	46	14.0	--	E17	--	<1	11.4	<.2	8.4
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	3.11	4.18	1	11.6	45	--	20	--	E25	--	11.4	<.2	9.3

324726094363801 -- LAKE O THE PINES SITE EC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L (00660)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
FEB												
24...	24.8	79	<.04	E.03n	<.008	--	<.006	.008	E3k	E3k	12	7.5
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	25.4	81	.10	E.06n	<.008	--	E.003n	.012	--	--	20	90.7
APR												
20...	27.6	81	<.04	<.06	<.008	--	<.006	.006	<1k	<1k	13	2.3
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	28.4	85	<.04	<.06	<.008	--	<.006	.007	--	--	20	238
AUG												
25...	17.6	70	<.04	<.06	<.008	--	<.006	.007	E5k	E4k	E4n	1.0
25...	--	--	<.04	<.06	<.008	--	<.006	.010	--	--	E3n	29.2
25...	--	--	.14	<.06	<.008	.018	.006	.014	--	--	28	356
25...	17.5	75	.38	<.06	<.008	.021	.007	.016	--	--	31	741

07345900 Lake O' the Pines near Jefferson, TX—Continued

325100094420301 -- LAKE O THE PINES SITE FC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sampling depth, feet (00003)	Transparency Secchi disc, meters (00078)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
FEB													
24...	1515	1.00	.73	759	8.4	81	6.9	190	--	13.5	29	47	12.2
24...	1537	10.0	--	759	8.4	81	6.9	190	--	13.5	--	--	--
24...	1559	22.0	--	759	8.4	81	6.9	190	--	13.5	29	47	12.3
APR													
20...	1440	1.00	1.04	768	8.7	98	8.2	228	--	21.5	25	52	13.3
20...	1441	1.70	1.04	--	--	--	--	--	--	--	--	--	--
20...	1446	10.0	--	768	8.4	94	8.0	230	--	21.0	--	--	--
20...	1452	22.0	--	768	8.2	91	7.9	231	--	21.0	24	53	13.7
AUG													
25...	1352	1.00	4.00	775	6.7	84	7.4	144	36.0	28.0	8	36	8.46
25...	1404	10.0	--	775	E.2	--	6.7	155	36.0	25.0	--	--	--
25...	1415	23.0	--	775	E.2	--	6.7	154	36.0	25.0	6	41	10.8

325100094420301 -- LAKE O THE PINES SITE FC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt Gran, field, mg/L as CaCO3 (29802)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt Gran titr., field, mg/L (63786)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt Gran titr., lab, mg/L (63789)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
FEB													
24...	3.92	5.09	.8	13.2	35	17.6	--	E21	--	<1	14.8	<.2	10.3
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	4.02	5.15	.8	13.2	35	17.8	--	E22	--	<1	14.7	<.2	10.2
APR													
20...	4.48	4.68	1	20.0	43	26.9	--	E33	--	<1	20.1	<.2	1.9
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	4.58	4.76	1	20.6	43	28.6	--	E35	--	<1	20.7	<.2	1.6
AUG													
25...	3.50	4.34	.8	11.2	37	--	28	--	E34	--	11.6	<.2	8.9
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	3.44	3.97	.7	10.5	33	35.5	--	E43	--	<1	10.9	<.2	8.1

325100094420301 -- LAKE O THE PINES SITE FC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L (00660)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)
FEB													
24...	37.5	110	--	--	.05	.44	.46	.017	.141	.046	.069	--	E2k
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	37.8	110	--	--	.06	.44	.46	.016	.150	.049	.066	--	--
APR													
20...	37.9	119	--	--	<.04	--	E.04n	<.008	.086	.028	.044	--	<1k
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	37.3	121	--	--	<.04	--	E.04n	<.008	.092	.030	.045	--	--
AUG													
25...	15.6	80	.46	.69	<.04	--	<.06	<.008	.052	.017	.031	.043	E13k
25...	--	--	.42	.73	<.04	--	<.06	<.008	.074	.024	.038	.115	--
25...	11.7	82	.44	.69	<.04	--	<.06	<.008	.153	.050	.065	.077	--

07345900 Lake O' the Pines near Jefferson, TX—Continued

325100094420301 -- LAKE O THE PINES SITE FC
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
FEB			
24...	E3k	104	63.8
24...	--	--	--
24...	--	98	65.4
APR			
20...	<1k	174	16.5
20...	--	--	--
20...	--	--	--
20...	--	187	16.8
AUG			
25...	E5k	48	29.4
25...	--	108	325
25...	--	557	371

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

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
k -- Counts outside acceptable range
n -- Below the LRL and above the LT-MDL
o -- Result determined by alternate method

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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 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Aug. 1924 to Dec. 1959, published as "Cypress Creek near Jefferson", Oct. 1979 to current year. Records of stage and discharge for the period Oct. 1959 to Sept. 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 NGVD of 1929 (U.S. Army Corps of Engineers benchmark). Prior to Nov. 2, 1933, staff gage. 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 and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Seven major reservoirs impact runoff from 100 percent of drainage area for this station. Since Aug. 1957, flow completely regulated by Lake O' the Pines (07345900). No known diversions. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--33 years (water years 1925-57), prior to completion of Ferrell's Bridge Dam, 660 ft^3s (478,500 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1925-1957: Maximum discharge, 57,100 ft^3s Apr. 1, 1945, gage height, 28.78. ft, site and datum then in use, from rating curve extended above 29,000 ft^3s; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	53	46	28	31	1,210	97	70	75	1,200	37	36
2	40	53	33	28	33	1,220	96	78	82	1,350	37	36
3	40	52	24	28	24	1,210	99	174	99	1,760	38	36
4	45	54	38	28	17	1,200	99	400	97	1,820	51	36
5	49	55	38	28	18	1,240	99	804	94	1,600	39	36
6	48	54	38	28	19	1,230	98	1,090	211	1,230	38	36
7	45	71	38	28	19	1,210	97	1,120	247	953	39	36
8	41	78	38	28	20	1,200	97	1,130	484	534	39	35
9	47	78	36	27	20	1,190	87	1,130	828	278	39	33
10	48	78	35	26	21	1,180	84	1,130	1,470	208	40	31
11	50	78	34	27	27	1,180	84	1,130	2,200	204	40	29
12	50	79	33	27	207	988	86	1,130	2,640	202	40	29
13	50	79	36	28	510	704	86	1,130	2,700	201	40	28
14	51	80	34	28	720	664	60	1,010	2,690	133	40	28
15	51	79	32	28	747	657	37	672	2,700	43	40	28
16	50	77	32	28	738	649	45	612	2,690	38	39	27
17	48	77	31	30	916	643	45	462	2,680	36	40	27
18	46	85	30	29	1,300	639	45	213	2,660	37	40	30
19	45	76	30	29	1,340	637	45	87	2,650	38	49	31
20	44	75	29	27	1,340	633	45	82	2,640	38	60	32
21	45	73	29	27	1,340	629	43	80	2,620	38	50	30
22	44	72	28	27	1,340	484	43	79	2,450	38	56	18
23	45	71	29	27	1,340	212	42	78	1,850	37	45	11
24	47	69	29	41	1,340	112	42	76	1,350	37	43	12
25	50	65	28	91	1,200	108	47	73	1,040	37	40	11
26	50	63	28	49	803	106	45	72	732	34	38	11
27	49	60	28	35	760	105	35	73	695	35	38	12
28	48	57	29	35	1,100	104	32	74	826	36	38	12
29	49	53	32	34	1,160	107	32	73	1,110	36	36	12
30	50	50	29	32	---	103	32	71	1,150	37	37	11
31	51	---	29	31	---	101	---	72	---	36	38	---
TOTAL	1,458	2,044	1,003	987	18,450	21,655	1,924	14,475	43,760	12,304	1,284	780
MEAN	47.0	68.1	32.4	31.8	636	699	64.1	467	1,459	397	41.4	26.0
MAX	51	85	46	91	1,340	1,240	99	1,130	2,700	1,820	60	36
MIN	40	50	24	26	17	101	32	70	75	34	36	11
AC-FT	2,890	4,050	1,990	1,960	36,600	42,950	3,820	28,710	86,800	24,400	2,550	1,550

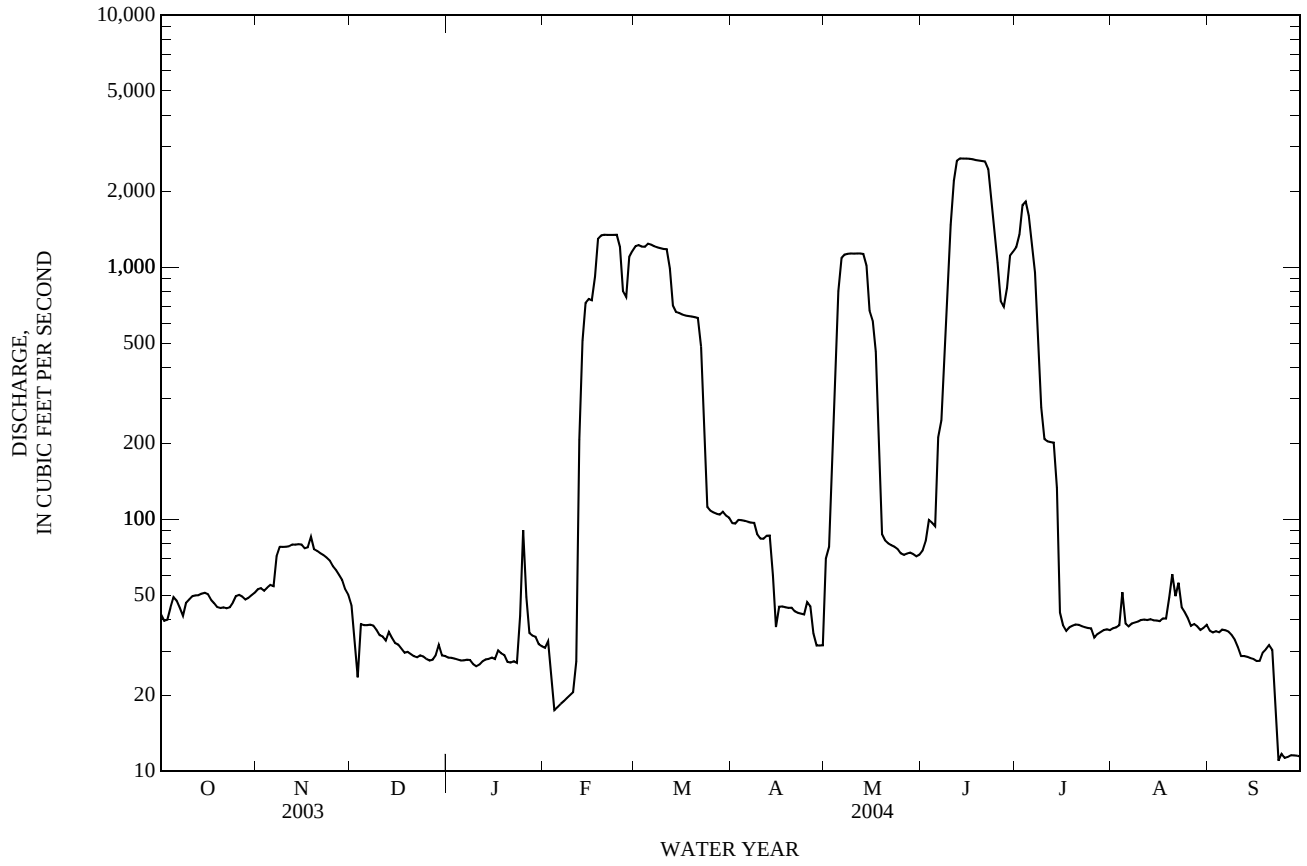
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2004hz, BY WATER YEAR (WY)

MEAN	206	416	701	951	1,250	1,258	1,099	864	832	368	159	92.3
MAX	728	2,690	1,946	2,802	2,688	2,983	3,234	2,979	3,209	3,057	2,349	482
(WY)	(1995)	(1958)	(1958)	(2002)	(1993)	(2001)	(2002)	(1958)	(1958)	(1958)	(1958)	(1958)
MIN	3.35	4.82	4.13	4.16	30.7	37.2	47.7	32.4	32.5	18.7	16.2	8.70
(WY)	(1981)	(1989)	(1982)	(1981)	(2000)	(1996)	(1996)	(1992)	(1987)	(1998)	(1982)	(1980)

07346000 Big Cypress Creek near Jefferson, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1958 - 2004hz	
ANNUAL TOTAL	108,085		120,124			
ANNUAL MEAN	296		328		682	
HIGHEST ANNUAL MEAN					1,859	1958
LOWEST ANNUAL MEAN					47.9	1996
HIGHEST DAILY MEAN	2,600	Mar 5	2,700	Jun 13	4,500	May 20, 1958
LOWEST DAILY MEAN	23	Aug 20	11	Sep 23	0.00	Jul 26, 1987
ANNUAL SEVEN-DAY MINIMUM	24	Aug 14	12	Sep 23	0.00	Jun 29, 2001
MAXIMUM PEAK FLOW			2,730	Jun 13	3,480	Apr 14, 2002
MAXIMUM PEAK STAGE			19.21	Jun 13	19.98	Mar 12, 2001
ANNUAL RUNOFF (AC-FT)	214,400		238,300		493,700	
10 PERCENT EXCEEDS	1,390		1,200		2,530	
50 PERCENT EXCEEDS	49		50		162	
90 PERCENT EXCEEDS	26		28		24	

h See PERIOD OF RECORD paragraph.
z Period of regulated streamflow.



07346000 Big Cypress Creek near Jefferson, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1998 to current year.
BIOCHEMICAL DATA: Oct. 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
FEB													
25...	1045	1,380	11	760	12.2	107	6.8	124	9.5	14	24	4.76	2.92
APR													
19...	1905	44	8.7	777	10.1	107	6.6	135	19.0	16	26	5.47c	2.90c
AUG													
25...	0930	41	7.2	774	6.4	79	6.9	135	27.0	3	26	5.48	3.01

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)
FEB													
25...	3.98	.9	10.6	44	10	E12	<1	12.7	<.2	11.2	21.6	74	91
APR													
19...	3.94c	1	12.2c	46	10	E12	<1	13.1	<.2	7.28c	23.1	74	91
AUG													
25...	4.04	1	11.5	44	23	E28	<1	12.1	<.2	8.02	17.6	76	79

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)
FEB													
25...	<10	--	--	E.03n	<.06	<.008	--	--	<.006	.012	--	6.4	--
APR													
19...	<20d	--	--	E.02n	<.06	<.008	--	--	<.006	.007	--	7.5	--
AUG													
25...	<10	.60	.92	.24	E.03n	<.008	.35	.68	<.02	.010	.054	8.1	<2.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)
FEB													
25...	2	<.20	Mn	50	<.06	E.03n	<.8	.033	1.3	12	E.05n	14.1	<.02
APR													
19...	3	<.20	<2	54	<.06	<.04	<.8	.112	1.3	9c	<.08	42.9	<.02
AUG													
25...	4	<.20	<2	50	<.06	<.04	<.8	.222	1.0	18	<.08	579	<.02

07346000 Big Cypress Creek near Jefferson, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
FEB						
25...	E.3n	.88	<3	<.2	6.2	<.04
APR						
19...	E.3n	.83	<3	<.2	.7	<.04
AUG						
25...	1.0	.81	<3	<.2	1.0	E.02n

Remark codes used in this table:
< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

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 mi^2.

PERIOD OF RECORD.--May 1938 to Sept. 1955 (daily gage heights), Nov. 1956 to Aug. 1968 (daily gage heights and discharge measurements) published by U.S. Army Corps of Engineers as "Black Cypress Creek at Jefferson", Sept. 1964 to Aug. 1968 (low-flow partial-record), Oct. 1968 to current year. Water-quality records: Chemical data: Oct. 1967 to Sept. 1981.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 171.47 ft above NGVD of 1929 (U.S. Army Corps of Engineers benchmark). Satellite telemeter at station.

REMARKS.--Records good except those for July 22 to Sept. 30, which are fair. Estimated daily discharges are rated poor. No known regulation or diversions. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1938, 22.42 ft Apr. 29, 1958, from records by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	13	120	214	700	198	307	89	946	9.3	8.2
2	0.00	0.00	13	141	196	707	183	441	186	1,350	7.9	6.4
3	0.00	0.00	13	153	181	706	171	460	208	1,280	6.6	5.3
4	0.00	0.00	14	159	165	693	162	449	188	1,100	5.3	4.5
5	0.09	0.00	14	159	194	753	155	512	121	952	4.2	3.6
6	0.04	0.00	13	149	219	722	147	555	580	795	3.3	4.1
7	e0.01	0.01	13	132	221	676	140	530	1,740	639	2.5	4.0
8	e0.02	0.02	14	117	237	671	137	490	1,430	467	1.9	2.8
9	e0.03	0.02	16	104	276	675	130	434	1,370	331	1.6	1.9
10	e0.88	0.04	20	93	317	652	120	350	1,460	231	1.4	1.8
11	e2.5	0.11	27	84	367	631	112	246	1,200	177	1.0	1.5
12	e4.6	0.40	30	79	499	599	118	175	985	149	0.66	1.1
13	e4.3	0.28	45	74	558	523	132	142	891	133	0.56	0.61
14	e2.7	0.19	63	71	581	459	132	130	796	114	0.49	0.40
15	e1.5	0.68	65	69	641	407	129	119	663	99	0.51	0.35
16	0.14	1.6	62	68	700	371	132	111	525	84	0.73	0.33
17	0.06	2.2	67	77	733	344	133	111	408	70	0.41	0.62
18	0.02	14	66	97	744	345	129	120	320	57	0.20	0.51
19	0.00	36	60	110	739	357	121	108	246	44	0.95	0.28
20	0.00	32	57	108	697	362	111	103	222	35	4.8	0.17
21	0.00	25	53	108	624	349	102	96	223	28	11	0.18
22	0.00	25	50	109	536	319	93	87	211	23	29	0.18
23	0.00	27	53	109	465	279	85	73	191	19	65	0.16
24	0.00	25	57	124	408	243	81	61	190	15	64	0.38
25	0.00	20	66	261	448	222	102	52	199	13	44	0.52
26	0.00	17	68	246	558	213	131	45	201	11	38	1.3
27	0.00	17	68	204	544	206	127	40	273	10	37	1.1
28	0.00	15	68	213	524	204	127	36	365	9.2	26	0.97
29	0.00	13	85	239	587	250	158	34	389	8.6	18	0.67
30	0.00	12	108	246	---	234	194	29	493	8.8	13	0.40
31	0.00	---	108	235	---	215	---	29	---	9.6	10	---
TOTAL	16.89	283.55	1,469	4,258	13,173	14,087	3,992	6,475	16,363	9,208.2	409.31	54.33
MEAN	0.54	9.45	47.4	137	454	454	133	209	545	297	13.2	1.81
MAX	4.6	36	108	261	744	753	198	555	1,740	1,350	65	8.2
MIN	0.00	0.00	13	68	165	204	81	29	89	8.6	0.20	0.16
AC-FT	34	562	2,910	8,450	26,130	27,940	7,920	12,840	32,460	18,260	812	108

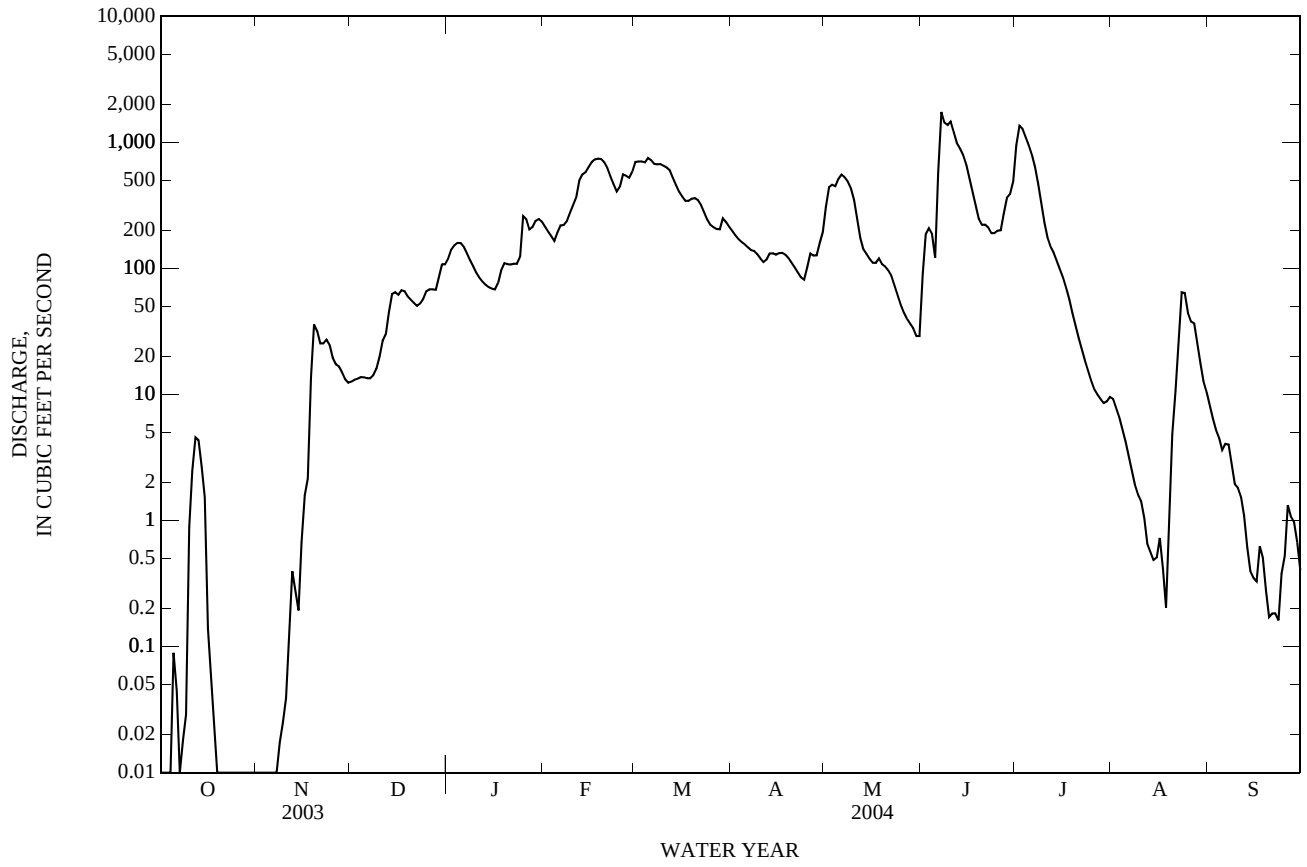
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2004, BY WATER YEAR (WY)

MEAN	92.3	253	558	524	670	732	572	464	289	96.8	37.9	55.5
MAX	415	1,344	2,157	1,508	1,964	1,909	2,006	1,934	1,321	576	623	581
(WY)	(1974)	(1975)	(1988)	(1991)	(2001)	(2001)	(1973)	(1991)	(1974)	(1992)	(1979)	(1974)
MIN	0.01	9.45	47.4	88.6	69.6	108	109	50.8	1.86	0.00	0.06	0.00
(WY)	(1979)	(2004)	(2004)	(2000)	(1996)	(1996)	(1971)	(1984)	(1998)	(1998)	(1969)	(1969)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1969 - 2004	
ANNUAL TOTAL	67,249.87		69,789.28			
ANNUAL MEAN	184		191		361	
HIGHEST ANNUAL MEAN					701	2001
LOWEST ANNUAL MEAN					78.3	1971
HIGHEST DAILY MEAN	2,070	Feb 27	1,740	Jun 7	10,700	Dec 28, 1987
LOWEST DAILY MEAN	0.00	Aug 26	0.00	Oct 1	0.00	Aug 10, 1969
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 26	0.00	Oct 19	0.00	Aug 10, 1969
MAXIMUM PEAK FLOW			1,850	Jun 7	11,600	Dec 28, 1987
MAXIMUM PEAK STAGE			13.57	Jun 7	19.34	Dec 28, 1987
ANNUAL RUNOFF (AC-FT)	133,400		138,400		261,300	
10 PERCENT EXCEEDS	443		583		874	
50 PERCENT EXCEEDS	62		84		164	
90 PERCENT EXCEEDS	0.00		0.15		1.5	

e Estimated

07346045 Black Cypress Bayou at Jefferson, TX—Continued



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, 4.0 mi downstream from Clear Creek, 9.0 mi south of Ore City, and 12.0 mi north of Longview.

DRAINAGE AREA.--383 mi^2.

PERIOD OF RECORD.--Jan. 1963 to Sept. 1999 (daily mean discharge). Oct. 1999 to current year (peaks above base discharge).

GAGE.--Water-stage recorder. Datum of gage is 232.67 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those for Oct. 1 to Mar. 3, which are fair. No known regulation or diversions. During the year, the city of Gilmer discharged a small amount of wastewater effluent into a tributary above this station.

AVERAGE DISCHARGE.--36 years (water years 1964-99), 290 ft^3/s (210,400 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,500 ft^3/s, Apr. 24, 1966, gage height, 20.20 ft; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1902 occurred in Mar. 1945; maximum stage since 1945, that of Apr. 24, 1966. The flood in Apr. 1958 reached a stage of 19.4 ft, or 1.3 ft lower than the flood of Mar. 1945 at a point 6.0 mi upstream, from information by local resident.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 7	1545	*1,230	*10.64				

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07346070 Little Cypress Creek near Jefferson, TX

LOCATION.--Lat 32°42'46", long 94°20'45", Harrison 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 mi^2.

PERIOD OF RECORD.--June 1946 to current year. Water-quality records: Chemical data: June 1964 to Oct. 1997. Biological data: June 1964 to Oct. 1997. Pesticide data: Jan. 1968 to June 1981. Specific conductance: Oct. 1967 to Sept. 1990. Water temperature: Oct. 1967 to Sept. 1990.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 174.60 ft above NGVD of 1929. Prior to Sept. 19, 1947, nonrecording gage at upstream side of bridge at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. No known regulation or diversions. Wastewater effluent is discharged into tributaries that enter Little Cypress Creek above this station. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1944 reached a stage of 21.1 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

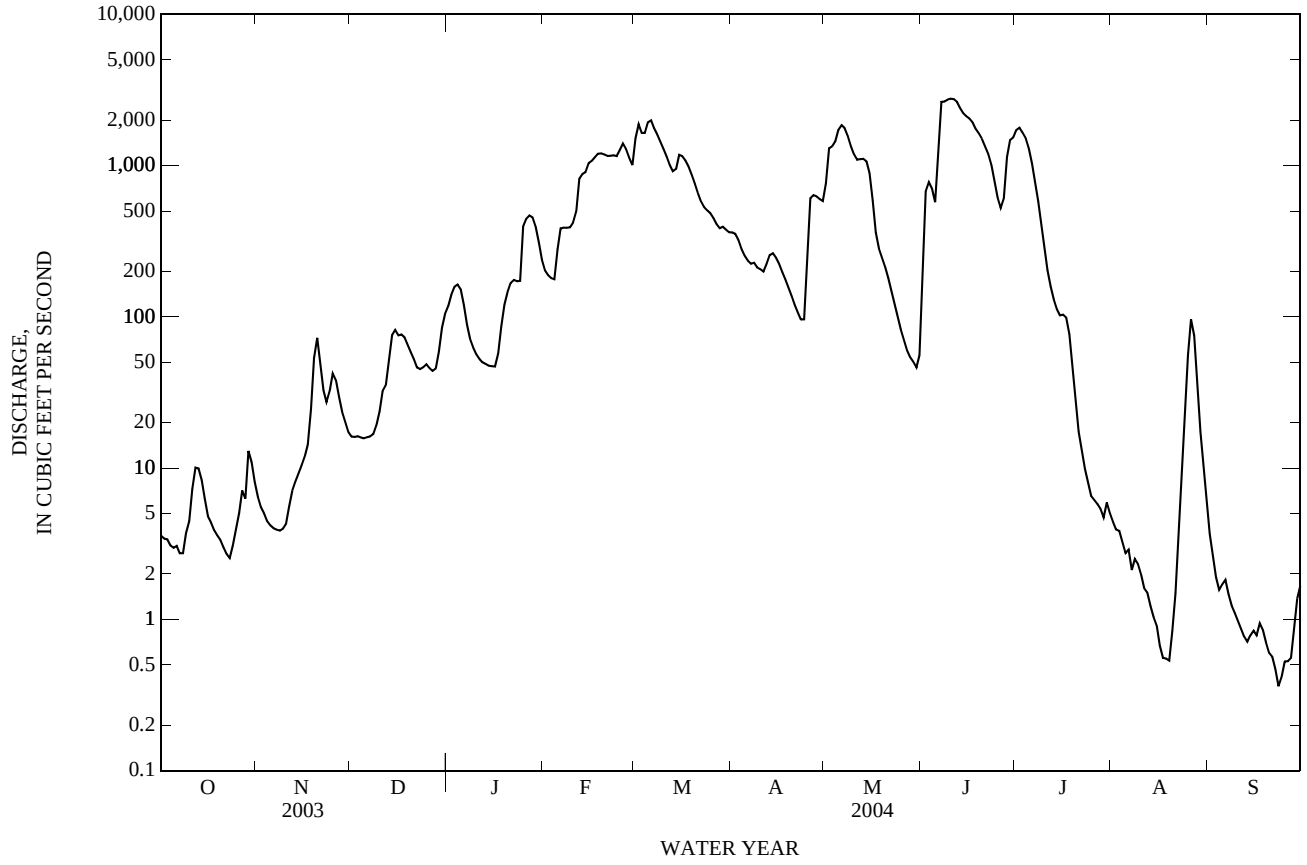
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	6.5	16	118	203	1,510	361	761	252	1,710	4.4	3.7
2	3.4	5.5	16	140	189	1,880	354	1,300	675	1,780	3.9	2.6
3	3.4	5.0	16	158	180	1,650	322	1,340	777	1,660	3.8	1.9
4	3.1	4.5	16	163	177	1,650	282	1,450	707	1,520	3.2	1.6
5	3.0	4.2	16	152	279	1,930	254	1,720	573	1,310	2.7	1.7
6	3.1	4.0	16	121	385	1,990	235	1,850	1,290	1,040	2.9	1.8
7	2.7	3.9	16	89	389	1,770	224	1,780	2,640	791	2.1	1.5
8	2.7	3.9	17	72	388	1,600	228	1,570	2,650	581	2.5	1.2
9	3.7	4.0	19	63	391	1,440	212	1,350	2,730	408	2.3	1.1
10	4.5	4.3	24	57	420	1,290	207	1,190	2,770	286	2.0	0.98
11	7.3	5.5	32	53	498	1,150	199	1,090	2,750	204	1.6	0.87
12	10	7.1	36	50	820	1,010	224	1,100	2,650	159	1.5	0.77
13	10	8.1	50	49	883	917	256	1,110	2,400	131	1.2	0.71
14	8.3	9.2	76	48	907	950	264	1,070	2,230	112	1.0	0.78
15	6.3	10	82	47	1,040	1,180	247	890	2,120	103	0.91	0.84
16	4.8	12	76	47	1,070	1,150	225	585	2,050	103	0.67	0.79
17	4.4	14	76	57	1,140	1,080	199	362	1,930	99	0.56	0.94
18	3.9	25	73	86	1,200	988	177	282	1,750	76	0.55	0.85
19	3.6	53	66	121	1,210	875	157	245	1,630	46	0.53	0.70
20	3.3	73	59	145	1,180	762	138	213	1,510	27	0.83	0.60
21	3.0	48	53	167	1,160	659	121	181	1,340	17	1.5	0.57
22	2.7	33	46	175	1,160	578	107	148	1,200	13	3.4	0.47
23	2.5	27	45	172	1,170	532	96	122	1,020	9.9	7.2	0.36
24	3.1	32	47	173	1,150	505	96	100	785	8.0	17	0.41
25	4.0	42	49	396	1,270	484	239	83	619	6.5	56	0.53
26	5.1	38	46	446	1,400	450	609	70	524	6.2	96	0.53
27	7.1	30	44	468	1,280	411	639	60	604	5.8	75	0.56
28	6.3	24	45	455	1,130	385	626	54	1,140	5.4	37	0.86
29	13	20	59	396	1,010	394	601	51	1,470	4.7	17	1.4
30	11	17	85	311	---	377	582	46	1,530	5.9	10	1.7
31	8.1	---	105	239	---	363	---	56	---	5.1	5.8	---
TOTAL	161.0	573.7	1,422	5,234	23,679	31,910	8,481	22,229	46,316	12,233.5	365.05	33.32
MEAN	5.19	19.1	45.9	169	817	1,029	283	717	1,544	395	11.8	1.11
MAX	13	73	105	468	1,400	1,990	639	1,850	2,770	1,780	96	3.7
MIN	2.5	3.9	16	47	177	363	96	46	252	4.7	0.53	0.36
AC-FT	319	1,140	2,820	10,380	46,970	63,290	16,820	44,090	91,870	24,270	724	66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2004, BY WATER YEAR (WY)

MEAN	126	299	676	761	961	1,039	982	951	464	141	44.4	97.3
MAX	927	2,709	3,391	2,664	2,918	3,467	4,584	4,212	2,525	689	667	941
(WY)	(1950)	(1958)	(1961)	(1991)	(2001)	(2001)	(1966)	(1958)	(1946)	(1992)	(1979)	(1979)
MIN	0.00	0.02	0.53	8.33	73.1	75.7	117	61.6	4.67	0.24	0.00	0.00
(WY)	(1953)	(1957)	(1957)	(1957)	(1996)	(1996)	(1972)	(1971)	(1971)	(1964)	(1956)	(1952)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1946 - 2004	
ANNUAL TOTAL	120,457.3		152,637.57			
ANNUAL MEAN	330		417		540	
HIGHEST ANNUAL MEAN					1,260	1958
LOWEST ANNUAL MEAN					67.3	1964
HIGHEST DAILY MEAN	3,500	Feb 23	2,770	Jun 10	32,700	Apr 26, 1966
LOWEST DAILY MEAN	2.5	Oct 23	0.36	Sep 23	0.00	Sep 20, 1948
ANNUAL SEVEN-DAY MINIMUM	3.1	Oct 2	0.49	Sep 21	0.00	Sep 20, 1948
MAXIMUM PEAK FLOW			2,810	Jun 10	35,500	Apr 26, 1966
MAXIMUM PEAK STAGE			11.34	Jun 10	22.28	Apr 26, 1966
ANNUAL RUNOFF (AC-FT)	238,900		302,800		391,300	
10 PERCENT EXCEEDS	886		1,340		1,370	
50 PERCENT EXCEEDS	96		88		182	
90 PERCENT EXCEEDS	6.1		1.7		1.3	

07346070 Little Cypress Creek near Jefferson, TX—Continued



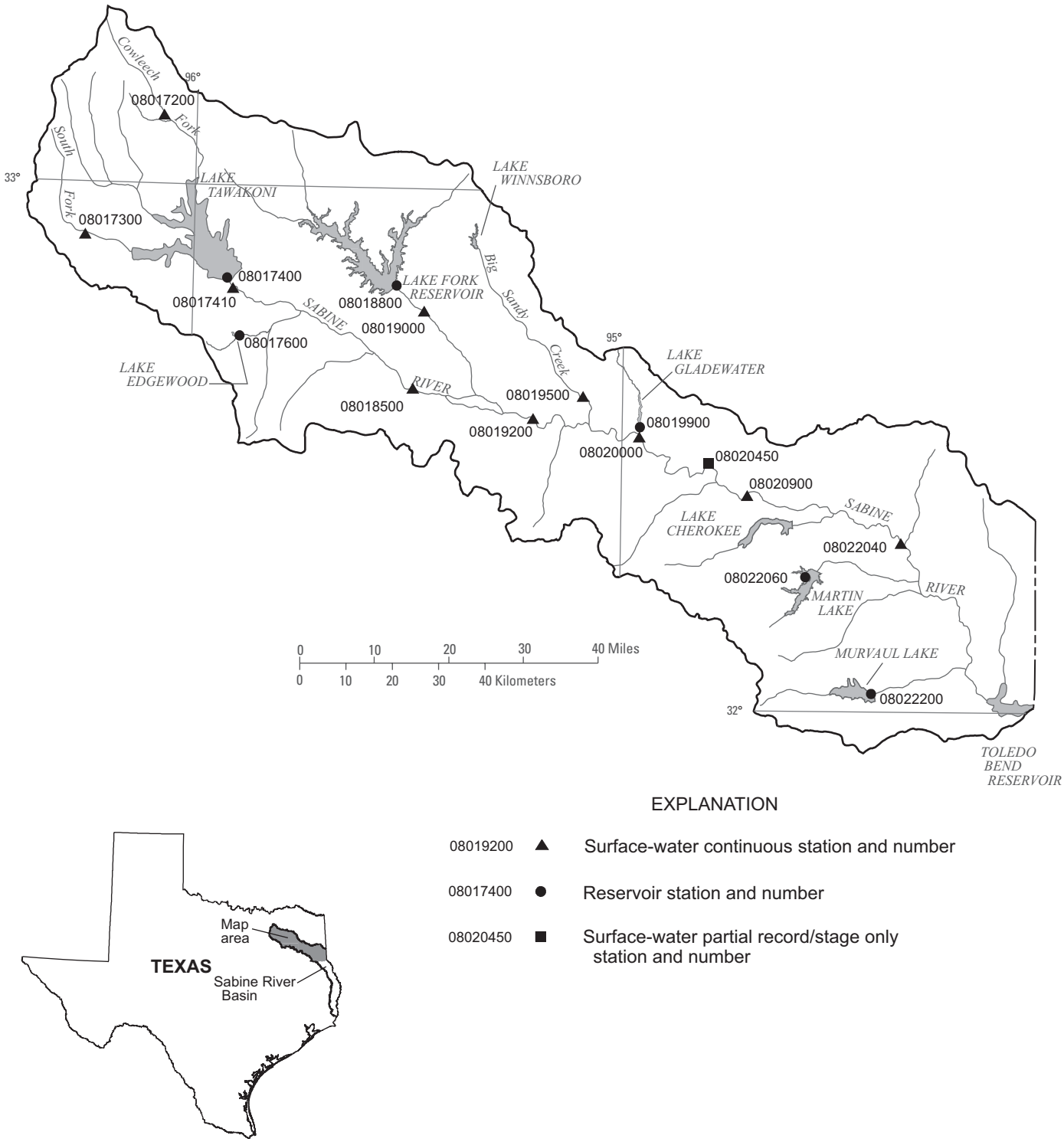


Figure 8.--Map showing location of gaging stations in the first section of the Sabine River Basin

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, 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 mi^2.

PERIOD OF RECORD.--Feb. 1959 to current year. Prior to Oct. 1963, published as "Sabine River at Greenville".

REVISED RECORDS.--WSP 1732: Drainage area. WSP 2122: 1960, 1963-65.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 485.07 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily dischages, which are poor. No known regulation. The city of Greenville diverts water from city lakes upstream from gage and from Lake Tawakoni (station 08017400). Wastewater effluent was returned to a tributary downstream from gage. Extreme low flows are largely sustained by return water from a water treatment plant upstream. No flow at times.

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.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.09	e0.08	e0.81	3.6	0.72	15	0.00	94	2.6	112	0.05	0.10
2	0.09	e0.81	0.51	3.9	2.3	9.7	0.09	52	7.1	10	0.00	0.06
3	e0.12	e0.11	0.51	4.2	1.7	3.6	0.67	12	9.3	2.1	0.00	0.00
4	e0.09	e0.11	0.55	4.3	5.4	23	1.1	3.6	9.3	0.21	0.00	0.00
5	e0.17	e0.08	0.28	4.6	264	408	1.3	1.1	8.4	0.00	0.00	0.00
6	e0.20	e0.08	0.35	4.5	89	41	1.6	0.44	55	0.00	0.00	0.68
7	e0.19	e0.18	0.46	4.7	16	13	1.6	0.36	14	0.00	0.00	0.03
8	e0.17	0.20	0.51	4.8	5.8	6.6	1.7	0.29	4.9	0.00	0.00	0.00
9	e0.17	0.39	0.53	5.3	2.6	3.5	1.2	0.30	33	0.00	0.00	e0.01
10	e0.20	0.15	0.25	5.6	0.99	1.3	0.49	0.28	40	0.00	0.00	e0.01
11	0.14	0.10	0.13	5.8	5.5	1.3	0.20	0.40	42	0.00	0.00	0.00
12	0.09	0.11	1.9	5.2	200	0.30	0.57	0.62	7.5	0.00	e0.02	0.00
13	0.06	0.23	3.1	4.9	41	0.12	5.7	0.31	1.0	0.00	0.00	0.00
14	0.01	0.30	0.46	4.7	12	1.9	4.0	0.34	0.05	e0.02	0.01	e0.02
15	e0.11	0.31	0.48	4.2	14	5.9	1.2	0.32	0.00	e0.02	0.02	1.9
16	e0.11	0.26	0.51	16	75	8.7	0.52	0.28	0.00	e0.02	0.06	0.06
17	e0.22	3.2	0.55	132	31	4.5	0.18	0.30	0.00	e0.01	0.11	0.03
18	e0.22	1.4	0.56	60	27	2.0	0.05	0.29	1.9	0.00	0.12	0.00
19	e0.22	0.44	0.58	10	9.4	0.91	0.02	0.28	192	0.00	6.8	0.13
20	e0.11	0.35	0.62	4.4	2.8	0.57	0.01	0.28	83	0.00	1.2	0.06
21	e0.03	0.41	0.68	2.4	0.56	0.29	0.00	0.29	6.8	0.00	0.29	0.01
22	e0.01	0.44	0.86	1.3	0.25	0.34	0.00	0.32	1.0	0.00	0.22	0.08
23	e0.01	0.51	0.82	0.73	1.4	0.16	0.00	0.33	13	0.00	0.20	0.16
24	e0.01	0.64	0.92	1.6	53	0.55	7.3	0.34	1.0	0.00	0.21	0.08
25	e0.02	0.64	1.1	2.2	133	0.30	56	0.36	0.00	0.00	0.19	e0.02
26	e0.01	0.68	1.4	0.80	91	0.10	33	0.39	0.01	0.00	0.16	0.07
27	e0.03	0.72	1.9	0.59	12	0.01	9.9	0.41	16	0.00	0.14	0.16
28	e0.03	0.86	4.1	0.25	3.1	1.1	3.3	1.4	567	0.00	0.59	0.34
29	e0.01	e0.81	3.1	0.26	3.3	0.77	1.3	6.1	916	60	0.19	0.42
30	e0.01	e0.81	2.8	0.75	---	0.09	0.92	1.2	787	23	0.09	0.44
31	0.00	---	3.3	0.71	---	0.02	---	0.68	---	1.4	0.09	---
TOTAL	2.95	15.41	34.63	304.29	1,103.82	554.63	133.92	179.61	2,818.86	208.78	10.76	4.87
MEAN	0.10	0.51	1.12	9.82	38.1	17.9	4.46	5.79	94.0	6.73	0.35	0.16
MAX	0.22	3.2	4.1	132	264	408	56	94	916	112	6.8	1.9
MIN	0.00	0.08	0.13	0.25	0.25	0.01	0.00	0.28	0.00	0.00	0.00	0.00
AC-FT	5.9	31	69	604	2,190	1,100	266	356	5,590	414	21	9.7

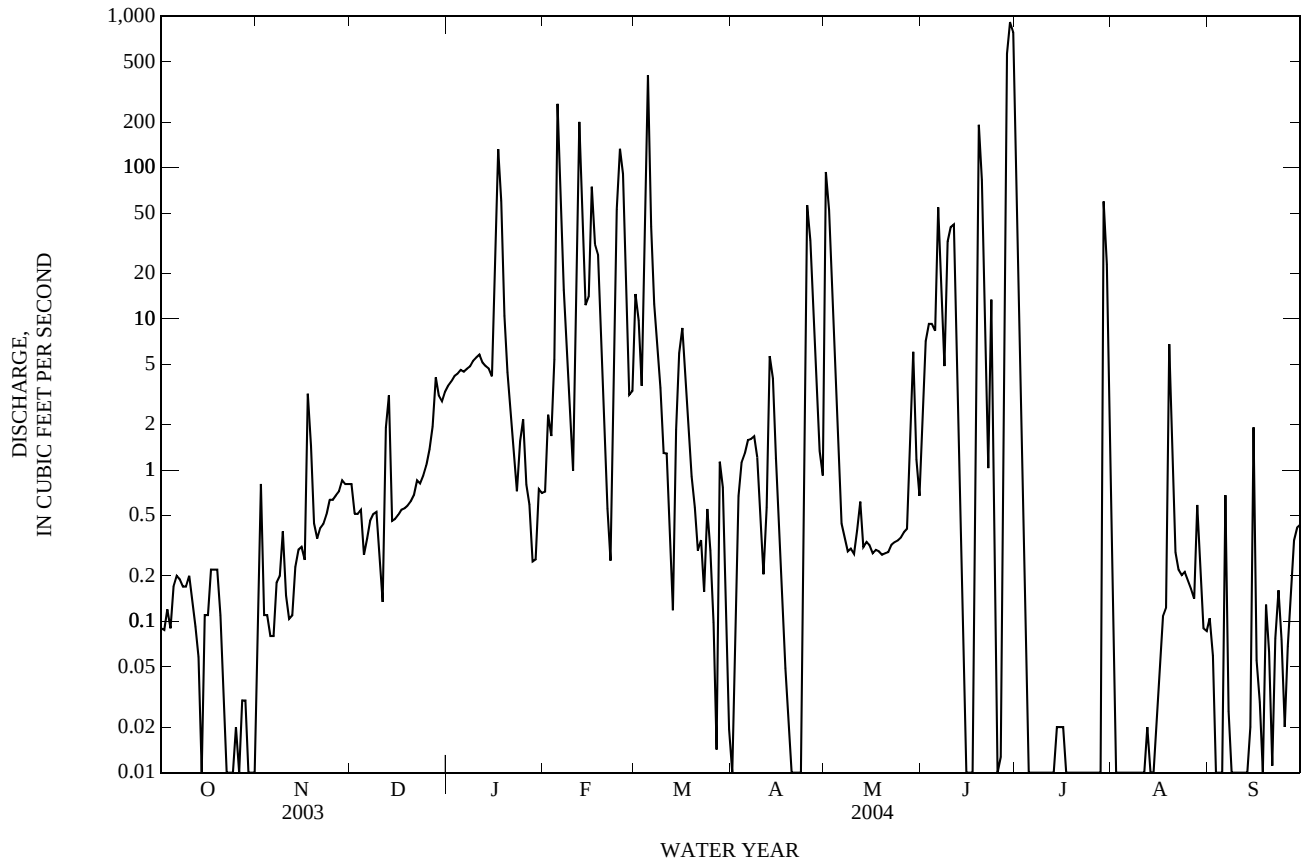
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2004, BY WATER YEAR (WY)

MEAN	56.8	59.5	108	61.7	94.6	99.6	97.4	125	63.5	20.2	5.11	25.6
MAX	354	433	573	403	461	394	431	540	353	264	95.2	258
(WY)	(1972)	(1997)	(1972)	(1998)	(2001)	(2001)	(1966)	(1982)	(1981)	(1989)	(1977)	(1974)
MIN	0.00	0.02	0.11	0.24	0.22	0.48	0.85	0.33	0.03	0.00	0.00	0.00
(WY)	(1996)	(1996)	(1990)	(1986)	(1996)	(1996)	(1971)	(1988)	(1988)	(1998)	(1985)	(1999)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1959 - 2004	
ANNUAL TOTAL	6,425.67		5,372.53			
ANNUAL MEAN	17.6		14.7		68.6	
HIGHEST ANNUAL MEAN					147	2001
LOWEST ANNUAL MEAN					2.85	1996
HIGHEST DAILY MEAN	2,200	Feb 22	916	Jun 29	9,730	May 13, 1982
LOWEST DAILY MEAN	0.00	Oct 31	0.00	Oct 31	0.00	Aug 4, 1964
ANNUAL SEVEN-DAY MINIMUM	0.02	Oct 25	0.00	Jul 5	0.00	Aug 4, 1972
MAXIMUM PEAK FLOW			2,030	Jun 30	15,300	May 13, 1982
MAXIMUM PEAK STAGE			16.13	Jun 30	18.47	May 13, 1982
ANNUAL RUNOFF (AC-FT)	12,750		10,660		49,730	
10 PERCENT EXCEEDS	8.0		14		56	
50 PERCENT EXCEEDS	1.4		0.44		1.4	
90 PERCENT EXCEEDS	0.19		0.00		0.02	

e Estimated

08017200 Cowleech Fork Sabine River at Greenville, TX—Continued



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, 7.0 mi southwest of Quinlan, and 25.0 mi upstream from mouth.

DRAINAGE AREA.--78.7 mi^2.

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

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 461.40 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No known regulation or diversions. Wastewater effluent is discharged at various periods during the water year by Royse City located approximately 10.0 mi above this station. No flow at times.

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.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.22	0.46	0.45	0.81	149	2.4	e91	0.71	139	5.1	0.25
2	0.00	0.61	0.52	0.34	0.85	39	1.4	148	0.52	16	2.3	0.24
3	0.00	0.82	0.55	0.26	1.5	47	1.0	21	12	3.8	1.4	0.27
4	0.00	0.73	0.49	0.36	1.2	e80	0.76	8.1	4.0	1.5	0.97	0.49
5	0.00	0.66	0.42	0.41	583	642	0.58	3.8	16	1.0	0.83	0.65
6	0.00	0.62	0.28	0.40	285	96	0.53	e2.9	45	0.81	0.60	0.62
7	0.00	1.2	0.22	0.37	38	27	0.77	1.7	12	0.62	0.46	0.55
8	0.00	3.6	0.34	0.33	14	14	0.64	1.4	5.0	0.48	0.39	0.54
9	0.00	3.0	0.48	0.27	6.3	6.7	0.45	1.7	121	0.44	0.34	0.58
10	0.00	6.5	0.45	0.22	3.9	3.2	0.60	1.4	201	0.35	0.34	0.57
11	0.51	2.7	0.36	0.19	34	2.2	0.64	1.4	65	0.44	0.43	0.50
12	0.74	1.7	0.34	0.17	328	1.4	0.58	11	11	0.32	0.44	0.50
13	0.62	1.5	19	0.21	59	e20	0.42	4.2	2.9	0.26	0.35	0.47
14	0.69	1.3	9.4	0.36	31	e26	0.45	2.3	1.4	0.27	0.09	0.62
15	0.81	1.1	2.7	0.38	112	51	0.52	1.8	0.96	0.27	0.07	1.1
16	0.78	1.7	1.5	42	95	19	0.43	1.4	0.69	0.24	0.19	0.95
17	1.1	2.3	0.86	380	32	9.1	0.44	1.2	0.70	0.21	0.15	0.69
18	1.1	15	0.52	99	16	4.2	0.33	1.1	0.81	0.19	0.13	0.59
19	1.1	4.7	0.34	17	6.6	2.8	0.29	0.99	4.4	0.17	46	0.46
20	0.80	1.6	0.27	6.3	4.5	2.1	0.25	0.99	128	0.14	106	0.45
21	0.50	1.1	0.22	3.4	3.3	1.6	0.32	0.92	10	0.12	12	0.48
22	0.39	0.82	0.18	2.4	2.4	1.3	0.39	0.84	2.1	0.11	3.0	0.55
23	0.32	0.53	0.15	1.8	12	1.2	0.57	0.79	1.1	0.08	1.6	0.62
24	0.24	0.40	0.34	1.7	270	1.1	18	0.85	0.68	0.06	0.91	0.69
25	0.19	0.42	0.38	6.0	1,290	1.1	e82	0.97	0.44	0.04	0.56	0.58
26	0.32	0.56	0.33	4.7	547	1.2	e52	0.97	5.5	0.02	0.36	0.49
27	0.46	0.45	0.31	2.2	79	1.0	16	0.82	208	0.00	0.34	0.39
28	0.42	0.40	0.41	1.4	32	23	4.3	0.78	362	0.01	0.37	0.29
29	0.36	0.34	1.2	1.1	55	135	2.1	0.60	60	322	0.32	0.34
30	0.29	0.40	0.89	0.94	---	22	1.7	0.52	151	370	0.28	0.57
31	0.24	---	0.55	0.85	---	7.5	---	1.0	---	24	0.23	---
TOTAL	11.98	56.98	44.46	575.51	3,943.36	1,437.7	190.86	316.44	1,433.91	882.95	186.55	16.09
MEAN	0.39	1.90	1.43	18.6	136	46.4	6.36	10.2	47.8	28.5	6.02	0.54
MAX	1.1	15	19	380	1,290	642	82	148	362	370	106	1.1
MIN	0.00	0.22	0.15	0.17	0.81	1.0	0.25	0.52	0.44	0.00	0.07	0.24
AC-FT	24	113	88	1,140	7,820	2,850	379	628	2,840	1,750	370	32

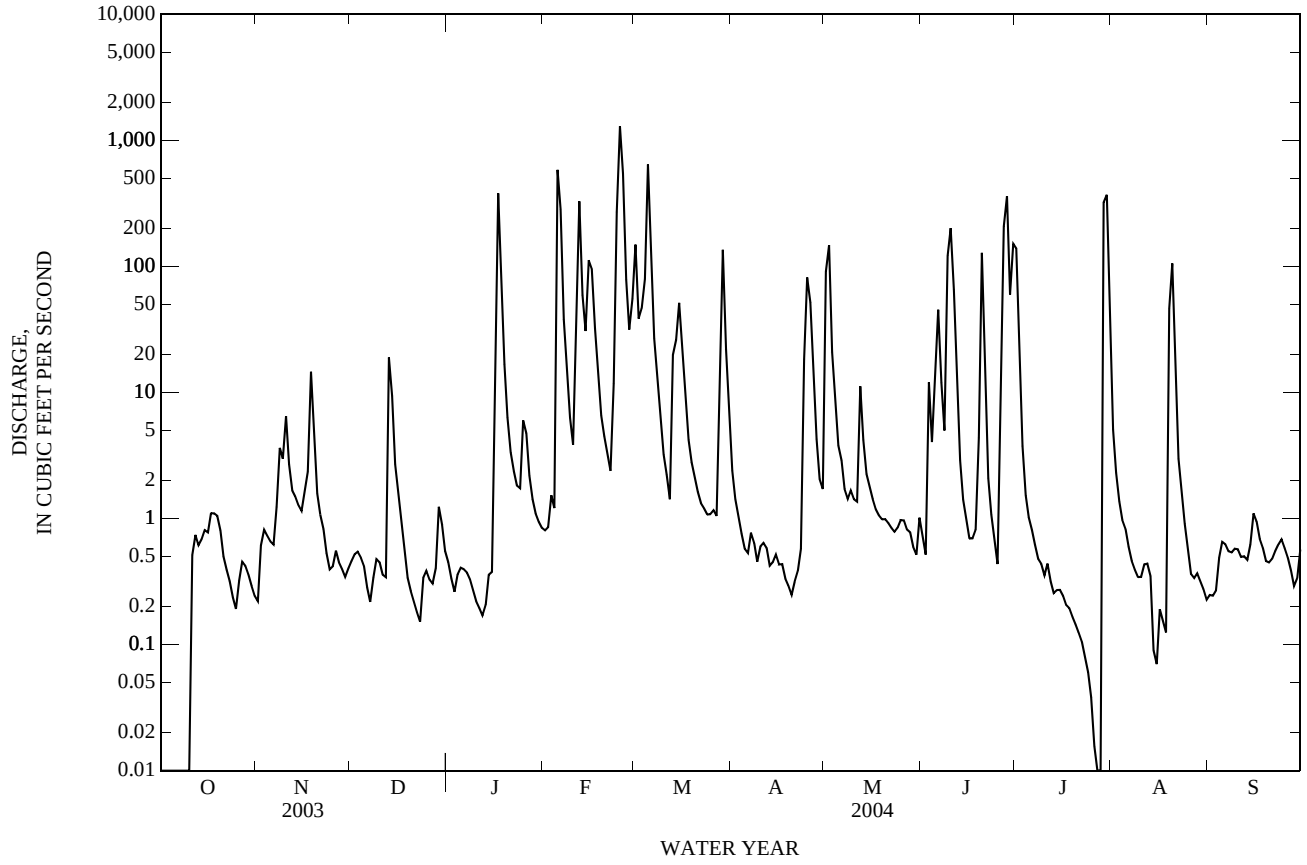
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2004, BY WATER YEAR (WY)

MEAN	101	66.2	120	61.2	122	108	115	141	88.9	25.9	5.17	23.0
MAX	656	655	562	277	556	572	693	674	1,128	490	96.8	353
(WY)	(1982)	(1995)	(2002)	(1974)	(1983)	(1977)	(1966)	(1979)	(1981)	(1981)	(1974)	(1974)
MIN	0.00	0.00	0.00	0.00	0.00	0.11	0.06	0.04	0.00	0.00	0.00	0.00
(WY)	(1964)	(1964)	(1964)	(1976)	(1976)	(1972)	(1971)	(1988)	(1977)	(1964)	(1965)	(1963)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1959 - 2004	
ANNUAL TOTAL	9,682.07		9,096.79			
ANNUAL MEAN	26.5		24.9		82.1	
HIGHEST ANNUAL MEAN					187	1995
LOWEST ANNUAL MEAN					3.29	1996
HIGHEST DAILY MEAN	1,730	Feb 22	1,290	Feb 25	13,300	Jun 16, 1981
LOWEST DAILY MEAN	0.00	Jul 14	0.00	Oct 1	0.00	Mar 3, 1959
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 5	0.00	Oct 1	0.00	Apr 5, 1959
MAXIMUM PEAK FLOW			2,230	Feb 25	23,000	Jun 16, 1981
MAXIMUM PEAK STAGE			16.14	Feb 25	18.77	Apr 5, 1986
ANNUAL RUNOFF (AC-FT)	19,200		18,040		59,460	
10 PERCENT EXCEEDS	17		46		61	
50 PERCENT EXCEEDS	1.2		0.81		0.60	
90 PERCENT EXCEEDS	0.00		0.22		0.00	

e Estimated

08017300 South Fork Sabine River near Quinlan, TX—Continued



08017400 Lake Tawakoni near Wills Point, TX

LOCATION.--Lat 32°48'31", long 95°55'10", Rains 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 mi^2.

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

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

REMARKS.--No estimated daily contents. Records good. The 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. Diversions are made for municipal use by the city of Dallas and various other users in the Sabine River basin. The dam is owned by the Sabine River Authority. The lake was built for water conservation. Conservation pool storage is 888,130 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	454.0
Design flood	446.2
Crest of spillway	437.5
Lowest intake to wet well (invert)	416.5
Lowest gated outlet (invert)	378.0

COOPERATION.--Capacity table No. 1, based on a 1984 survey was prepared by Forrest and Cotton, Inc., Consulting Engineers, for Sabine River Authority. Table No. 1 was replaced with Table No. 2, provided by the Texas Water Development Board from a survey conducted in Apr. 1997, and put into use Oct. 1, 2000.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,130,400 acre-ft, May 1, 1966, elevation, 442.58 ft; minimum contents since lake first filled in May 1965, 722,500 acre-ft, Feb. 22, elevation, 431.16 ft.

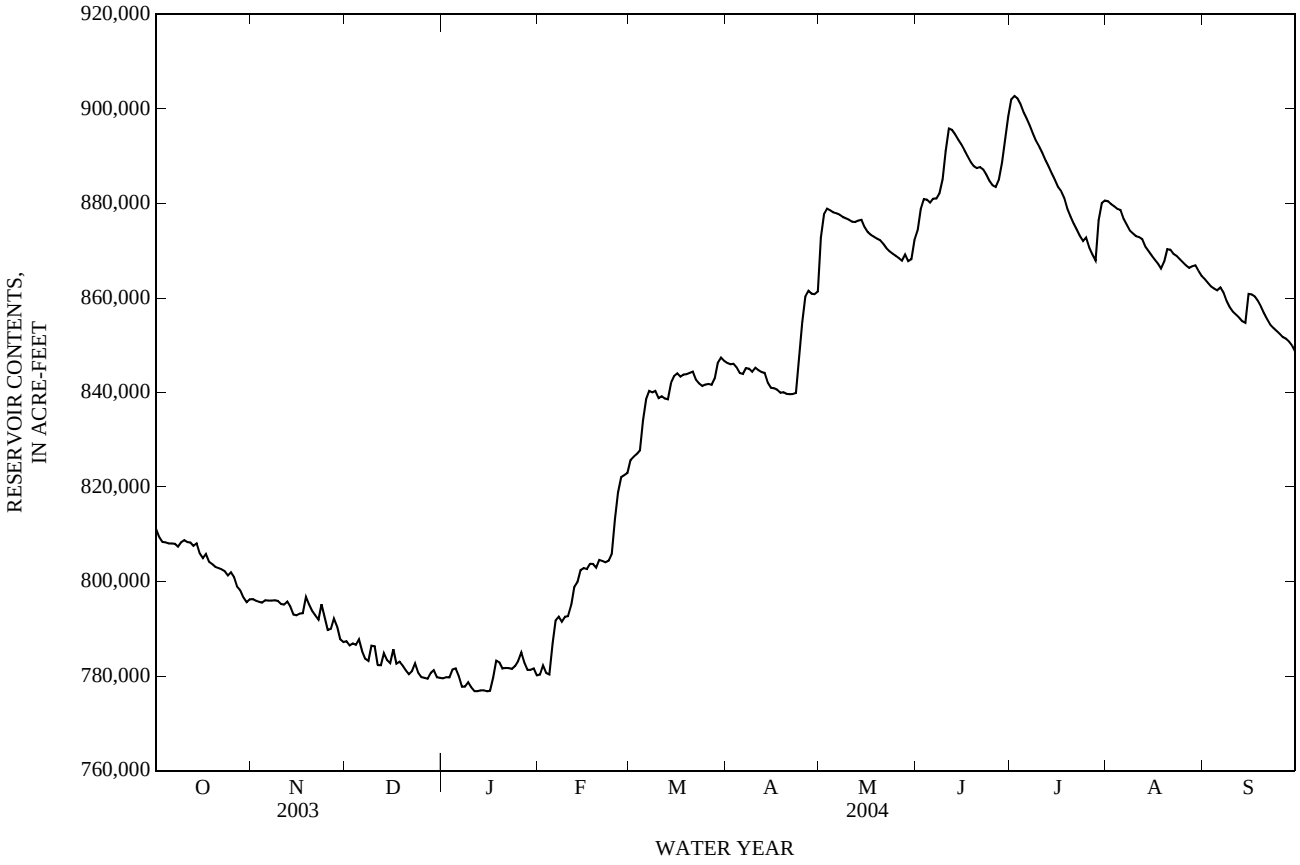
EXTREMES FOR CURRENT YEAR.--Maximum contents, 905,500 acre-ft, July 3, elevation, 437.95 ft; minimum contents, 775,800 acre-ft, Jan. 16, elevation, 434.43 ft.

RESERVOIR STORAGE, ACRE FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	811,200	796,300	787,400	779,500	780,300	825,700	846,200	872,800	874,300	902,000	880,500	864,000
2	809,400	796,000	786,500	779,800	782,300	826,400	846,000	877,800	878,700	902,800	879,900	863,200
3	808,400	795,700	786,900	779,700	780,600	826,900	846,100	878,900	880,900	902,200	879,400	862,500
4	808,300	795,500	786,600	781,400	780,400	827,700	845,300	878,500	880,800	901,000	878,800	862,000
5	808,100	796,100	787,800	781,600	786,800	834,000	844,100	878,100	880,200	899,200	878,600	861,600
6	808,100	796,000	785,300	780,000	791,700	838,600	843,900	877,900	881,000	897,900	876,800	862,200
7	808,000	796,000	783,700	777,800	792,600	840,300	845,200	877,600	881,100	896,400	875,500	861,100
8	807,400	796,100	783,200	777,800	791,500	840,000	845,000	877,200	882,100	894,700	874,300	859,400
9	808,300	795,900	786,400	778,700	792,600	840,300	844,400	876,800	885,100	893,200	873,600	858,000
10	808,800	795,300	786,300	777,600	792,700	838,800	845,200	876,500	891,100	892,000	873,100	857,100
11	808,400	795,100	782,300	776,800	795,000	839,200	844,700	876,100	895,800	890,700	872,900	856,500
12	808,300	795,800	782,300	776,800	798,900	838,700	844,300	876,100	895,600	889,100	872,500	855,900
13	807,500	794,800	784,900	777,000	799,900	838,600	844,100	876,400	894,600	887,800	870,800	855,100
14	808,100	793,000	783,400	777,000	802,400	842,100	842,100	876,500	893,500	886,300	869,900	854,700
15	806,000	792,900	782,800	776,800	802,900	843,500	841,000	875,000	892,500	885,000	869,000	860,900
16	804,900	793,200	785,700	776,900	802,600	844,100	840,900	873,900	891,300	883,500	868,100	860,800
17	805,800	793,300	782,600	779,700	803,800	843,400	840,600	873,400	890,000	882,600	867,300	860,300
18	804,200	796,800	783,000	783,300	803,700	843,800	840,000	873,000	888,800	881,100	866,200	859,400
19	803,700	795,200	782,200	782,900	802,900	843,900	840,100	872,600	887,900	878,900	867,700	858,100
20	803,100	793,800	781,200	781,600	804,600	844,100	839,700	872,200	887,500	877,200	870,300	856,800
21	802,900	792,900	780,400	781,700	804,400	844,400	839,600	871,500	887,700	875,700	870,200	855,500
22	802,600	791,900	781,100	781,700	804,100	842,700	839,700	870,500	887,200	874,400	869,300	854,300
23	802,200	795,200	782,700	781,500	804,400	841,900	839,900	869,900	886,100	873,100	868,900	853,600
24	801,300	792,400	780,700	782,200	805,800	841,400	847,400	869,400	884,800	872,000	868,200	853,100
25	802,000	789,800	779,800	783,200	813,200	841,700	854,700	868,900	883,800	872,800	867,500	852,400
26	800,900	790,000	779,600	785,000	818,800	841,800	860,300	868,400	883,500	870,700	866,900	851,700
27	798,900	792,200	779,400	782,900	822,100	841,600	861,500	867,900	885,000	869,200	866,400	851,400
28	798,100	790,500	780,700	781,300	822,500	843,000	860,900	869,200	888,600	867,900	866,700	850,800
29	796,700	787,800	781,300	781,300	823,000	846,300	860,800	867,800	893,300	876,400	866,900	849,900
30	795,700	787,200	779,800	781,600	---	847,400	861,300	868,200	898,400	880,100	865,800	848,700
31	796,300	---	779,600	780,200	---	846,700	---	872,200	---	880,600	864,700	---
MEAN	804,600	793,800	783,100	780,200	800,200	840,000	846,500	873,600	887,000	885,000	871,200	857,000
MAX	811,200	796,800	787,800	785,000	823,000	847,400	861,500	878,900	898,400	902,800	880,500	864,000
MIN	795,700	787,200	779,400	776,800	780,300	825,700	839,600	867,800	874,300	867,900	864,700	848,700

CAL YR 2003 MEAN 855,500 MAX 927,200 MIN 779,400
WTR YR 2004 MEAN 835,300 MAX 902,800 MIN 776,800

08017400 Lake Tawakoni near Wills Point, TX—Continued



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 mi^2.

PERIOD OF RECORD.--Oct. 1970 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 370.00 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since installation of gage in Oct. 1970, at least 10% of contributing drainage area has been regulated. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since construction of Iron Bridge Dam in 1960, about 21,000 ft^3/s, May 1, 1966, from theoretical rating curve of flow over dam 750 ft upstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	9.9	22	13	17	8.9	12	438	36	463	27	11
2	10	10	16	13	16	8.7	12	321	242	491	21	11
3	9.8	11	15	13	16	8.8	12	32	60	476	20	12
4	9.8	11	17	13	17	16	11	4.4	12	435	20	12
5	10	10	21	13	25	e99	11	1.7	5.9	378	42	12
6	9.9	10	20	13	29	e53	12	1.2	111	335	44	51
7	9.8	10	20	13	19	e23	14	1.1	15	291	24	92
8	9.9	10	20	13	17	e14	13	1.0	7.5	242	20	60
9	10	9.9	24	13	17	e9.0	12	0.70	160	196	19	21
10	10	9.8	41	13	17	e8.5	27	0.63	213	159	19	12
11	9.9	9.8	23	13	31	7.4	42	0.66	303	128	72	11
12	9.1	10	22	13	129	6.9	24	0.71	259	92	72	11
13	8.4	9.5	21	13	46	7.0	37	15	229	67	19	11
14	12	9.3	20	13	26	102	15	77	187	49	12	12
15	8.7	10	19	14	22	124	12	39	152	30	12	29
16	8.4	10	24	14	21	39	12	2.4	135	21	12	26
17	9.8	11	19	15	19	20	11	0.98	95	50	12	13
18	9.1	15	17	15	18	14	11	0.80	70	121	12	11
19	8.6	12	15	15	17	13	11	0.73	81	29	14	10
20	8.4	11	13	14	17	12	12	0.74	58	15	15	11
21	8.6	10	14	14	17	20	12	0.78	54	14	20	11
22	8.6	11	14	14	17	14	12	0.80	73	13	13	11
23	8.3	24	17	14	17	13	12	0.70	47	11	13	12
24	8.4	15	15	15	17	13	67	0.66	11	20	12	12
25	11	10	14	15	79	13	106	0.86	4.9	88	12	12
26	10	11	14	20	93	13	57	0.86	7.6	61	12	12
27	7.9	25	14	16	22	13	19	0.96	26	18	12	12
28	8.4	27	14	12	12	15	11	1.0	69	14	22	12
29	10	23	13	13	9.9	14	11	0.87	181	150	23	9.9
30	11	22	12	16	---	17	12	3.3	411	189	13	12
31	10	---	12	17	---	13	---	3.9	---	50	11	---
TOTAL	294.8	387.2	562	435	819.9	752.2	642	954.44	3,315.9	4,696	671	554.9
MEAN	9.51	12.9	18.1	14.0	28.3	24.3	21.4	30.8	111	151	21.6	18.5
MAX	12	27	41	20	129	124	106	438	411	491	72	92
MIN	7.9	9.3	12	12	9.9	6.9	11	0.63	4.9	11	11	9.9
AC-FT	585	768	1,110	863	1,630	1,490	1,270	1,890	6,580	9,310	1,330	1,100

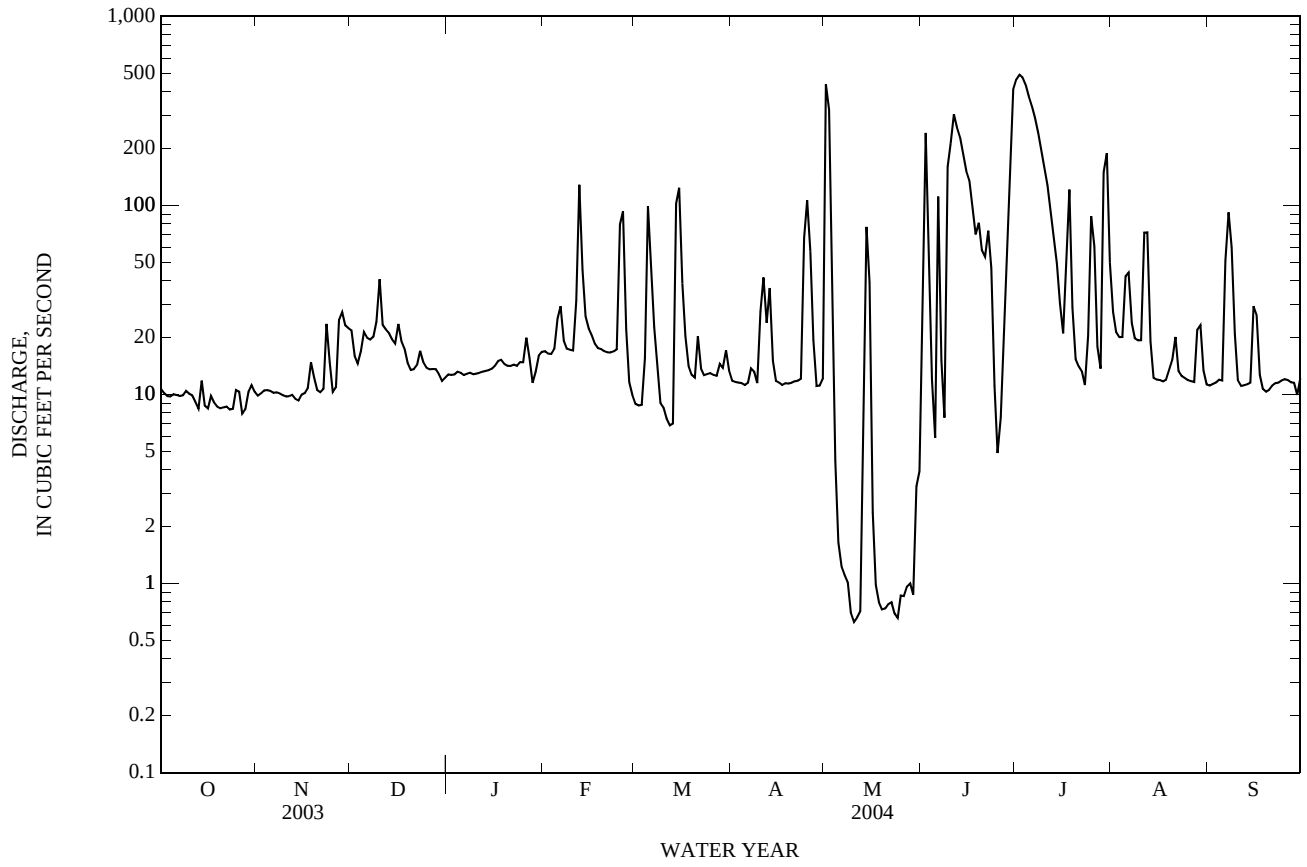
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2004, BY WATER YEAR (WY)

MEAN	191	342	592	363	577	739	683	821	522	158	30.8	43.7
MAX	1,726	2,539	3,377	1,701	2,482	3,319	2,090	3,888	2,825	1,229	332	868
(WY)	(1974)	(1975)	(1992)	(1998)	(1975)	(2001)	(1986)	(1990)	(1989)	(1981)	(1979)	(1974)
MIN	0.21	0.76	0.16	3.14	1.87	2.84	1.31	5.35	0.81	0.56	0.12	0.25
(WY)	(1991)	(1979)	(1991)	(1996)	(1976)	(1976)	(1971)	(1996)	(1972)	(1972)	(1986)	(1987)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1971 - 2004	
ANNUAL TOTAL	61,412.0		14,085.34			
ANNUAL MEAN	168		38.5		421	
HIGHEST ANNUAL MEAN					1,064	1992
LOWEST ANNUAL MEAN					3.66	1996
HIGHEST DAILY MEAN	1,880	Mar 1	491	Jul 2	20,000	May 4, 1990
LOWEST DAILY MEAN	5.2	Sep 26	0.63	May 10	0.00	Oct 1, 1971
ANNUAL SEVEN-DAY MINIMUM	8.4	Sep 4	0.74	May 18	0.00	Oct 6, 1971
MAXIMUM PEAK FLOW			821	May 1	20,600	May 4, 1990
MAXIMUM PEAK STAGE			9.54	May 1	19.11	May 4, 1990
ANNUAL RUNOFF (AC-FT)	121,800		27,940		305,000	
10 PERCENT EXCEEDS	545		92		1,310	
50 PERCENT EXCEEDS	20		14		20	
90 PERCENT EXCEEDS	9.2		8.4		0.37	

e Estimated

08017410 Sabine River near Wills Point, TX—Continued



08017600 Lake Edgewood near Edgewood, TX

LOCATION.--Lat 32°42'30", long 95°54'06", Van Zandt County, Hydrologic Unit 12010001, on earthrolled dam, 1.0 mi northwest of Edgewood.

DRAINAGE AREA.--16.6 mi^2.

PERIOD OF RECORD.--Oct. 2000 to current year.

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

REMARKS.--Records good except those for Sept. 11-14, which are fair. The lake is formed by a rolled earthfill dam. Reservoir used for City of Edgewood water supply. City of Edgewood will divert water from reservoir in extreme drought conditions.

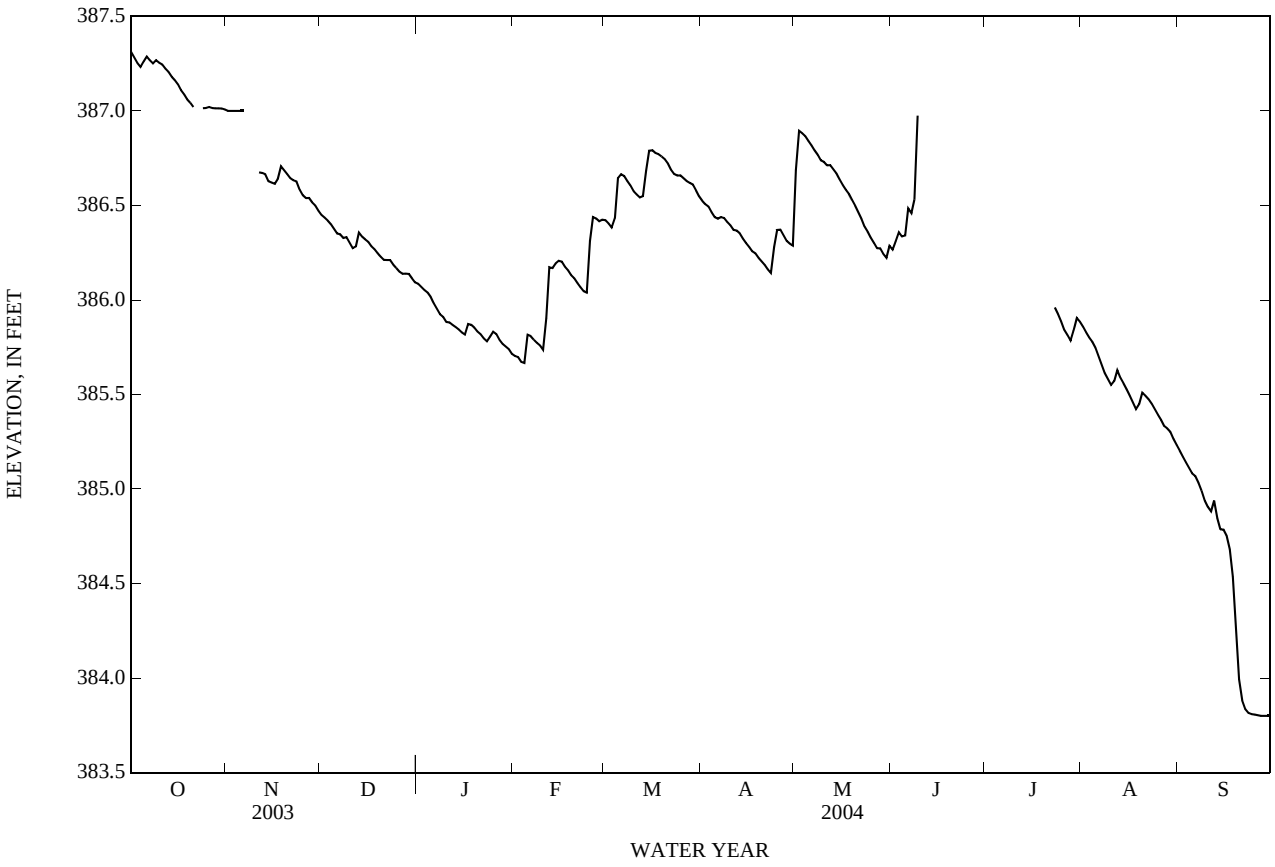
EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 392.37 ft, Feb. 16, 2001; minimum elevation, 383.80 ft, Sept. 25, 26, 27, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 387.32 ft, Oct. 1; minimum elevation, 383.80 ft, Sept. 25, 26, 27.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	387.31	387.00	386.45	386.08	385.70	386.42	386.52	386.69	386.27	---	385.86	385.20
2	387.28	387.00	386.44	386.07	385.70	386.40	386.51	386.90	386.31	---	385.83	385.17
3	387.25	387.00	386.42	386.05	385.67	386.38	386.49	386.88	386.36	---	385.80	385.14
4	387.23	387.00	386.40	386.04	385.67	386.43	386.46	386.87	386.34	---	385.78	385.11
5	387.26	387.00	386.38	386.02	385.82	386.64	386.44	386.84	386.34	---	385.75	385.08
6	387.29	387.00	386.35	385.98	385.81	386.67	386.43	386.82	386.48	---	385.70	385.07
7	387.27	---	386.35	385.95	385.79	386.66	386.44	386.79	386.46	---	385.65	385.03
8	387.25	---	386.33	385.92	385.77	386.63	386.43	386.77	386.53	---	385.61	384.99
9	387.27	---	386.33	385.91	385.76	386.61	386.41	386.74	386.97	---	385.58	384.94
10	387.26	---	386.30	385.88	385.74	386.58	386.40	386.73	---	---	385.55	384.91
11	387.25	386.68	386.27	385.88	385.90	386.56	386.37	386.71	---	---	385.57	384.88
12	387.22	386.67	386.28	385.87	386.17	386.54	386.37	386.71	---	---	385.63	384.94
13	387.21	386.67	386.36	385.86	386.17	386.55	386.35	386.69	---	---	385.59	384.85
14	387.18	386.63	386.34	385.84	386.19	386.68	386.32	386.67	---	---	385.56	384.79
15	387.16	386.62	386.32	385.83	386.21	386.79	386.30	386.64	---	---	385.53	384.79
16	387.14	386.61	386.31	385.82	386.20	386.79	386.28	386.61	---	---	385.49	384.75
17	387.11	386.64	386.28	385.87	386.18	386.78	386.26	386.58	---	---	385.46	384.68
18	387.09	386.71	386.27	385.87	386.16	386.77	386.25	386.56	---	---	385.42	384.54
19	387.06	386.69	386.25	385.85	386.13	386.76	386.22	386.53	---	---	385.45	384.27
20	387.04	386.67	386.23	385.83	386.12	386.74	386.20	386.50	---	---	385.51	383.99
21	387.02	386.64	386.21	385.82	386.09	386.72	386.19	386.47	---	---	385.49	383.88
22	---	386.63	386.21	385.80	386.07	386.69	386.16	386.43	---	---	385.48	383.84
23	---	386.63	386.21	385.78	386.05	386.67	386.14	386.39	---	385.96	385.45	383.82
24	387.01	386.58	386.19	385.81	386.04	386.66	386.28	386.36	---	385.93	385.42	383.81
25	387.01	386.55	386.17	385.83	386.31	386.66	386.37	386.33	---	385.89	385.39	383.81
26	387.02	386.54	386.15	385.82	386.44	386.64	386.37	386.30	---	385.84	385.37	383.80
27	387.02	386.54	386.14	385.79	386.43	386.63	386.34	386.27	---	385.81	385.33	383.80
28	387.01	386.52	386.14	385.77	386.42	386.62	386.31	386.27	---	385.78	385.32	383.80
29	387.01	386.50	386.14	385.75	386.42	386.61	386.30	386.24	---	385.84	385.30	383.80
30	387.01	386.47	386.11	385.74	---	386.58	386.29	386.22	---	385.90	385.27	383.80
31	387.01	---	386.09	385.72	---	386.55	---	386.29	---	385.89	385.23	---
MEAN	---	---	386.27	385.87	386.04	386.63	386.34	386.57	---	---	385.53	384.51
MAX	---	---	386.45	386.08	386.44	386.79	386.52	386.90	---	---	385.86	385.20
MIN	---	---	386.09	385.72	385.67	386.38	386.14	386.22	---	---	385.23	383.80

08017600 Lake Edgewood near Edgewood, TX—Continued



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 mi^2.

PERIOD OF RECORD.--June 1939 to Sept. 1959, Oct. 1967 to current year. Gage-height records collected at this site since July 1946 are contained in reports published by the National Weather Service. Water-quality records: Chemical data: Oct. 1967 to Sept. 1996. Biochemical data: Oct. 1973 to Sept. 1996.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 304.16 ft above NGVD of 1929. May 12, 1939 to Dec. 11, 1955, at site 55 ft upstream from downstream side of bridge at same datum. Dec. 12, 1955 to Dec. 12, 1959, at downstream side of bridge at same datum. Oct. 1, 1967 to Sept. 12, 1968, nonrecording gage at downstream side of bridge at same datum. Sept. 13, 1968 to Oct. 23, 1974, water-stage recorder at downstream side of bridge at same datum. Oct. 24, 1974 to Oct. 16, 1975, at site on right bank 75 ft downstream from bridge at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since Oct. 1960, at least 10% of contributing drainage area has been regulated. Flow may also be slightly affected at times by discharge from floodwater-retarding structures controlling runoff from a 9.70 mi^2 area in the Mill Creek drainage basin.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--20 years (water years 1940-1959) prior to regulation by Lake Tawakoni, 1,054 ft^3/s (763,600 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1940-1959: Maximum discharge 76,000 ft^3/s Apr. 1, 1945 (gage height, 24.00 ft); maximum gage height, 24.37 ft June 8, 1943; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	13	18	32	34	299	83	593	16	843	407	23
2	8.7	12	23	29	33	238	64	1,870	162	1,060	217	23
3	11	12	23	26	32	201	54	2,380	521	1,050	102	19
4	12	14	21	25	82	205	48	2,630	791	853	57	16
5	15	14	19	25	689	701	43	2,610	722	675	37	14
6	19	16	18	22	890	942	41	1,960	416	564	27	14
7	18	15	17	20	672	872	46	929	418	469	21	14
8	19	17	15	19	468	549	45	257	597	390	22	13
9	22	18	17	18	273	234	44	109	748	325	35	14
10	24	19	16	18	167	147	42	77	824	261	26	37
11	24	22	16	17	218	112	43	60	1,020	204	22	37
12	23	20	19	17	807	95	56	49	1,010	162	28	28
13	20	17	41	18	1,030	85	57	40	808	129	24	20
14	19	15	58	18	937	94	67	36	550	97	62	15
15	16	15	48	18	701	201	59	34	375	71	71	14
16	15	15	42	19	450	548	57	56	286	53	44	15
17	15	17	39	34	329	581	49	105	243	38	28	17
18	14	31	36	43	261	293	39	67	244	25	21	45
19	14	25	30	43	202	159	35	37	180	16	30	45
20	14	22	26	41	154	118	34	24	130	55	56	29
21	14	25	24	44	123	95	32	18	112	66	35	20
22	14	22	24	40	103	135	29	14	108	33	34	15
23	13	23	26	34	88	197	28	12	84	16	55	13
24	13	24	25	33	81	187	76	12	90	9.8	56	11
25	12	19	23	62	218	122	841	12	90	7.4	42	11
26	12	18	21	71	653	89	1,380	9.5	64	5.9	29	10
27	11	22	20	66	865	78	1,480	8.2	85	5.4	23	10
28	11	26	27	62	781	71	1,210	8.1	318	54	20	10
29	12	21	73	55	468	66	513	8.0	594	45	17	10
30	12	18	58	46	---	73	172	8.2	680	29	16	10
31	13	---	41	39	---	100	---	11	---	267	17	---
TOTAL	468.0	567	904	1,054	11,809	7,887	6,767	14,044.0	12,286	7,878.5	1,681	572
MEAN	15.1	18.9	29.2	34.0	407	254	226	453	410	254	54.2	19.1
MAX	24	31	73	71	1,030	942	1,480	2,630	1,020	1,060	407	45
MIN	8.3	12	15	17	32	66	28	8.0	16	5.4	16	10
AC-FT	928	1,120	1,790	2,090	23,420	15,640	13,420	27,860	24,370	15,630	3,330	1,130

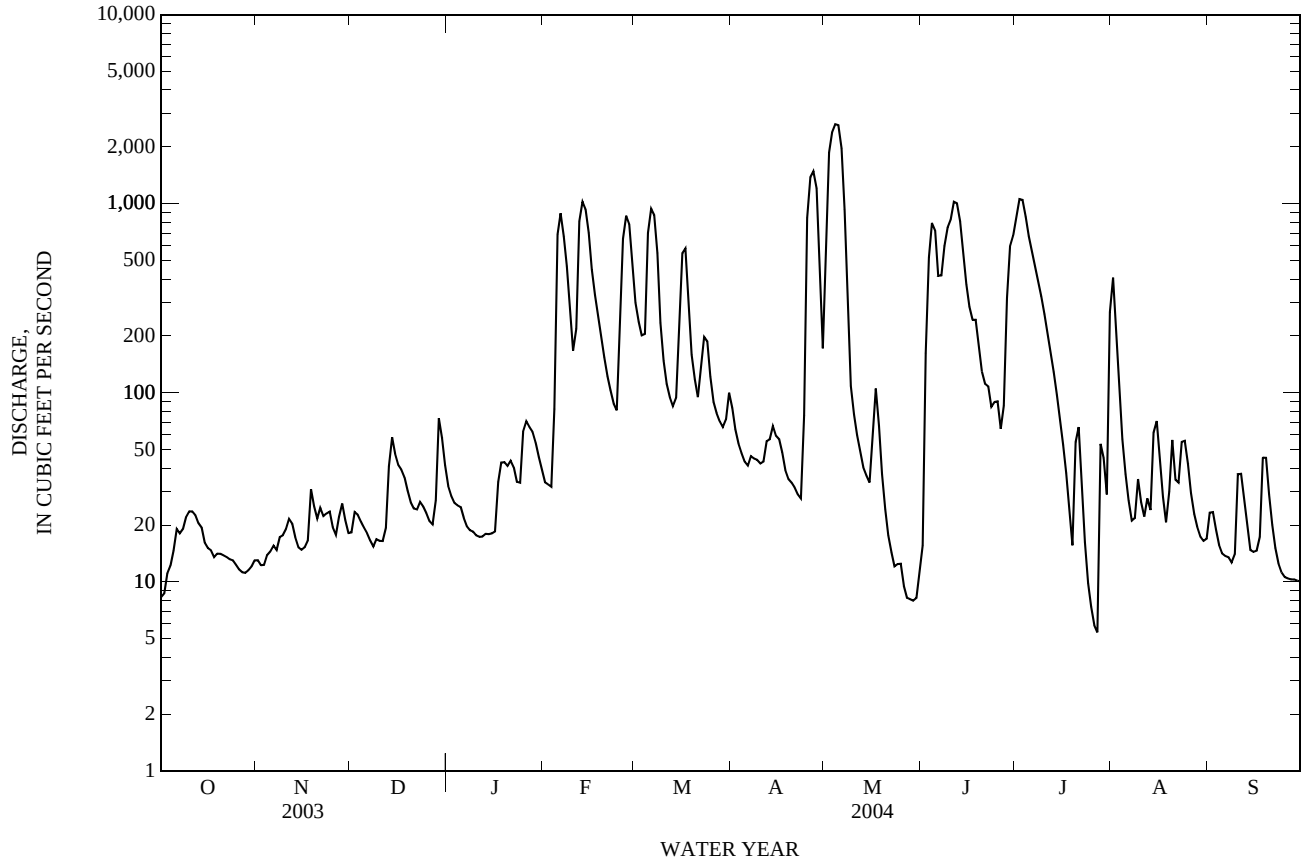
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2004z, BY WATER YEAR (WY)

MEAN	291	738	1,223	949	1,388	1,696	1,320	1,824	975	245	55.0	61.3
MAX	2,158	5,296	5,873	4,097	5,179	6,885	4,086	6,934	4,083	1,626	419	616
(WY)	(1974)	(1975)	(1992)	(1998)	(2001)	(2001)	(1990)	(1968)	(1973)	(1992)	(1979)	(1974)
MIN	3.42	9.88	10.9	26.2	20.3	28.0	31.8	29.6	5.72	4.87	0.07	0.05
(WY)	(1988)	(1990)	(1990)	(2000)	(1996)	(1996)	(1971)	(1988)	(1971)	(1969)	(1987)	(1987)

08018500 Sabine River near Mineola, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1967 - 2004z	
ANNUAL TOTAL	146,066.9		65,917.5			
ANNUAL MEAN	400		180		895	
HIGHEST ANNUAL MEAN					1,904	1968
LOWEST ANNUAL MEAN					29.8	1996
HIGHEST DAILY MEAN	4,630	Feb 26	2,630	May 4	36,200	Dec 11, 1971
LOWEST DAILY MEAN	8.3	Oct 1	5.4	Jul 27	0.00	Aug 13, 1970
ANNUAL SEVEN-DAY MINIMUM	10	Sep 27	9.3	May 25	0.00	Sep 15, 1971
MAXIMUM PEAK FLOW			2,700	May 4	37,700	Dec 11, 1971
MAXIMUM PEAK STAGE			15.91	May 4	21.53	Dec 11, 1971
ANNUAL RUNOFF (AC-FT)	289,700		130,700		648,200	
10 PERCENT EXCEEDS	1,240		614		2,740	
50 PERCENT EXCEEDS	54		37		130	
90 PERCENT EXCEEDS	13		13		8.9	

z Period of regulated streamflow.



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 mi^2.

PERIOD OF RECORD.--Oct. 1979 to current year. Water-quality records: Chemical data: Oct. 1980 to Sept. 1984.

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

REMARKS.--No estimated daily contents. Records good. The lake is formed by a rolled earthfill dam 12,660 ft long, including a 260-foot gated concrete spillway. The outlet works consist of two 5- by 8-foot low-flow sluice gates, five 40- by 20-foot tainter 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 Jan. 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 from 60 mi^2 above the lake. Conservation pool storage is 675,820 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	419.5
Top of tainter gates	405.0
Crest of gated spillway	385.0
Invert of upper sluice gate	383.0
Invert of lower sluice gate	360.5
Invert of sluice gate in two center pieces	360.0

COOPERATION.--Capacity table 1-A was 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. Capacity table, Table 2-C, provided by the Sabine River Authority was put into effect Oct. 1, 1996. A new capacity table, provided by the Sabine River Authority was put in effect Oct. 1, 2002.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 737,400 acre-ft, Feb. 16, 2001, elevation, 405.15 ft; minimum contents after initial filling, 81,550 acre-ft, Sept. 27, 1980, elevation, 366.86 ft.

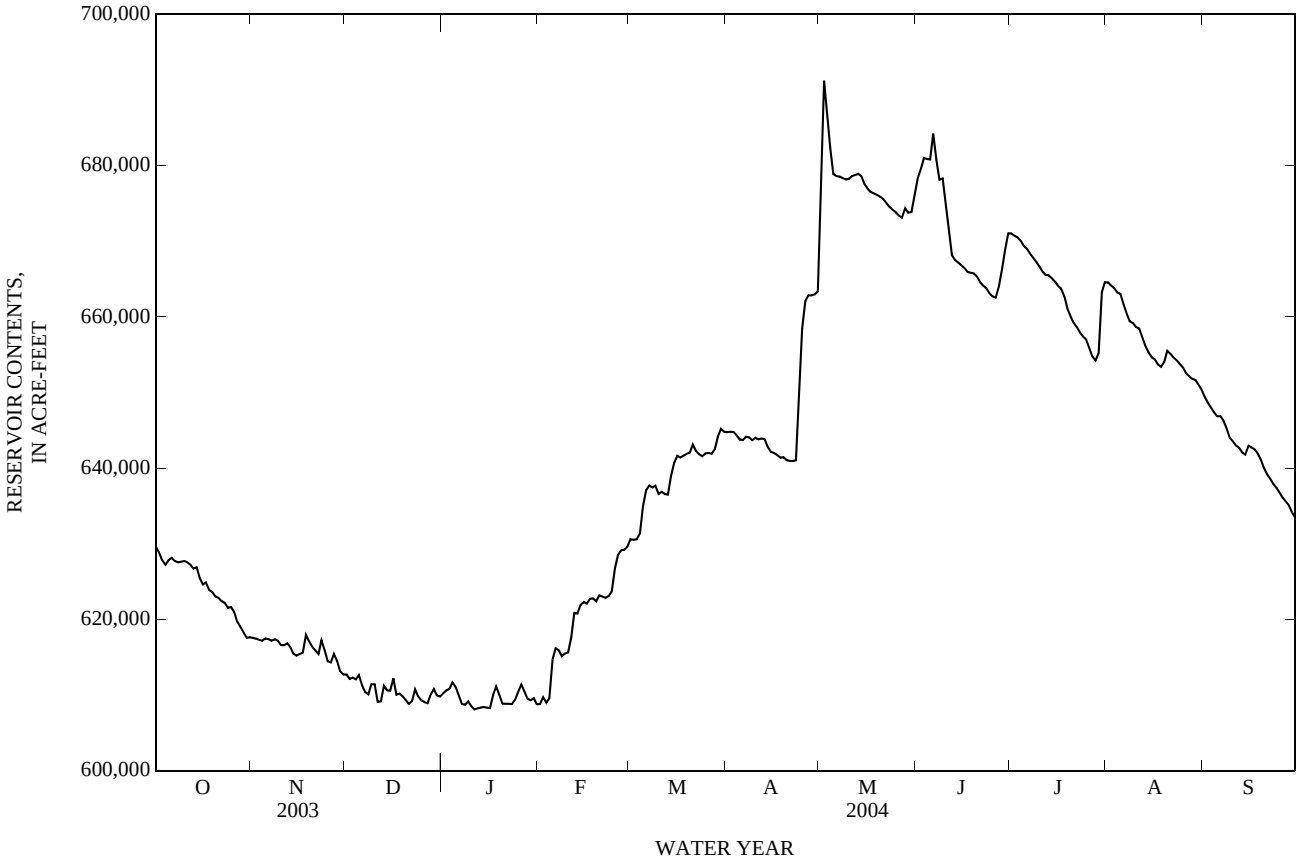
EXTREMES FOR CURRENT YEAR.--Maximum contents, 692,600 acre-ft, May 2, elevation, 403.60 ft; minimum contents, 608,100 acre-ft, Dec. 12, Jan. 10, 15, 16, Feb. 4, elevation, 400.46 ft.

RESERVOIR STORAGE, ACRE FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	629,600	617,600	612,700	610,200	608,800	630,600	644,800	680,100	678,200	671,000	664,600	649,400
2	628,800	617,500	612,100	610,600	609,700	630,500	644,800	691,200	679,500	670,700	664,100	648,600
3	627,800	617,300	612,300	610,800	609,000	630,600	644,800	687,000	681,000	670,500	663,800	648,000
4	627,200	617,200	612,100	611,700	609,600	631,300	644,400	682,200	680,900	670,100	663,200	647,400
5	627,800	617,500	612,600	611,000	614,700	634,900	643,800	678,900	680,800	669,400	663,000	646,800
6	628,100	617,400	611,300	610,000	616,200	637,100	643,700	678,600	684,200	669,000	661,700	646,900
7	627,700	617,200	610,400	608,800	615,900	637,700	644,200	678,600	680,700	668,400	660,400	646,300
8	627,500	617,400	610,100	608,700	615,100	637,400	644,100	678,300	678,100	667,800	659,400	645,300
9	627,600	617,200	611,400	609,200	615,500	637,700	643,700	678,200	678,300	667,300	659,200	644,000
10	627,700	616,600	611,400	608,500	615,600	636,600	644,000	678,300	674,900	666,700	658,700	643,500
11	627,600	616,600	609,100	608,100	617,600	636,900	643,800	678,600	671,300	666,000	658,500	643,000
12	627,200	616,800	609,200	608,200	620,900	636,600	643,900	678,700	668,200	665,500	657,300	642,700
13	626,700	616,300	611,200	608,300	620,800	636,500	643,800	678,900	667,500	665,500	656,100	642,000
14	626,900	615,400	610,600	608,400	621,900	639,000	642,800	678,600	667,200	665,100	655,300	641,800
15	625,500	615,200	610,600	608,300	622,300	640,700	642,100	677,600	666,800	664,700	654,600	643,000
16	624,600	615,400	612,200	608,300	622,100	641,600	642,000	676,900	666,500	664,100	654,400	642,700
17	624,900	615,600	610,000	610,000	622,700	641,400	641,700	676,500	665,900	663,700	653,700	642,500
18	623,900	618,000	610,200	611,100	622,800	641,700	641,400	676,300	665,800	662,700	653,400	641,900
19	623,600	617,100	609,800	610,000	622,400	641,900	641,400	676,100	665,700	661,100	654,100	641,100
20	623,000	616,400	609,300	608,900	623,200	642,000	641,100	675,900	665,400	660,100	655,500	640,000
21	622,800	615,900	608,800	608,800	623,000	643,100	641,000	675,600	664,600	659,200	655,100	639,200
22	622,400	615,500	609,200	608,800	622,900	642,200	640,900	675,000	664,100	658,600	654,600	638,600
23	622,200	617,200	610,800	608,800	623,100	641,800	641,000	674,500	663,800	657,900	654,300	637,900
24	621,500	615,900	609,800	609,400	623,700	641,600	649,900	674,200	663,100	657,400	653,800	637,400
25	621,700	614,500	609,300	610,400	626,800	641,900	658,500	673,900	662,700	657,000	653,300	636,700
26	621,000	614,300	609,100	611,400	628,500	642,000	662,100	673,400	662,500	655,900	652,600	636,100
27	619,700	615,400	608,900	610,500	629,200	641,900	662,900	673,100	663,900	654,800	652,100	635,600
28	619,000	614,500	610,100	609,500	629,200	642,500	662,800	674,400	666,300	654,200	651,800	635,000
29	618,300	613,100	610,800	609,300	629,600	644,100	663,000	673,800	668,800	655,200	651,700	634,100
30	617,600	612,700	610,000	609,600	---	645,200	663,300	673,900	671,000	663,200	651,000	633,400
31	617,600	---	609,800	608,800	---	644,800	---	676,100	---	664,600	650,400	---
MEAN	624,400	616,200	610,500	609,500	620,100	639,200	647,100	677,500	670,600	663,500	656,500	641,700
MAX	629,600	618,000	612,700	611,700	629,600	645,200	663,300	691,200	684,200	671,000	664,600	649,400
MIN	617,600	612,700	608,800	608,100	608,800	630,500	640,900	673,100	662,500	654,200	650,400	633,400

CAL YR 2003 MEAN 650,700 MAX 681,000 MIN 608,800
WTR YR 2004 MEAN 639,800 MAX 691,200 MIN 608,100

08018800 Lake Fork Reservoir near Quitman, TX—Continued



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 mi^2.

PERIOD OF RECORD.--June 1924 to Apr. 1926, Feb. 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 Oct. 1961, published as "Lake Fork Sabine River near Quitman". Water-quality records: Chemical data: Dec. 1961 to Sept. 1989. Specific conductance: Nov. 1967 to Sept. 1989. Water temperature: Dec. 1967 to Sept. 1989.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 317.42 ft above NGVD 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. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1980, at least 10% of contributing drainage area has been regulated. Construction of Lake Fork Reservoir located about 5 mi upstream from this station, began in 1975. Deliberate impoundment began June 29, 1979, and the dam was completed in Jan. 1980. Lake Fork Reservoir controls runoff from 490 mi^2 above this station. The city of Quitman discharges wastewater effluent into a tributary above this station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--41 years (water years 1925, 1940-1979), prior to regulation by Lake Fork Reservoir, 432 ft^3/s (313,000 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1895 reached a stage of about 25.9 ft, from information by local resident.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1925, 1940-1979: Maximum discharge, 75,600 ft^3/s, Mar. 30, 1945, gage height, 29.85 ft, from floodmark, from rating curve extended above 49,000 ft^3/s; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	38	11	12	11	85	24	446	96	221	669	63
2	60	13	11	12	11	76	24	1,240	249	160	318	64
3	60	12	11	12	11	57	22	3,290	361	125	151	64
4	60	12	11	12	35	83	20	3,670	372	107	110	63
5	65	12	10	12	469	468	18	2,770	238	97	92	63
6	70	12	10	12	594	497	17	1,440	531	92	82	63
7	67	12	10	12	343	305	18	526	1,350	84	73	64
8	64	12	10	12	96	119	18	111	2,620	80	68	64
9	64	12	12	12	58	69	17	46	3,550	77	67	63
10	63	12	12	11	50	55	16	36	3,310	75	68	62
11	63	12	12	11	122	45	16	31	3,030	73	66	63
12	63	12	12	11	484	39	18	28	2,790	72	65	62
13	63	11	15	13	503	36	18	26	1,580	72	65	62
14	64	11	16	11	308	67	17	24	699	70	65	62
15	62	11	13	11	210	170	15	23	263	69	64	63
16	63	12	12	11	183	113	13	20	136	68	64	63
17	63	12	12	15	120	72	13	19	104	67	65	62
18	62	14	12	17	90	56	12	18	95	67	64	61
19	62	14	11	15	68	47	12	16	91	67	70	61
20	63	11	11	14	56	43	12	15	96	67	110	60
21	65	11	11	15	46	39	12	14	93	67	83	65
22	62	11	11	13	39	35	12	13	88	67	75	68
23	62	11	13	12	35	33	13	13	85	66	104	64
24	62	11	13	13	37	30	67	12	84	66	79	64
25	62	11	12	34	178	33	313	12	82	65	69	64
26	62	11	12	23	404	33	336	12	82	65	67	64
27	62	11	12	16	311	31	239	11	129	67	65	63
28	62	11	13	14	131	30	87	12	203	65	65	64
29	62	11	22	12	79	28	53	11	191	66	64	62
30	62	10	20	12	---	31	47	12	194	294	64	62
31	62	---	15	11	---	28	---	20	---	778	64	---
TOTAL	1,945	376	388	423	5,082	2,853	1,519	13,937	22,792	3,476	3,195	1,892
MEAN	62.7	12.5	12.5	13.6	175	92.0	50.6	450	760	112	103	63.1
MAX	70	38	22	34	594	497	336	3,670	3,550	778	669	68
MIN	59	10	10	11	11	28	12	11	82	65	64	60
AC-FT	3,860	746	770	839	10,080	5,660	3,010	27,640	45,210	6,890	6,340	3,750

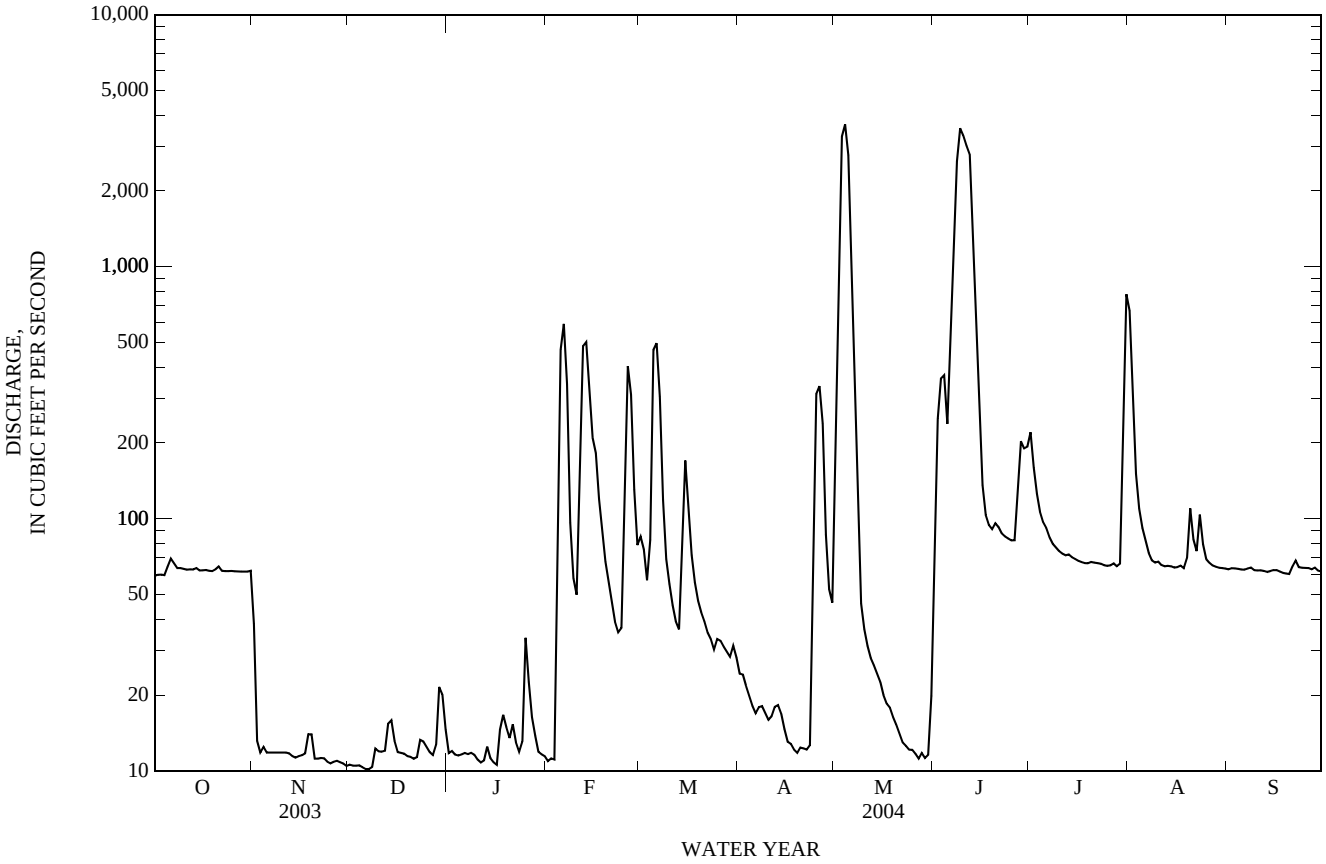
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2004z, BY WATER YEAR (WY)

MEAN	147	301	742	489	906	890	502	594	403	230	88.0	44.1
MAX	1,068	1,552	3,668	1,786	3,198	3,811	1,991	2,807	2,771	1,795	940	167
(WY)	(1999)	(1989)	(2002)	(1998)	(2001)	(2001)	(1990)	(1990)	(2000)	(1994)	(1992)	(1992)
MIN	1.23	2.92	9.31	4.43	14.1	25.3	4.29	9.51	8.51	1.43	0.13	0.76
(WY)	(1983)	(1981)	(1982)	(1981)	(1981)	(1996)	(1981)	(1998)	(1984)	(1985)	(1980)	(1982)

08019000 Lake Fork Creek near Quitman, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1980 - 2004z	
ANNUAL TOTAL	75,921.9		57,878			
ANNUAL MEAN	208		158		443	
HIGHEST ANNUAL MEAN					1,006	1992
LOWEST ANNUAL MEAN					43.2	1984
HIGHEST DAILY MEAN	4,620	Feb 25	3,670	May 4	26,300	Dec 17, 2001
LOWEST DAILY MEAN	5.6	May 4	10	Nov 30	0.00	Aug 23, 1980
ANNUAL SEVEN-DAY MINIMUM	6.2	Apr 29	10	Dec 2	0.00	Aug 23, 1980
MAXIMUM PEAK FLOW			4,320	May 3	27,300	Dec 17, 2001
MAXIMUM PEAK STAGE			16.64	May 3	22.35	Dec 17, 2001
ANNUAL RUNOFF (AC-FT)	150,600		114,800		320,700	
10 PERCENT EXCEEDS	258		253		1,260	
50 PERCENT EXCEEDS	60		62		50	
90 PERCENT EXCEEDS	11		11		6.7	

z Period of regulated streamflow.



08019200 Sabine River near Hawkins, TX

LOCATION.--Lat 32°33'35", long 95°12'23", Wood County, Hydrologic Unit 12010002, on left bank of downstream side of Farm Road 14 bridge, 2.2 mi south of Hawkins.

DRAINAGE AREA.--2,259 mi^2.

PERIOD OF RECORD.--Sept. 1997 to current year.

GAGE.--Water-stage recorder. Datum of gage is 266.59 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since installation of gage in Oct. 1997, at least 10% of contributing drainage area has been regulated. There are many diversions above station for oil field operations and municipal supply.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	58	65	192	95	635	164	1,030	82	1,070	436	108
2	58	59	62	154	94	465	162	1,890	118	1,100	754	107
3	57	55	60	125	99	382	135	2,310	312	1,170	618	110
4	56	39	61	109	104	360	117	2,480	776	1,160	381	111
5	59	28	64	99	395	776	105	2,720	1,050	1,030	243	109
6	62	24	62	91	1,150	1,340	99	3,070	1,050	844	188	106
7	75	24	62	69	1,320	1,530	105	3,420	831	698	154	104
8	83	25	60	64	1,120	1,450	115	3,590	914	589	134	102
9	83	26	59	62	764	1,100	114	3,170	1,390	505	123	102
10	82	28	59	60	460	e831	105	1,780	1,770	437	121	102
11	85	30	58	59	369	e589	98	536	2,000	374	129	103
12	83	31	60	57	726	426	98	291	2,280	319	184	117
13	79	32	74	56	1,270	385	115	237	2,560	277	138	118
14	76	31	96	56	1,410	369	126	223	2,720	246	125	112
15	71	30	112	56	1,370	362	123	206	2,680	222	122	107
16	69	28	115	57	1,100	459	115	180	2,360	197	151	104
17	66	28	106	73	740	708	104	165	1,690	175	144	102
18	64	59	110	105	540	697	96	196	842	158	127	102
19	63	91	105	133	428	478	86	185	571	144	128	104
20	63	106	99	138	351	322	75	148	520	132	174	121
21	62	93	90	120	295	248	71	124	437	129	222	120
22	62	79	79	107	255	211	72	108	335	162	208	111
23	63	71	81	101	224	206	69	99	300	149	177	107
24	62	69	81	97	207	273	184	92	265	128	161	107
25	61	67	82	101	248	287	610	88	244	116	180	104
26	60	67	81	118	471	245	1,280	85	239	109	168	102
27	58	65	77	140	881	207	1,570	83	240	109	145	101
28	57	62	88	133	1,050	181	1,640	79	419	107	129	100
29	58	61	169	115	930	163	1,520	76	811	113	120	99
30	58	66	241	106	---	156	914	74	1,040	159	115	99
31	58	---	230	100	---	147	---	73	---	169	111	---
TOTAL	2,051	1,532	2,848	3,053	18,466	15,988	10,187	28,808	30,846	12,297	6,310	3,201
MEAN	66.2	51.1	91.9	98.5	637	516	340	929	1,028	397	204	107
MAX	85	106	241	192	1,410	1,530	1,640	3,590	2,720	1,170	754	121
MIN	56	24	58	56	94	147	69	73	82	107	111	99
AC-FT	4,070	3,040	5,650	6,060	36,630	31,710	20,210	57,140	61,180	24,390	12,520	6,350

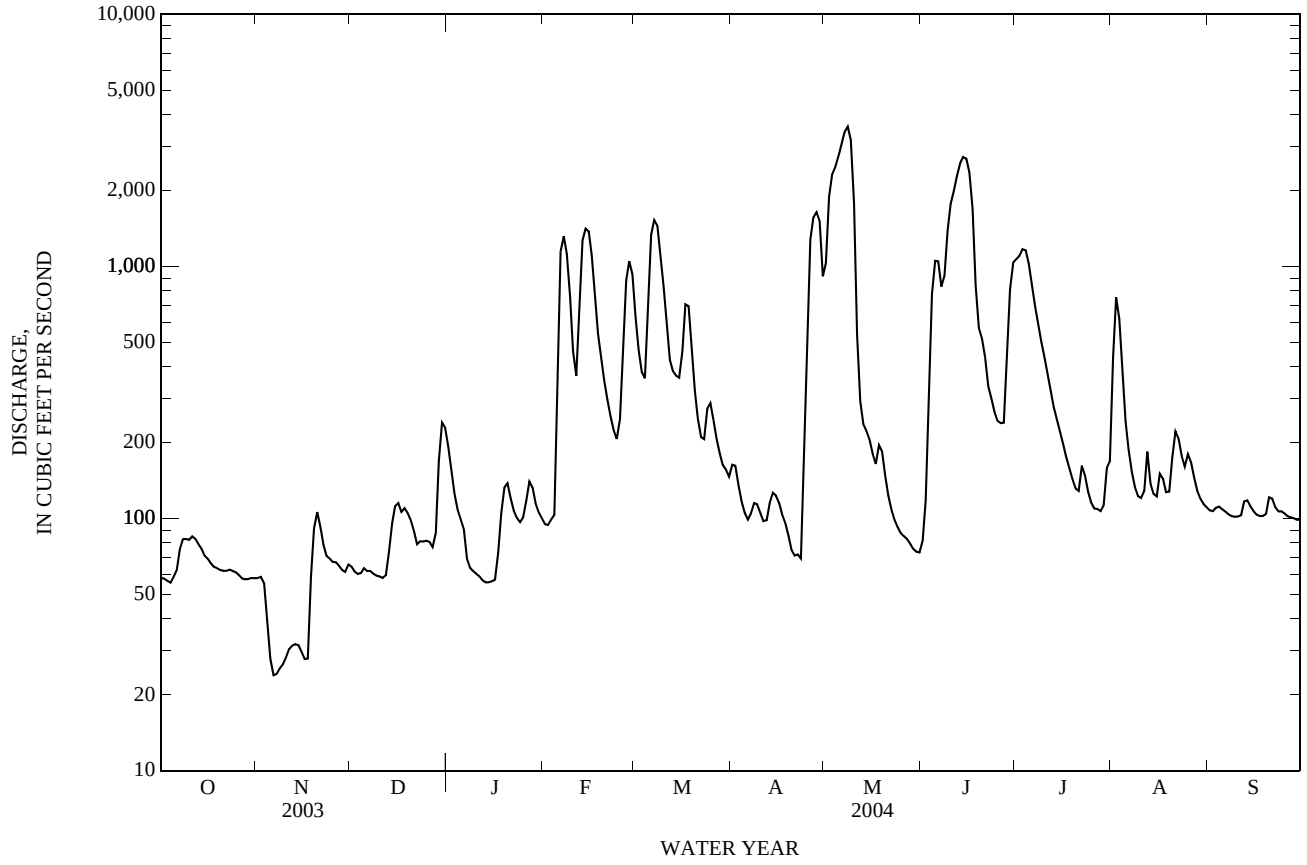
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2004, BY WATER YEAR (WY)

MEAN	534	672	2,530	2,466	2,774	3,552	1,446	906	1,348	336	111	169
MAX	1,735	2,569	7,342	6,742	8,451	12,670	4,585	2,232	4,797	1,139	204	482
(WY)	(1999)	(1999)	(2002)	(2001)	(2001)	(2001)	(2002)	(2002)	(2000)	(2000)	(2004)	(2001)
MIN	66.2	51.1	91.9	98.5	204	266	340	115	87.0	47.9	49.5	82.7
(WY)	(2004)	(2004)	(2004)	(2004)	(2000)	(2000)	(2004)	(1998)	(1998)	(1998)	(1998)	(2003)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1997 - 2004	
ANNUAL TOTAL	242,577		135,587			
ANNUAL MEAN	665		370		1,399	
HIGHEST ANNUAL MEAN					2,828	2001
LOWEST ANNUAL MEAN					370	2004
HIGHEST DAILY MEAN	7,970	Mar 1	3,590	May 8	28,500	Dec 20, 2001
LOWEST DAILY MEAN	24	Nov 6	24	Nov 6	4.8	Oct 5, 1997
ANNUAL SEVEN-DAY MINIMUM	26	Nov 5	26	Nov 5	4.9	Sep 30, 1997
MAXIMUM PEAK FLOW			3,620	May 8	31,800	Dec 20, 2001
MAXIMUM PEAK STAGE			18.77	May 8	34.80	Dec 20, 2001
ANNUAL RUNOFF (AC-FT)	481,200		268,900		1,013,000	
10 PERCENT EXCEEDS	1,590		1,080		4,000	
50 PERCENT EXCEEDS	157		120		262	
90 PERCENT EXCEEDS	60		59		75	

e Estimated

08019200 Sabine River near Hawkins, TX—Continued



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 Saint Louis Southwestern Railway Lines bridge, 1.6 mi northeast of Big Sandy, and 6.5 mi upstream from mouth.

DRAINAGE AREA.--231 mi^2.

PERIOD OF RECORD.--Feb. 1939 to current year. Water-quality records: Chemical data: Mar. 1961 to Sept. 1986. Biochemical data: Oct. 1984 to Sept. 1986.

REVISED RECORDS.--WSP 1732: 1941(M), 1945-46, 1956, drainage area. WSP 1922: 1944(M), 1945-46(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 278.38 ft above NGVD 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. Satellite telemeter at station.

REMARKS.--Records good except those for Mar. 11 to June 16, which are fair. Estimated daily discharges are rated poor. Since water year 1963, at least 10% of contributing drainage area has been regulated.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--24 years (water years 1940-1962), 200 ft^3/s (145,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1939-1962: Maximum discharge, 24,000 ft^3/s Mar. 31, 1945, gage height, 24.10 ft, from floodmark, from rating curve extended above 91,000 ft^3/s; minimum, 5.6 ft^3/s, Aug. 16, 1939.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	20	36	123	64	329	111	396	e124	e448	21	19
2	16	21	34	119	70	264	111	446	e213	e411	19	16
3	15	22	33	105	76	191	109	456	e213	e351	20	15
4	14	23	32	87	73	185	101	952	e225	e242	22	16
5	15	24	31	76	164	258	91	1,270	e328	133	20	14
6	22	25	31	68	207	264	87	947	e358	107	17	14
7	30	26	30	62	266	279	95	642	e340	83	15	14
8	28	27	30	59	398	388	93	432	e340	65	13	13
9	30	32	32	52	876	545	87	284	e382	54	12	11
10	38	32	34	43	769	460	83	187	e527	46	11	10
11	38	32	36	37	446	308	80	143	e661	41	11	9.6
12	32	31	35	35	402	203	76	121	e888	35	11	9.8
13	31	32	53	34	338	158	72	113	e997	32	11	9.3
14	30	34	69	35	386	150	72	117	e837	29	11	9.2
15	29	32	68	36	579	152	73	111	e536	27	10	11
16	26	32	68	35	669	142	73	107	e140	24	9.6	12
17	23	32	74	67	477	160	65	104	e100	22	9.6	15
18	21	54	67	88	307	215	57	99	e159	21	8.8	13
19	20	86	55	95	247	216	53	93	e117	21	11	12
20	19	89	48	91	204	178	51	91	e125	20	34	11
21	19	70	45	84	167	150	49	90	e133	18	48	11
22	17	63	43	77	139	133	42	88	e127	18	42	12
23	17	56	48	69	119	122	38	90	e125	17	33	11
24	16	51	53	63	107	122	65	94	108	16	40	11
25	17	46	51	75	139	139	158	111	86	15	42	15
26	24	42	49	81	176	141	240	92	73	14	52	16
27	32	40	53	82	178	136	287	62	85	14	54	15
28	24	39	62	88	220	131	333	e60	e185	14	42	14
29	22	40	139	90	288	129	391	e60	e272	14	31	15
30	21	38	126	80	---	124	356	e58	e389	19	25	14
31	20	---	126	71	---	116	---	e55	---	25	22	---
TOTAL	723	1,191	1,691	2,207	8,551	6,488	3,599	7,971	9,193	2,396	728.0	387.9
MEAN	23.3	39.7	54.5	71.2	295	209	120	257	306	77.3	23.5	12.9
MAX	38	89	139	123	876	545	391	1,270	997	448	54	19
MIN	14	20	30	34	64	116	38	55	73	14	8.8	9.2
AC-FT	1,430	2,360	3,350	4,380	16,960	12,870	7,140	15,810	18,230	4,750	1,440	769

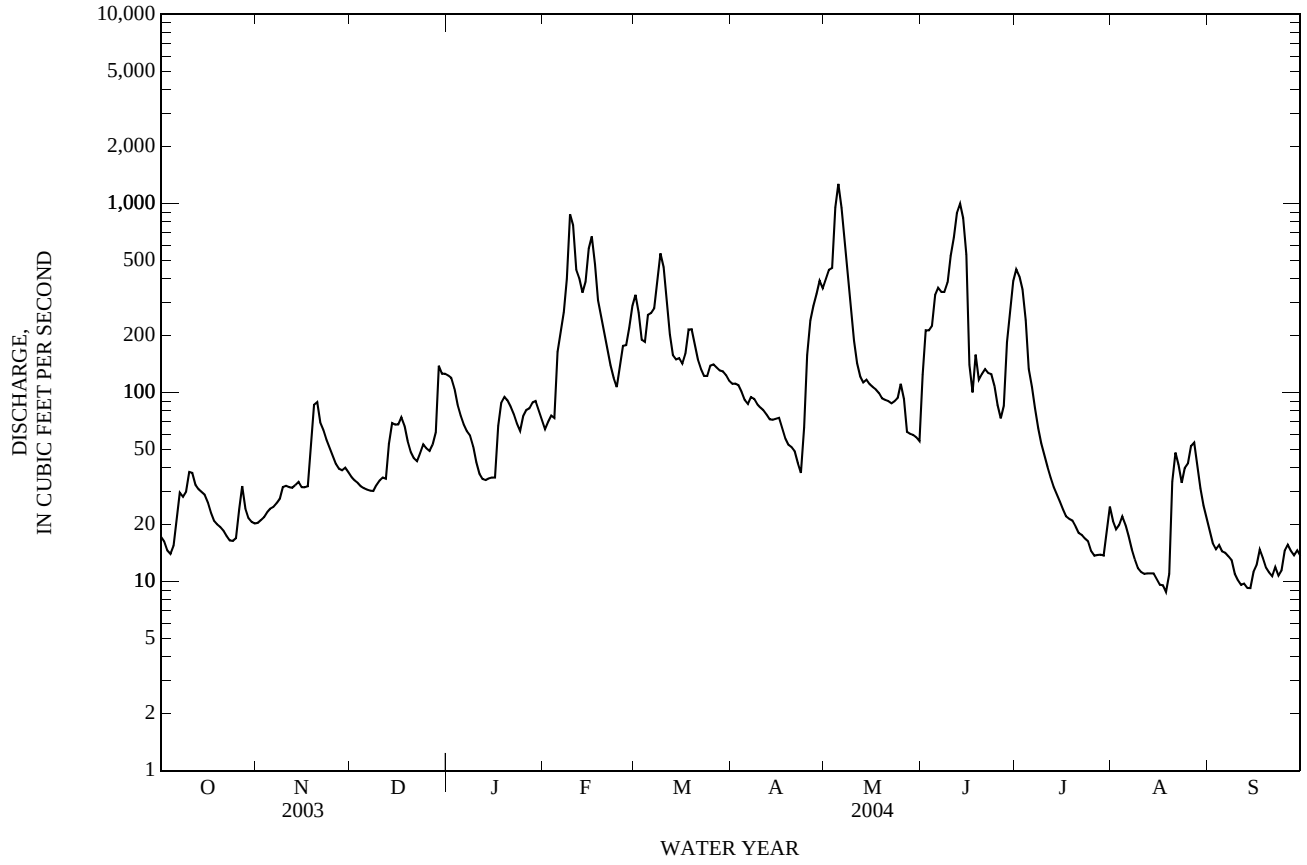
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2004z, BY WATER YEAR (WY)

MEAN	62.1	141	253	231	299	332	290	263	150	82.7	29.8	51.5
MAX	469	884	884	798	881	1,226	1,068	796	528	416	150	441
(WY)	(1994)	(1975)	(1988)	(1993)	(2001)	(2001)	(1973)	(1968)	(1981)	(1994)	(1979)	(1974)
MIN	13.2	20.0	27.2	38.4	43.7	47.5	52.3	32.5	9.61	6.99	4.65	8.47
(WY)	(1979)	(1966)	(1966)	(1966)	(1996)	(1966)	(1981)	(1998)	(1984)	(1984)	(1984)	(2000)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1963 - 2004z	
ANNUAL TOTAL	39,265		45,125.9			
ANNUAL MEAN	108		123		181	
HIGHEST ANNUAL MEAN					358	1975
LOWEST ANNUAL MEAN					43.7	1964
HIGHEST DAILY MEAN	1,090	Feb 26	1,270	May 5	6,240	May 19, 1989
LOWEST DAILY MEAN	13	Aug 27	8.8	Aug 18	3.5	Jul 24, 1984
ANNUAL SEVEN-DAY MINIMUM	14	Aug 25	10	Sep 9	4.0	Aug 16, 1984
MAXIMUM PEAK FLOW			1,360	May 5	6,680	May 19, 1989
MAXIMUM PEAK STAGE			12.66	May 5	18.30	May 19, 1989
ANNUAL RUNOFF (AC-FT)	77,880		89,510		131,400	
10 PERCENT EXCEEDS	241		339		416	
50 PERCENT EXCEEDS	49		62		78	
90 PERCENT EXCEEDS	19		14		16	

z Period of regulated streamflow.
e Estimated

08019500 Big Sandy Creek near Big Sandy, TX—Continued



08019900 Lake Gladewater near Gladewater, TX

LOCATION.--Lat 32°33'00", long 94°57'00", Upshur County, Hydrologic Unit 12010002, located in control tower 20 ft upstream from the centerline of dam, 400 ft right of left bank, approximately 1.5 mi from Gladewater.

DRAINAGE AREA.--42.0 mi^2.

PERIOD OF RECORD.--Feb. 1998 to Sept. 2000 (contents), Oct. 2000 to current year.

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

REMARKS.--Records good. The lake is formed by a rolled earthfill dam. The dam was completed and storage began in 1952. An uncontrolled spillway has been cut through natural ground, and is located about 304 ft above mean sea level. The dam was built by the city of Gladewater to impound water for municipal use. There was no known diversion from the lake during the current water year. Data regarding the dam is given in the following table:

	Elevation (feet)
Top of dam	312.0
Crest of emergency spillway	304.0
Crest of service spillway	300.0

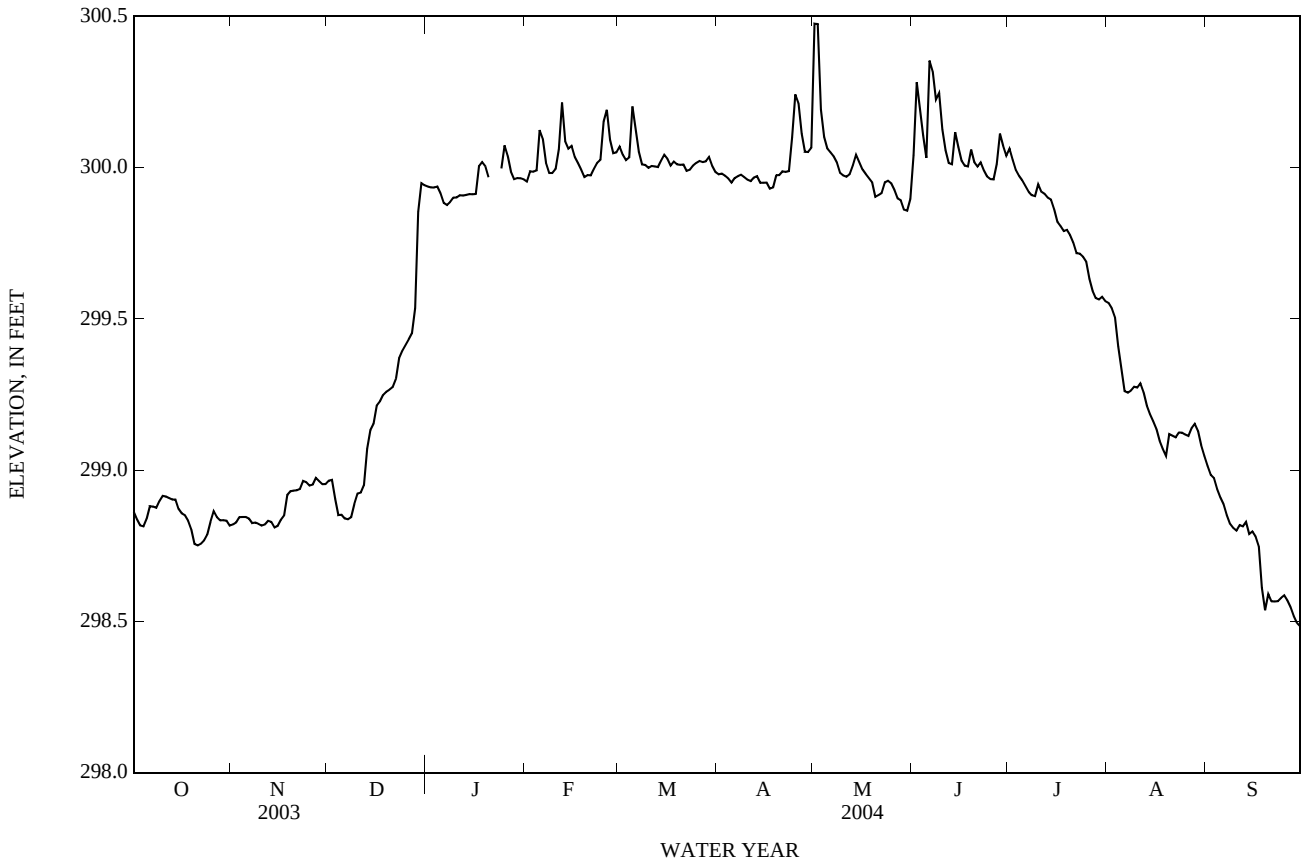
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,470 acre-ft, May 4, 2000, elevation, 301.51 ft; minimum contents, 3,680 acre-ft, Sept. 30, 2000, elevation, 297.67 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 300.75 ft, May 1; minimum elevation, 298.45 ft, Sept. 30.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	298.86	298.82	298.96	299.94	299.95	300.07	299.98	300.48	300.04	300.06	299.55	299.01
2	298.84	298.83	298.97	299.93	299.99	300.04	299.98	300.47	300.28	300.03	299.54	298.98
3	298.82	298.84	298.91	299.93	299.99	300.02	299.97	300.19	300.19	299.99	299.51	298.97
4	298.81	298.85	298.85	299.94	299.99	300.03	299.96	300.10	300.11	299.97	299.41	298.94
5	298.84	298.85	298.85	299.92	300.12	300.20	299.95	300.06	300.03	299.96	299.34	298.91
6	298.88	298.84	298.84	299.88	300.09	300.12	299.97	300.05	300.35	299.94	299.26	298.89
7	298.88	298.83	298.84	299.88	300.02	300.05	299.97	300.04	300.32	299.92	299.26	298.85
8	298.88	298.83	298.84	299.89	299.98	300.01	299.98	300.02	300.22	299.91	299.26	298.82
9	298.90	298.82	298.89	299.90	299.98	300.01	299.97	299.98	300.25	299.91	299.28	298.81
10	298.91	298.82	298.92	299.90	300.00	300.00	299.96	299.97	300.13	299.95	299.27	298.80
11	298.91	298.82	298.93	299.91	300.06	300.01	299.96	299.97	300.06	299.92	299.29	298.82
12	298.91	298.83	298.95	299.91	300.22	300.00	299.97	299.98	300.02	299.91	299.26	298.81
13	298.90	298.83	299.07	299.91	300.09	300.00	299.97	300.01	300.01	299.90	299.21	298.83
14	298.90	298.81	299.13	299.91	300.06	300.02	299.95	300.04	300.12	299.89	299.19	298.79
15	298.87	298.82	299.15	299.91	300.07	300.04	299.95	300.02	300.07	299.86	299.16	298.80
16	298.86	298.84	299.21	299.91	300.04	300.03	299.95	299.99	300.02	299.82	299.14	298.78
17	298.85	298.85	299.23	300.00	300.02	300.01	299.93	299.98	300.01	299.81	299.10	298.75
18	298.83	298.92	299.25	300.02	299.99	300.02	299.93	299.97	300.00	299.79	299.07	298.61
19	298.80	298.93	299.26	300.00	299.97	300.01	299.97	299.95	300.06	299.79	299.05	298.54
20	298.76	298.93	299.27	299.97	299.98	300.01	299.98	299.90	300.02	299.78	299.12	298.59
21	298.75	298.93	299.27	---	299.97	300.01	299.99	299.91	300.00	299.75	299.11	298.57
22	298.76	298.94	299.30	---	300.00	299.99	299.99	299.92	300.02	299.72	299.11	298.57
23	298.77	298.96	299.37	---	300.02	299.99	299.99	299.95	299.99	299.72	299.12	298.57
24	298.79	298.96	299.39	300.00	300.03	300.01	300.10	299.96	299.97	299.71	299.12	298.58
25	298.83	298.95	299.41	300.07	300.15	300.02	300.24	299.95	299.96	299.69	299.12	298.59
26	298.86	298.95	299.43	300.04	300.19	300.02	300.21	299.93	299.96	299.63	299.11	298.57
27	298.84	298.97	299.45	299.99	300.09	300.02	300.11	299.90	300.01	299.59	299.14	298.55
28	298.83	298.96	299.54	299.96	300.05	300.02	300.05	299.89	300.11	299.57	299.15	298.52
29	298.83	298.95	299.85	299.97	300.05	300.03	300.05	299.86	300.07	299.56	299.13	298.49
30	298.83	298.95	299.95	299.96	---	300.01	300.07	299.86	300.04	299.57	299.08	298.48
31	298.82	---	299.94	299.96	---	299.99	---	299.90	---	299.56	299.05	---
MEAN	298.84	298.88	299.20	---	300.04	300.03	300.00	300.01	300.08	299.81	299.21	298.73
MAX	298.91	298.97	299.95	---	300.22	300.20	300.24	300.48	300.35	300.06	299.55	299.01
MIN	298.75	298.81	298.84	---	299.95	299.99	299.93	299.86	299.96	299.56	299.05	298.48

08019900 Lake Gladewater near Gladewater, TX—Continued



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 mi^2.

PERIOD OF RECORD.--Oct. 1932 to current year.

REVISED RECORDS.--WSP 1732: Drainage area. WRD TX-73-1: 1972.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 243.85 ft above NGVD of 1929. Prior to Oct. 13, 1933, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since water year 1961, at least 10% of contributing drainage area has been regulated. There are many diversions above station for oil field operations and municipal supply.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--28 years (water years 1933-1960) prior to regulation by Lake Tawakoni, 2,012 ft^3/s (1,458,000 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1914 reached a stage of about 41.7 ft (discharge, 85,900 ft^3/s), from information by local resident.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1933-1960: Maximum discharge, 138,000 ft^3/s, Apr. 2, 1945, gage height, 44.16 ft, from floodmark, from rating curve extended above 91,000 ft^3/s; minimum, 5.6 ft^3/s, Aug. 16, 1939.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	112	114	540	263	1,440	344	2,170	107	1,450	177	101
2	110	110	115	469	271	1,210	340	3,130	360	1,460	514	88
3	107	111	112	414	291	972	334	3,560	481	1,450	803	83
4	105	113	109	359	312	828	299	3,580	690	1,440	693	85
5	115	102	108	308	498	1,020	260	3,610	1,090	1,380	486	87
6	121	84	110	265	1,070	1,470	236	3,780	1,570	1,220	303	84
7	134	75	110	236	1,590	1,760	248	3,910	1,750	1,020	209	79
8	158	75	109	208	1,700	1,840	294	4,040	1,490	869	161	74
9	175	79	114	196	1,610	1,770	291	4,110	1,600	739	130	70
10	177	83	118	185	1,500	1,490	262	3,840	1,970	e667	113	68
11	185	86	119	176	1,240	1,100	240	2,620	2,270	e518	105	67
12	187	89	124	167	1,300	817	242	1,170	2,480	e442	115	67
13	177	88	149	164	1,590	643	270	603	2,760	e387	191	79
14	165	88	191	162	1,860	579	279	507	3,120	e325	166	86
15	e157	91	231	162	2,040	597	280	468	3,250	e288	127	91
16	e145	90	236	164	2,060	632	270	408	3,190	e257	111	81
17	e133	88	233	230	1,830	768	254	344	2,850	e226	129	73
18	130	101	226	346	1,410	1,010	224	298	2,100	e191	132	72
19	125	163	219	438	1,070	1,030	195	299	1,290	e164	128	72
20	122	248	204	432	880	851	176	277	879	e145	151	70
21	120	240	188	393	747	663	163	227	805	127	238	84
22	118	198	176	339	644	542	154	187	788	118	315	91
23	116	169	169	300	570	460	150	161	671	145	279	83
24	115	151	175	292	517	438	201	140	560	143	235	84
25	118	136	188	345	608	517	635	122	462	118	208	84
26	138	129	181	377	878	551	1,360	112	395	100	220	80
27	128	123	171	382	1,070	508	1,830	103	417	90	221	77
28	127	119	181	359	1,350	453	2,040	98	760	87	194	73
29	119	115	346	340	1,470	434	2,090	95	1,080	85	159	72
30	116	114	609	316	---	404	1,940	87	1,280	90	131	71
31	113	---	611	283	---	382	---	91	---	142	115	---
TOTAL	4,168	3,570	6,046	9,347	32,239	27,179	15,901	44,147	42,515	15,883	7,259	2,376
MEAN	134	119	195	302	1,112	877	530	1,424	1,417	512	234	79.2
MAX	187	248	611	540	2,060	1,840	2,090	4,110	3,250	1,460	803	101
MIN	105	75	108	162	263	382	150	87	107	85	105	67
AC-FT	8,270	7,080	11,990	18,540	63,950	53,910	31,540	87,570	84,330	31,500	14,400	4,710

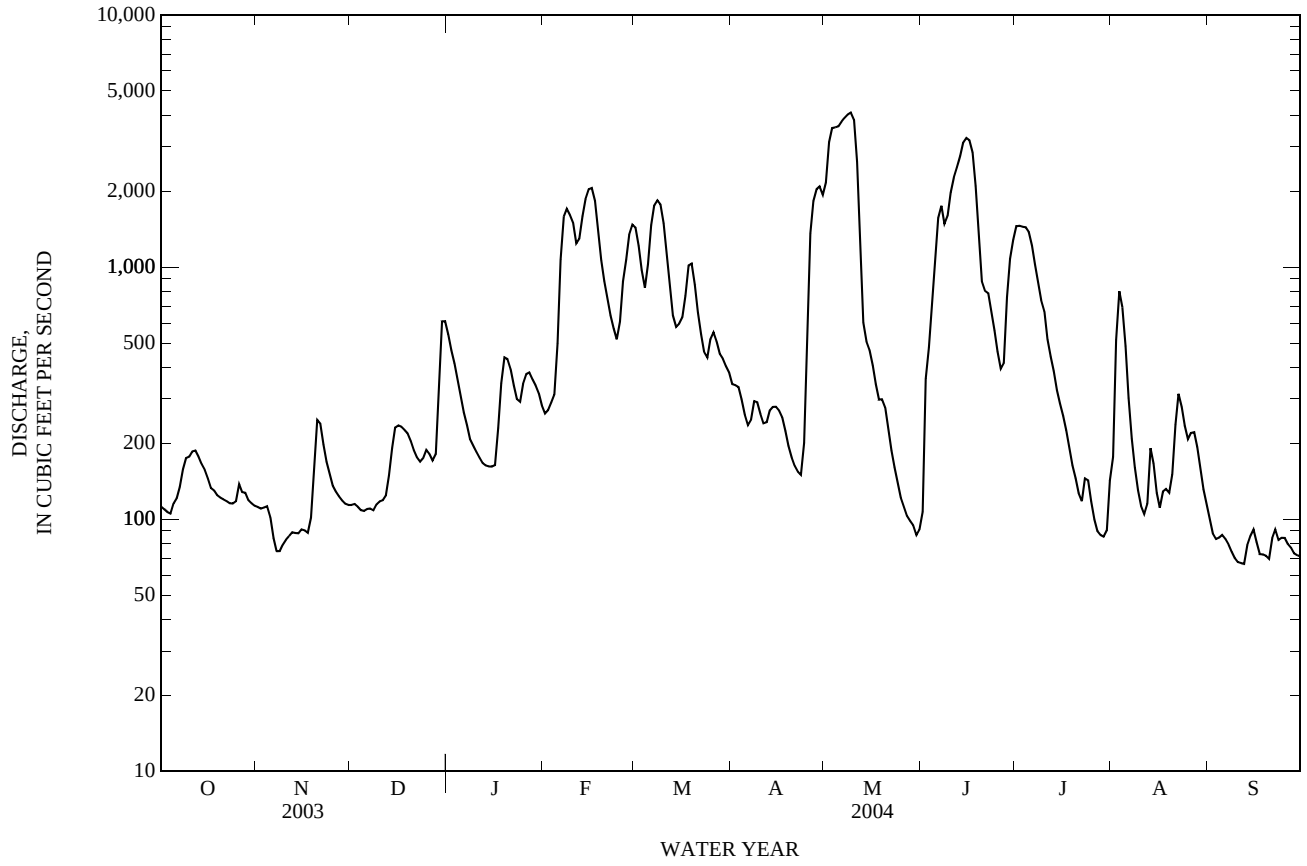
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004z, BY WATER YEAR (WY)

MEAN	495	1,242	2,598	2,255	2,775	3,578	2,758	3,668	1,822	671	198	283
MAX	3,361	7,839	10,580	8,791	9,664	15,080	9,644	17,100	6,745	4,261	1,291	2,566
(WY)	(1974)	(1975)	(1972)	(2001)	(1975)	(2001)	(1990)	(1966)	(1973)	(1994)	(1992)	(1974)
MIN	29.4	86.9	101	199	174	204	241	181	49.0	17.9	18.1	27.0
(WY)	(1964)	(1964)	(1966)	(1964)	(1996)	(1996)	(1971)	(1998)	(1971)	(1964)	(1964)	(1985)

08020000 Sabine River near Gladewater, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004z	
ANNUAL TOTAL	335,169		210,630			
ANNUAL MEAN	918		575		1,859	
HIGHEST ANNUAL MEAN					3,831	1992
LOWEST ANNUAL MEAN					209	1996
HIGHEST DAILY MEAN	7,130	Mar 5	4,110	May 9	51,000	May 22, 1989
LOWEST DAILY MEAN	75	Nov 7	67	Sep 11	7.4	Jul 20, 1971
ANNUAL SEVEN-DAY MINIMUM	82	Nov 6	72	Sep 7	9.5	Jul 16, 1971
MAXIMUM PEAK FLOW			4,130	May 9	52,300	May 22, 1989
MAXIMUM PEAK STAGE			21.20	May 9	38.98	Apr 30, 1966
ANNUAL RUNOFF (AC-FT)	664,800		417,800		1,347,000	
10 PERCENT EXCEEDS	2,480		1,590		5,440	
50 PERCENT EXCEEDS	353		236		536	
90 PERCENT EXCEEDS	113		88		66	

z Period of regulated streamflow.
e Estimated



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 mi^2.

PERIOD OF RECORD.--Aug. 1983 to current year (mean daily discharges less than 500 ft^3/s).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 230.00 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since installation of gage in Aug. 1983, at least 10% of contributing drainage area has been regulated. There are many diversions above station for municipal and industrial supply, and for oil field operations.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 34.92 ft, Mar. 31, 2002; minimum daily discharge, 0 ft^3/s, July 15-18, 26, 27, 30, 31, Aug. 7-9, and Sept. 11-14, 2004.

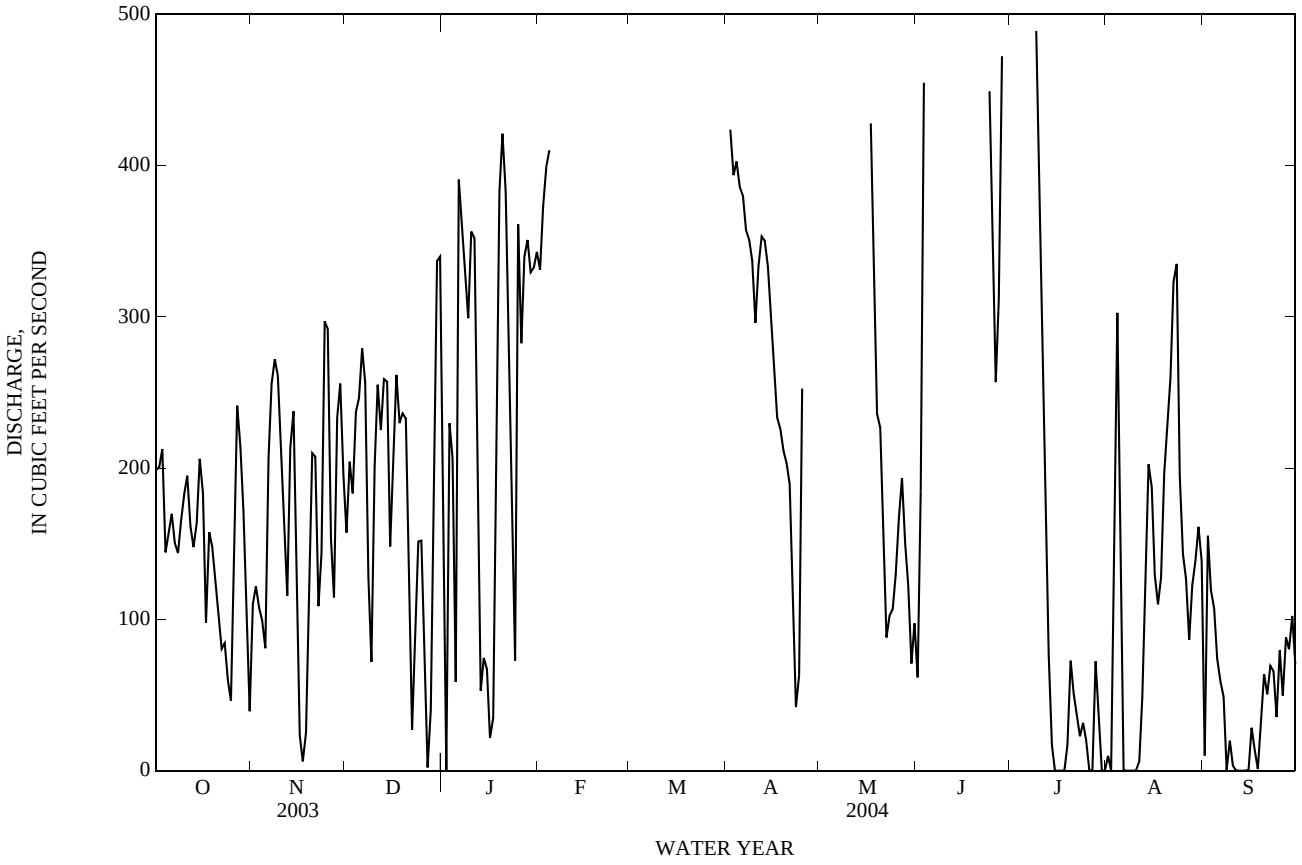
EXTREMES FOR CURRENT YEAR.--Maximum gage height, 20.00 ft, May 3; minimum daily discharge, 0 ft^3/s, July 15-18, 26, 27, 30, 31, Aug. 7-9, and Sept. 11-14..

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199	110	157	123	331	---	---	---	62	---	9.7	9.9
2	201	122	204	0.49	373	---	424	---	184	---	0.23	155
3	213	108	183	230	399	---	394	---	455	---	183	119
4	144	99	237	206	410	---	403	---	---	---	303	107
5	157	81	246	59	---	---	386	---	---	---	105	74
6	170	207	279	391	---	---	380	---	---	---	0.08	59
7	151	256	257	359	---	---	358	---	---	---	0.00	49
8	144	272	128	327	---	---	351	---	---	---	0.00	0.65
9	165	261	72	299	---	---	337	---	---	489	0.00	20
10	183	202	201	356	---	---	296	---	---	410	0.05	3.4
11	195	161	255	352	---	---	334	---	---	302	6.1	0.00
12	161	116	225	245	---	---	353	---	---	192	49	0.00
13	148	214	259	53	---	---	350	---	---	76	142	0.00
14	164	238	257	75	---	---	333	---	---	17	202	0.00
15	206	158	148	67	---	---	297	---	---	0.00	187	0.49
16	183	23	211	22	---	---	262	---	---	0.00	129	28
17	98	6.1	262	35	---	---	233	428	---	0.00	110	13
18	158	25	230	220	---	---	226	327	---	0.00	128	1.0
19	148	122	236	383	---	---	212	236	---	17	197	30
20	124	210	233	421	---	---	203	227	---	73	231	64
21	104	208	118	383	---	---	189	177	---	51	260	51
22	81	109	27	280	---	---	133	88	---	37	e323	69
23	84	144	83	147	---	---	42	102	---	23	335	66
24	60	297	151	73	---	---	63	107	449	32	e195	35
25	46	292	152	361	---	---	253	130	356	20	143	80
26	160	154	58	283	---	---	---	168	257	0.00	127	50
27	241	115	2.1	340	---	---	---	193	312	0.00	87	88
28	214	233	40	351	---	---	---	150	472	72	122	80
29	172	256	186	330	---	---	---	122	---	42	139	102
30	94	195	337	333	---	---	---	71	---	0.00	161	71
31	39	---	340	343	---	---	---	97	---	0.00	139	---
TOTAL	4,607	4,994.1	5,774.1	7,447.49	---	---	---	---	---	---	4,013.16	1,425.44
MEAN	149	166	186	240	---	---	---	---	---	---	129	47.5
MAX	241	297	340	421	---	---	335	155				
MIN	39	6.1	2.1	0.49	---	---	0.00	0.00				
AC-FT	9,140	9,910	11,450	14,770	---	---	---	---	---	---	7,960	2,830

e Estimated

08020450 Sabine River above Longview, TX—Continued



08020900 Sabine River below Longview, TX

LOCATION.--Lat 32°25'00", long 94°42'35", Gregg County, Hydrologic Unit 12010002, on downstream side of Highway 149 bridge, 5.0 mi south of Longview, 14.0 mi northwest of Tatum.

DRAINAGE AREA.--3,155 mi^2.

PERIOD OF RECORD.--Oct. 1995 to current year.

GAGE.--Water-stage recorder. Datum of gage is 220.00 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since installation of gage in Oct. 1995, at least 10% of contributing drainage area has been regulated. There are several diversions above this station for municipal, industrial and oil field operations. Flow may also be slightly affected at times by discharge from floodwater-retarding structures controlling runoff from a 9.70 mi^2 area in the Mill Creek drainage basin.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	136	123	142	612	372	2,580	511	3,700	232	2,130	212	158
2	132	121	140	555	415	2,480	476	5,630	517	1,910	221	148
3	127	119	139	494	429	1,850	467	6,070	770	1,800	465	137
4	117	117	137	452	410	1,470	461	e5,880	790	1,700	704	128
5	167	121	136	415	733	2,220	427	e4,850	915	1,650	633	129
6	206	121	133	364	967	2,210	392	e4,600	3,070	1,550	465	127
7	167	113	132	314	1,250	2,140	411	e4,550	3,450	1,380	318	124
8	175	105	134	291	1,560	2,130	450	e4,580	2,600	1,160	236	121
9	195	101	159	264	1,660	2,110	438	e4,470	2,590	982	200	117
10	210	100	198	246	1,690	1,990	416	e4,200	2,360	894	177	112
11	197	107	178	234	1,660	1,700	385	4,000	2,410	744	160	106
12	199	113	168	225	1,990	1,360	431	2,950	2,560	629	151	103
13	199	116	286	217	1,830	1,070	434	1,590	2,760	543	151	103
14	189	115	253	208	1,900	1,050	416	1,130	3,100	478	201	105
15	175	115	252	208	2,260	1,130	391	883	3,370	425	202	134
16	170	122	276	210	2,280	996	e387	754	3,580	368	171	160
17	166	113	285	383	2,160	938	367	656	3,590	328	150	145
18	154	314	278	464	1,870	1,040	338	573	3,170	295	148	118
19	150	170	274	522	1,460	1,250	311	504	2,570	262	236	113
20	143	177	265	529	1,140	1,250	291	481	1,560	236	426	112
21	137	253	250	499	944	1,050	266	450	1,120	209	260	109
22	130	266	232	459	806	852	251	390	1,020	197	307	113
23	127	231	253	412	708	688	238	339	1,110	182	558	123
24	127	203	245	427	650	619	451	301	880	194	503	149
25	128	182	237	1,110	937	649	1,170	275	732	202	339	188
26	176	173	236	722	1,230	682	1,920	256	625	186	280	129
27	164	168	231	536	1,200	704	2,260	241	871	170	257	116
28	156	159	222	481	1,260	644	2,300	246	1,220	161	251	117
29	146	154	402	452	1,490	627	2,440	257	1,240	167	232	112
30	133	149	461	431	---	603	2,590	214	1,660	203	202	101
31	128	---	605	398	---	555	---	275	---	198	178	---
TOTAL	4,926	4,541	7,339	13,134	37,261	40,637	22,086	65,295	56,442	21,533	8,994	3,757
MEAN	159	151	237	424	1,285	1,311	736	2,106	1,881	695	290	125
MAX	210	314	605	1,110	2,280	2,580	2,590	6,070	3,590	2,130	704	188
MIN	117	100	132	208	372	555	238	214	232	161	148	101
AC-FT	9,770	9,010	14,560	26,050	73,910	80,600	43,810	129,500	112,000	42,710	17,840	7,450

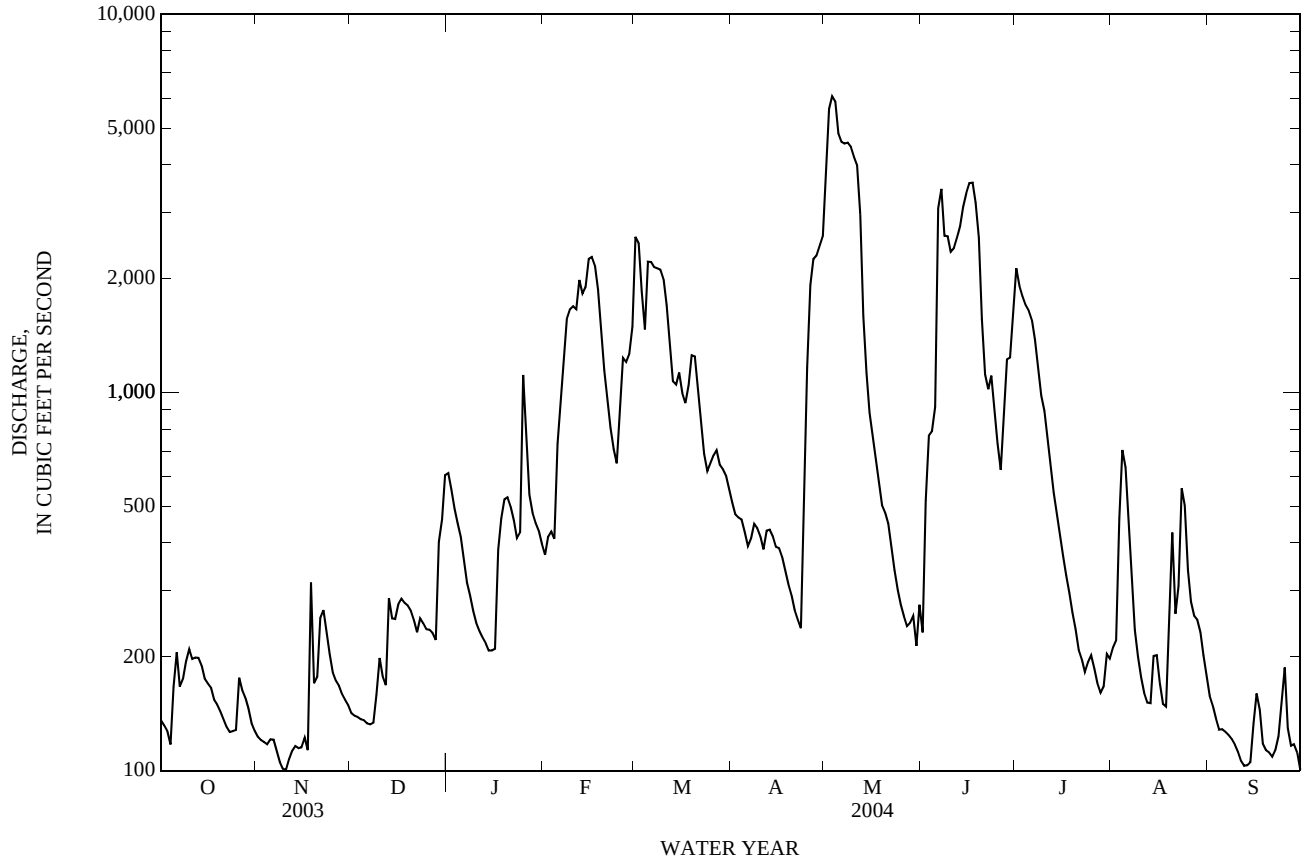
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2004, BY WATER YEAR (WY)

MEAN	701	976	2,804	3,675	3,958	5,486	3,006	1,868	1,574	798	213	376
MAX	2,905	3,519	8,764	9,753	9,979	18,530	8,464	5,846	3,986	3,423	491	1,016
(WY)	(1999)	(1999)	(2002)	(2001)	(2001)	(2001)	(2002)	(1997)	(1999)	(2000)	(1997)	(2001)
MIN	121	151	237	340	236	260	533	324	184	48.5	66.0	113
(WY)	(2000)	(1996)	(2004)	(1996)	(1996)	(1996)	(1996)	(1998)	(1998)	(1998)	(1998)	(2000)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1996 - 2004	
ANNUAL TOTAL	427,054		285,945			
ANNUAL MEAN	1,170		781		2,113	
HIGHEST ANNUAL MEAN					4,274	2001
LOWEST ANNUAL MEAN					294	1996
HIGHEST DAILY MEAN	9,210	Feb 24	6,070	May 3	25,700	Mar 7, 2001
LOWEST DAILY MEAN	100	Nov 10	100	Nov 10	23	Aug 1, 1998
ANNUAL SEVEN-DAY MINIMUM	108	Nov 7	108	Nov 7	26	Jul 28, 1998
MAXIMUM PEAK FLOW			6,140	May 3	25,900	Mar 7, 2001
MAXIMUM PEAK STAGE			21.00	May 3	34.48	Mar 7, 2001
ANNUAL RUNOFF (AC-FT)	847,100		567,200		1,531,000	
10 PERCENT EXCEEDS	3,380		2,180		6,650	
50 PERCENT EXCEEDS	366		339		574	
90 PERCENT EXCEEDS	130		126		121	

e Estimated

08020900 Sabine River below Longview, TX—Continued



08022040 Sabine River near Beckville, TX

LOCATION.--Lat 32°19'38", long 94°21'12", Panola County, Hydrologic Unit 12010002, on 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 mi^2.

PERIOD OF RECORD.--Oct. 1938 to current year. Prior to Oct. 1978, published as "near Tatum" (station 08022000). Water-quality records: Chemical data: Feb. 1952 to Mar. 1999. Biochemical data: Jan. 1968 to Mar. 1999. Pesticide data: Mar. 1968 to June 1981. Specific conductance: Feb. 1952 to Sept. 1998. Water temperature: Feb. 1952 to Sept. 1998.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 190.00 ft above NGVD 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. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since water year 1961, at least 10% of contributing drainage area has been regulated. There are several diversions above this station and below Lake Tawakoni for municipal, industrial and oil field operations. Low flows are sustained by wastewater effluents that are returned to the river above the station. Flow may also be slightly affected at times by discharge from floodwater retarding structures controlling runoff from 9.70 mi^2 in the Mill Creek drainage basin.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--22 years (water years 1939-1960) prior to regulation by Lake Tawakoni, 2,663 ft^3/s (1,929,000 acre-ft/yr).

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 Sabine River near Tatum (station 08022000) and Sabine River at Logansport, LA. (station 08022500).

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1939-1960: Maximum discharge, 123,000 ft^3/s, Apr. 4, 1945, from rating curve extended above 66,000 ft^3/s on basis of partly estimated discharge measurement of 88,900 ft^3/s, gage height, 33.80 ft, site and datum then in use, from graph based on gage readings; minimum observed, 2.4 ft^3/s, Aug. 11, 1964.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	166	144	159	594	583	2,860	611	3,470	158	3,610	238	192
2	150	124	131	589	556	4,460	521	7,430	480	4,100	221	163
3	152	131	120	582	639	4,170	470	10,200	934	3,090	238	154
4	161	136	145	472	623	2,820	450	9,960	1,050	2,190	444	145
5	151	121	151	411	802	3,750	423	8,240	849	1,820	606	144
6	182	121	142	368	1,340	5,280	364	5,880	1,790	1,600	535	153
7	250	137	128	318	1,370	4,600	393	4,350	6,070	1,430	395	146
8	214	137	141	280	1,520	3,330	375	3,810	5,520	1,240	286	175
9	222	112	150	268	1,680	2,870	425	3,580	4,320	1,100	230	135
10	234	107	172	250	1,750	2,570	369	3,570	4,290	900	205	125
11	246	119	240	244	1,920	2,190	339	3,620	3,310	833	171	131
12	226	125	182	223	2,670	1,730	363	3,200	2,640	721	155	115
13	235	123	206	220	3,030	1,380	584	2,040	2,570	628	206	108
14	233	115	333	208	2,630	1,240	566	1,410	2,860	540	155	107
15	199	129	302	193	2,920	1,700	441	1,130	3,130	e506	168	117
16	180	124	271	206	3,020	1,690	379	834	3,810	e415	182	127
17	171	130	267	257	2,830	1,380	362	693	3,790	e345	160	154
18	168	185	305	465	2,520	1,260	324	589	3,230	e318	156	161
19	156	344	272	536	2,110	1,390	267	478	2,790	e287	146	149
20	161	288	259	546	1,670	1,410	242	410	2,470	253	253	124
21	162	198	249	520	1,440	1,290	231	369	1,900	230	384	115
22	150	232	222	466	1,180	1,080	221	323	1,330	211	274	113
23	132	256	205	413	1,030	902	198	264	1,200	201	326	119
24	139	240	237	430	916	764	186	213	1,180	180	491	406
25	151	222	247	1,390	1,030	733	770	174	959	178	456	478
26	188	196	235	1,790	1,880	769	2,250	147	856	181	339	420
27	216	188	229	1,190	1,960	808	2,680	128	1,430	172	284	336
28	189	180	228	865	1,670	783	2,450	111	3,500	158	258	289
29	214	170	246	750	1,680	756	2,370	100	3,450	155	241	275
30	167	166	413	756	---	849	2,530	102	2,730	198	229	280
31	157	---	490	683	---	728	---	137	---	242	225	---
TOTAL	5,722	5,000	7,077	16,483	48,969	61,542	22,154	76,962	74,596	28,032	8,657	5,656
MEAN	185	167	228	532	1,689	1,985	738	2,483	2,487	904	279	189
MAX	250	344	490	1,790	3,030	5,280	2,680	10,200	6,070	4,100	606	478
MIN	132	107	120	193	556	728	186	100	158	155	146	107
AC-FT	11,350	9,920	14,040	32,690	97,130	122,100	43,940	152,700	148,000	55,600	17,170	11,220

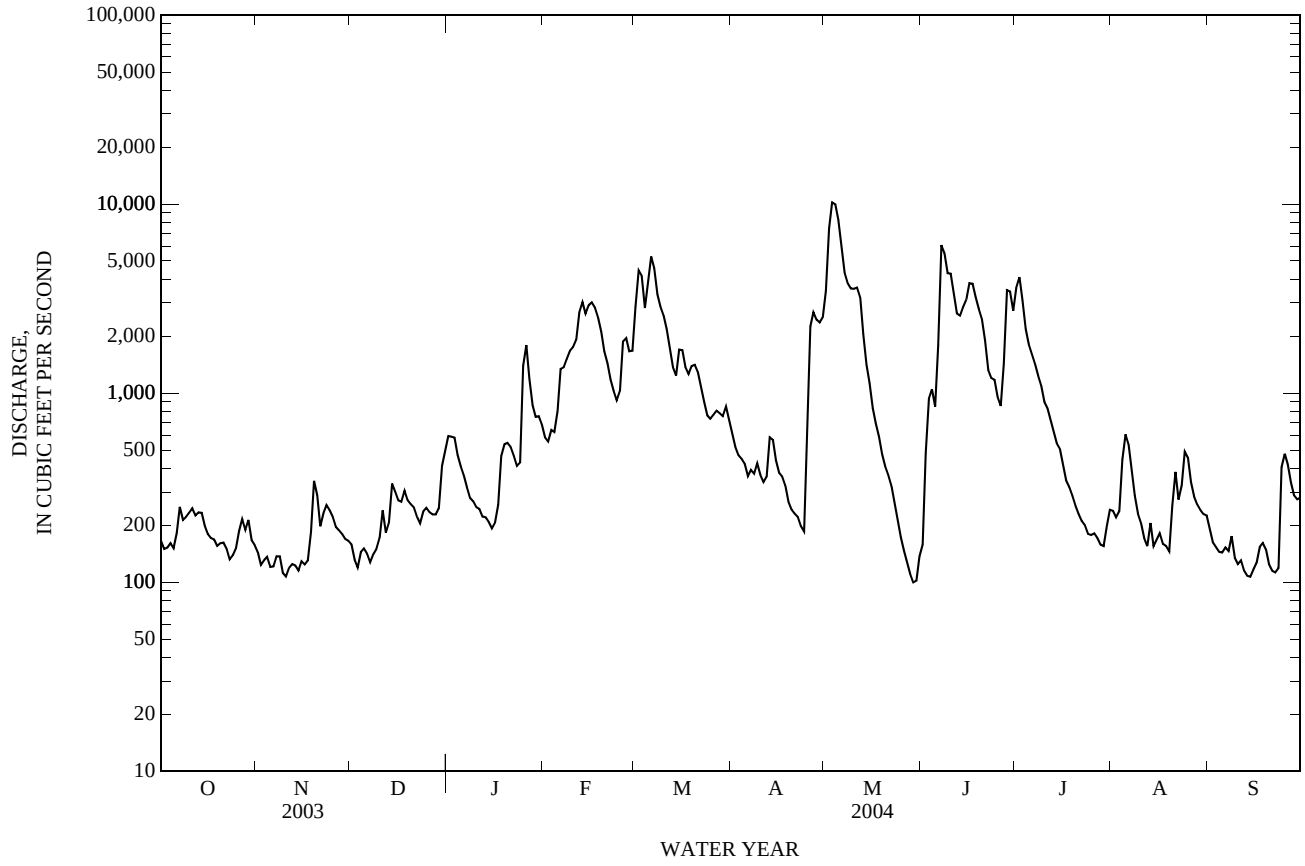
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004z, BY WATER YEAR (WY)

MEAN	676	1,612	3,385	3,589	4,207	4,852	3,985	4,449	2,732	993	310	441
MAX	4,325	8,221	12,270	10,960	11,930	21,620	11,330	21,010	11,580	4,552	1,725	3,434
(WY)	(1974)	(1975)	(2002)	(1992)	(1975)	(2001)	(1990)	(1966)	(1989)	(2000)	(1979)	(1974)
MIN	42.5	82.1	144	239	322	317	355	317	77.5	32.1	36.7	33.8
(WY)	(1964)	(1964)	(1966)	(1964)	(1996)	(1996)	(1971)	(1972)	(1971)	(1964)	(1969)	(1985)

08022040 Sabine River near Beckville, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004z	
ANNUAL TOTAL	609,679		360,850			
ANNUAL MEAN	1,670		986		2,595	
HIGHEST ANNUAL MEAN					5,103	2001
LOWEST ANNUAL MEAN					311	1964
HIGHEST DAILY MEAN	13,000	Feb 25	10,200	May 3	48,100	May 2, 1966
LOWEST DAILY MEAN	107	Nov 10	100	May 29	2.4	Aug 11, 1964
ANNUAL SEVEN-DAY MINIMUM	119	Nov 9	119	Nov 9	3.8	Aug 7, 1964
MAXIMUM PEAK FLOW			10,600	May 3	49,400	May 2, 1966
MAXIMUM PEAK STAGE			24.00	May 3	38.87	Mar 30, 1989
ANNUAL RUNOFF (AC-FT)	1,209,000		715,700		1,880,000	
10 PERCENT EXCEEDS	5,330		2,860		7,680	
50 PERCENT EXCEEDS	641		339		894	
90 PERCENT EXCEEDS	151		137		101	

z Period of regulated streamflow.
e Estimated



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 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 mi^2.

PERIOD OF RECORD.--Apr. 1974 to Sept. 2002 (contents), Oct. 2002 to current year. Water-quality records: Chemical data: Oct. 1974 to Sept. 1984.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to May 15, 1976, non-recording gage near left end of dam 1.9 mi downstream at same datum. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 8,675 ft long, including a 1,000-foot uncontrolled spillway. Deliberate impoundment began in Apr. 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 dam is owned by the Texas Utilities Services, Inc. There are no known diversions. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	321.5
Crest of uncontrolled spillway	312.0
Top of gates	308.0
Crest of gated spillway	294.0
Lowest gated outlet (invert)	284.0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 118,000 acre-ft, Mar. 29, 1989, elevation, 313.00 ft; minimum contents since first appreciable storage, 45,230 acre-ft, Sept. 18, 1996, elevation, 298.45 ft.

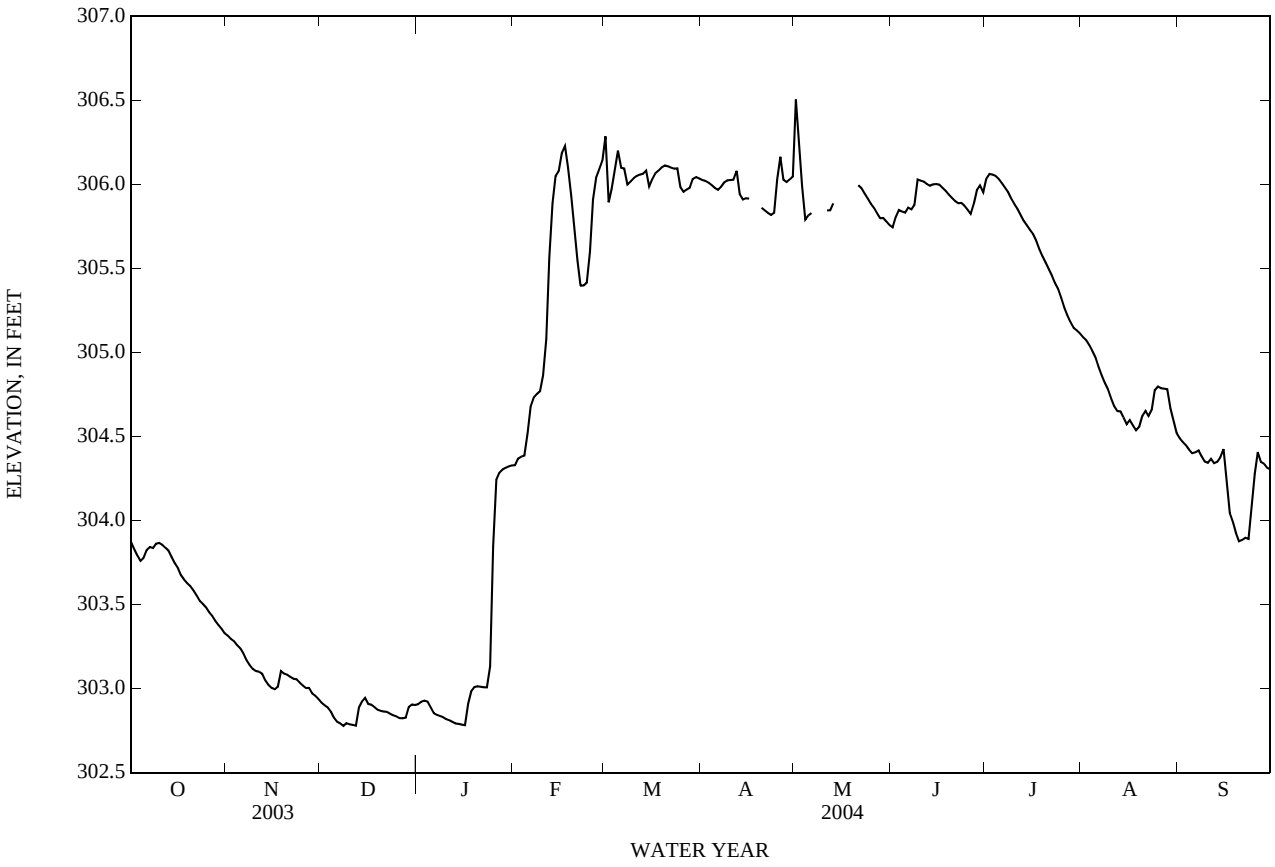
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 306.84 ft, May 1; minimum elevation, 302.73 ft, Dec. 12.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	303.87	303.31	302.92	302.91	304.33	306.29	306.03	306.50	305.74	306.03	305.09	304.49
2	303.83	303.30	302.90	302.92	304.37	305.89	306.02	306.22	305.80	306.06	305.07	304.47
3	303.79	303.28	302.89	302.93	304.38	305.98	306.01	305.99	305.85	306.06	305.04	304.45
4	303.76	303.26	302.86	302.92	304.39	306.09	306.00	305.79	305.84	306.05	305.01	304.42
5	303.78	303.24	302.83	302.89	304.52	306.20	305.98	305.81	305.83	306.03	304.97	304.40
6	303.82	303.21	302.80	302.85	304.68	306.10	305.97	305.83	305.86	306.01	304.92	304.41
7	303.84	303.17	302.79	302.84	304.73	306.09	305.99	---	305.85	305.98	304.86	304.42
8	303.84	303.14	302.78	302.84	304.75	306.00	306.01	---	305.88	305.95	304.82	304.38
9	303.86	303.12	302.79	302.83	304.77	306.02	306.02	---	306.03	305.92	304.78	304.35
10	303.87	303.10	302.79	302.82	304.86	306.04	306.03	---	306.02	305.88	304.73	304.34
11	303.86	303.10	302.79	302.81	305.08	306.05	306.03	305.85	306.02	305.85	304.68	304.37
12	303.84	303.09	302.78	302.80	305.57	306.06	306.08	305.85	306.00	305.82	304.65	304.34
13	303.82	303.05	302.89	302.79	305.89	306.06	305.94	305.89	305.99	305.78	304.65	304.35
14	303.78	303.02	302.92	302.79	306.05	306.08	305.91	---	306.00	305.76	304.61	304.38
15	303.75	303.00	302.94	302.79	306.08	305.99	305.92	---	306.00	305.73	304.57	304.43
16	303.72	303.00	302.91	302.78	306.18	306.03	305.92	---	306.00	305.70	304.60	304.23
17	303.67	303.01	302.90	302.91	306.23	306.07	---	---	305.98	305.67	304.57	304.05
18	303.65	303.10	302.89	302.98	306.10	306.08	---	---	305.96	305.62	304.54	303.99
19	303.63	303.09	302.87	303.01	305.93	306.10	---	---	305.94	305.57	304.56	303.92
20	303.61	303.08	302.87	303.01	305.74	306.11	305.86	---	305.92	305.54	304.62	303.88
21	303.58	303.07	302.86	303.01	305.55	306.11	305.85	305.99	305.90	305.50	304.65	303.88
22	303.55	303.06	302.86	303.01	305.40	306.10	305.83	305.98	305.89	305.46	304.62	303.90
23	303.52	303.06	302.85	303.01	305.40	306.09	305.82	305.95	305.89	305.41	304.66	303.89
24	303.50	303.04	302.84	303.13	305.41	306.10	305.83	305.92	305.87	305.38	304.78	304.06
25	303.48	303.02	302.84	303.85	305.60	305.98	306.03	305.89	305.85	305.33	304.80	304.28
26	303.45	303.00	302.82	304.24	305.91	305.96	306.16	305.86	305.82	305.27	304.79	304.41
27	303.43	303.00	302.82	304.28	306.04	305.97	306.03	305.83	305.88	305.22	304.78	304.35
28	303.40	302.97	302.83	304.30	306.09	305.98	306.01	305.80	305.97	305.18	304.78	304.34
29	303.38	302.96	302.89	304.31	306.14	306.03	306.03	305.80	306.00	305.15	304.67	304.31
30	303.36	302.94	302.91	304.32	---	306.04	306.05	305.78	305.95	305.13	304.60	304.30
31	303.33	---	302.90	304.33	---	306.04	---	305.76	---	305.11	304.52	---
MEAN	303.66	303.09	302.86	303.20	305.39	306.06	---	---	305.92	305.65	304.74	304.26
MAX	303.87	303.31	302.94	304.33	306.23	306.29	---	---	306.03	306.06	305.09	304.49
MIN	303.33	302.94	302.78	302.78	304.33	305.89	---	---	305.74	305.11	304.52	303.88

CAL YR 2003 MEAN 305.02 MAX 306.99 MIN 302.78

08022060 Martin Lake near Tatum, TX—Continued



08022200 Murval Lake near Gary, TX

LOCATION.--Lat 32°02'04", long 94°25'15", Panola County, Hydrologic Unit 12010002, at outlet structure of Murvaul Lake Dam on Murvaul Bayou (tributary to Sabine River), 3.0 mi northwest of Gary, and 9.0 mi southwest of Carthage.

DRAINAGE AREA.--115 mi^2.

PERIOD OF RECORD.--Apr. 6, 1999 to Sept. 2001 (contents), Oct. 2001 to current year.

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

REMARKS.--Records good. The dam is formed by a rolled earthfill structure 8,300 ft long with an uncontrolled broad-crested weir-type spillway, 270 ft in length, at right end of dam. The dam is the property of the Panola County Fresh Water Supply District No. 1, Carthage, and was built to impound water for municipal and industrial uses. Storage began in Nov. 1957 and the lake level reached the service spillway elevation in May 1958. Data regarding the dam is given in the following table:

	Elevation (feet)
Top of dam	280.0
Top of design flood pool	275.0
Crest of spillway	265.3
Invert of lowest sluice gate	235.0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 42,600 acre-ft, May 21, 2000, elevation, 266.54 ft; minimum contents, 31,750 acre-ft, Sept. 30, 2000, elevation, 263.31 ft; maximum elevation, 268.20 ft, May 2, 2004.

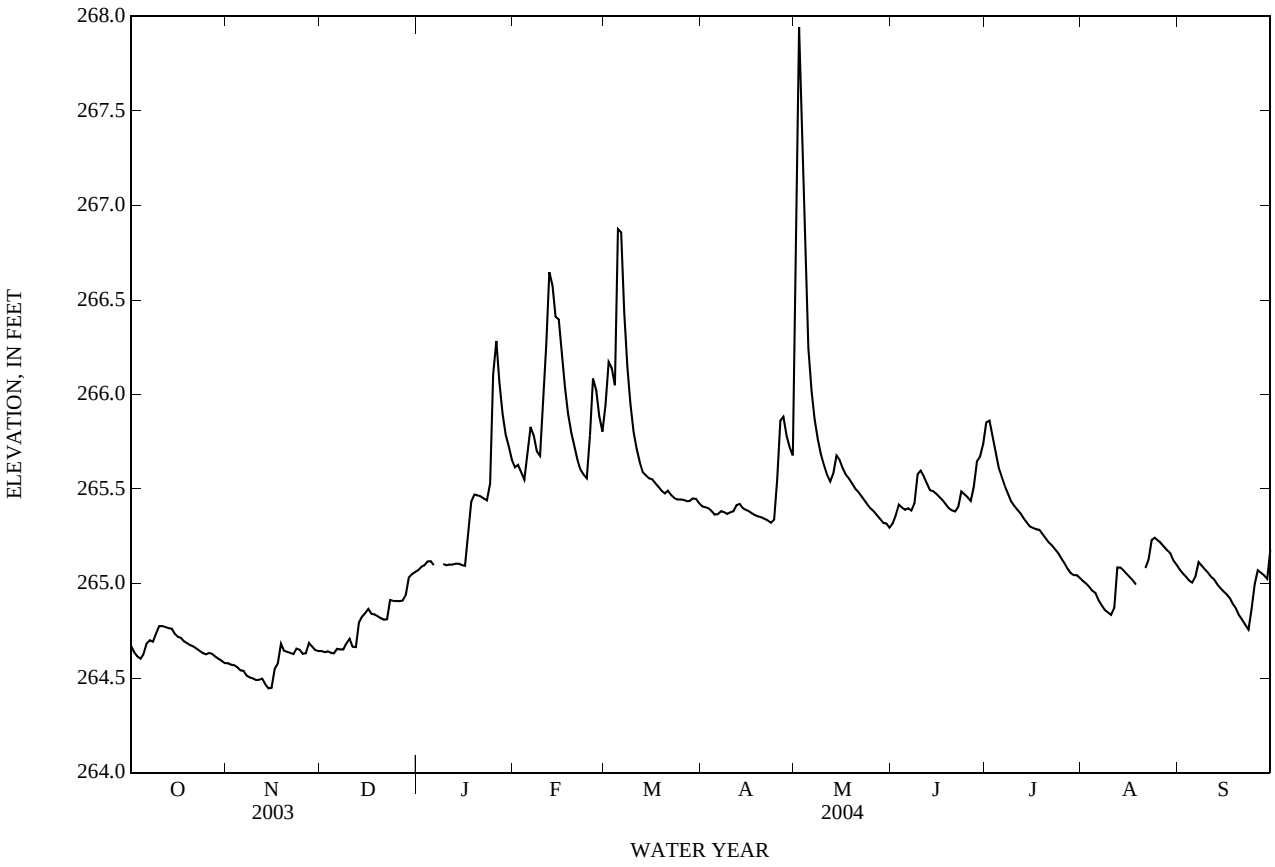
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 268.20 ft, May 2; minimum elevation, 264.43 ft, Nov. 14, 15.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	264.67	264.58	264.64	265.07	265.61	265.94	265.41	266.69	265.32	265.85	265.01	265.07
2	264.64	264.57	264.64	265.09	265.63	266.17	265.40	267.94	265.36	265.86	265.00	265.05
3	264.62	264.57	264.64	265.10	265.59	266.14	265.40	267.17	265.42	265.78	264.98	265.04
4	264.60	264.56	264.63	265.12	265.55	266.05	265.38	266.60	265.40	265.69	264.96	265.02
5	264.63	264.54	264.63	265.12	265.69	266.88	265.37	266.25	265.39	265.61	264.95	265.00
6	264.68	264.54	264.65	265.10	265.83	266.86	265.37	266.02	265.40	265.56	264.91	265.04
7	264.70	264.51	264.65	---	265.78	266.44	265.38	265.87	265.39	265.51	264.88	265.11
8	264.69	264.50	264.65	---	265.70	266.14	265.38	265.76	265.42	265.47	264.86	265.10
9	264.73	264.50	264.68	265.10	265.68	265.95	265.37	265.69	265.58	265.43	264.85	265.08
10	264.78	264.49	264.71	265.10	265.99	265.80	265.38	265.63	265.60	265.41	264.83	265.06
11	264.77	264.49	264.67	265.10	266.26	265.71	265.38	265.58	265.57	265.39	264.87	265.04
12	264.77	264.50	264.66	265.10	266.65	265.64	265.41	265.54	265.53	265.37	265.08	265.02
13	264.76	264.47	264.79	265.10	266.58	265.59	265.42	265.58	265.49	265.34	265.08	265.00
14	264.76	264.45	264.83	265.10	266.41	265.57	265.40	265.68	265.49	265.32	265.07	264.98
15	264.73	264.45	264.84	265.10	266.40	265.56	265.39	265.66	265.47	265.30	265.05	264.96
16	264.72	264.55	264.87	265.09	266.22	265.55	265.38	265.61	265.46	265.29	265.03	264.94
17	264.71	264.58	264.84	265.27	266.04	265.53	265.37	265.58	265.44	265.29	265.02	264.92
18	264.69	264.68	264.84	265.43	265.90	265.51	265.36	265.56	265.42	265.28	264.99	264.89
19	264.68	264.65	264.83	265.47	265.80	265.49	265.35	265.53	265.40	265.26	---	264.87
20	264.67	264.64	264.82	265.47	265.73	265.48	265.35	265.50	265.39	265.24	---	264.83
21	264.67	264.63	264.81	265.46	265.65	265.49	265.34	265.48	265.38	265.22	265.08	264.81
22	264.66	264.63	264.81	265.45	265.60	265.47	265.33	265.46	265.41	265.20	265.13	264.78
23	264.64	264.66	264.91	265.44	265.58	265.45	265.32	265.44	265.49	265.18	265.23	264.76
24	264.63	264.65	264.91	265.53	265.56	265.44	265.34	265.42	265.47	265.16	265.24	264.86
25	264.63	264.63	264.91	266.11	265.78	265.45	265.55	265.40	265.46	265.13	265.23	265.00
26	264.63	264.63	264.91	266.28	266.08	265.44	265.86	265.38	265.44	265.11	265.21	265.07
27	264.63	264.69	264.91	266.06	266.02	265.44	265.88	265.36	265.51	265.08	265.19	265.06
28	264.61	264.67	264.94	265.90	265.89	265.44	265.78	265.34	265.65	265.06	265.18	265.04
29	264.60	264.65	265.03	265.79	265.80	265.45	265.72	265.32	265.67	265.05	265.16	265.03
30	264.59	264.64	265.05	265.72	---	265.45	265.68	265.32	265.74	265.04	265.12	265.18
31	264.58	---	265.06	265.65	---	265.43	---	265.30	---	265.03	265.10	---
MEAN	264.67	264.58	264.80	---	265.90	265.74	265.45	265.76	265.47	265.34	---	264.99
MAX	264.78	264.69	265.06	---	266.65	266.88	265.88	267.94	265.74	265.86	---	265.18
MIN	264.58	264.45	264.63	---	265.55	265.43	265.32	265.30	265.32	265.03	---	264.76

CAL YR 2003 MEAN 265.14 MAX 267.87 MIN 264.45

08022200 Murval Lake near Gary, TX—Continued



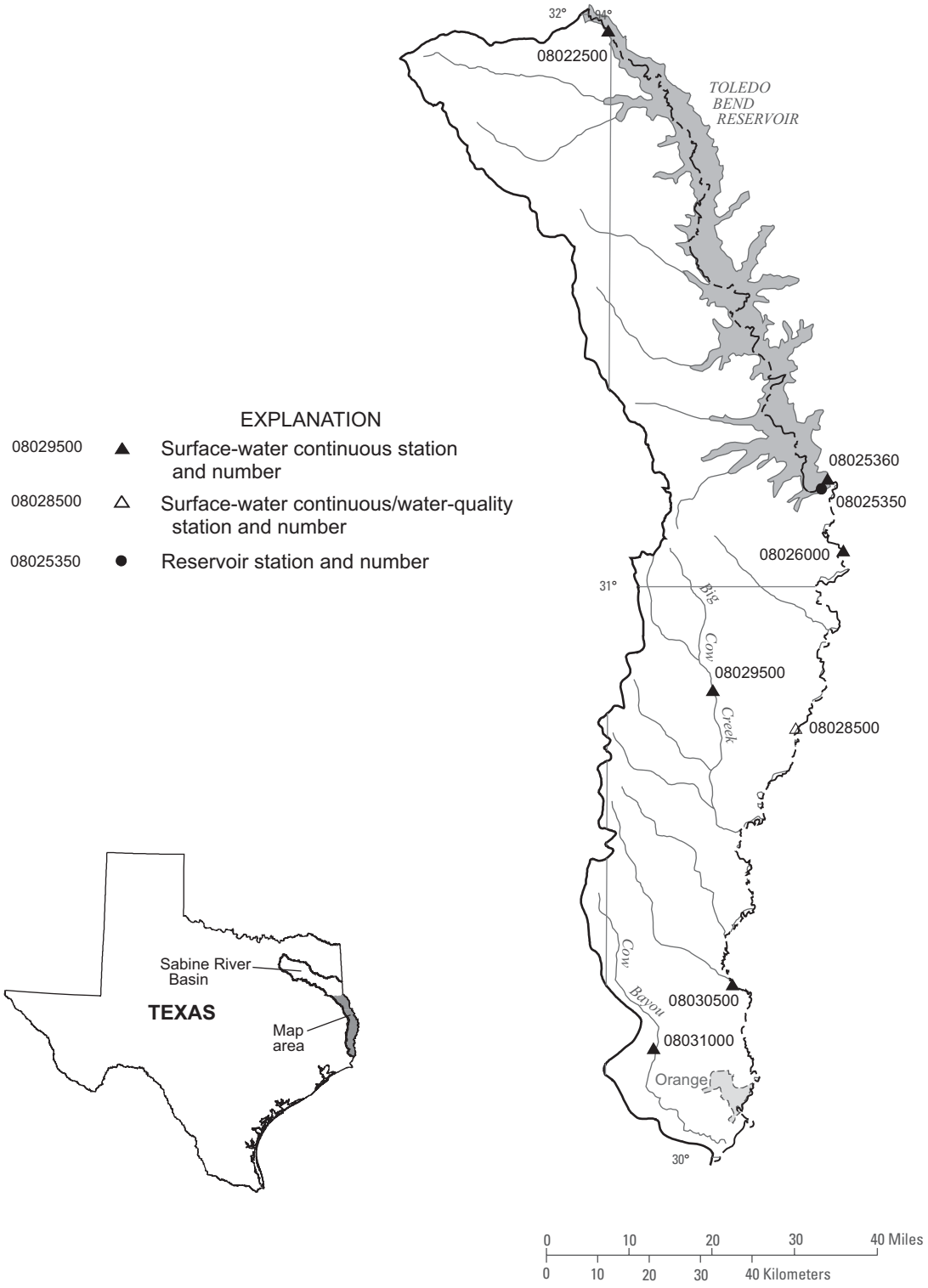


Figure 9.--Map showing location of gaging stations in the second section of the Sabine River Basin

08022500 Sabine River at Logansport, LA

LOCATION.--Lat 31°58'20", long 94°00'22", Shelby County, Hydrologic Unit 12010004, on left bank just upstream from bridge on U.S. Highway 84, 3.0 mi upstream from Bayou Castor, 111 mi upstream from Toledo Bend Dam and at mile 267.1.

DRAINAGE AREA.--4,842 mi^2 of which 3 mi^2 probably is noncontributing.

PERIOD OF RECORD.--July 1903 to Feb. 1968 (daily mean discharge), Mar. 1968 to current year (daily maximum gage height). Water-quality records: Specific conductance: 1939 to 1945. Water temperature: 1939 to 1945.

REVISED RECORDS.--WSP 1312: 1903-06 (monthly and annual means). WSP 1732: 1929(M), 1933(M).

GAGE.--Water-stage recorder. Datum of gage is 147.72 ft above NGVD of 1929. July 1, 1903, to Sept. 30, 1956, nonrecording gages located in the vicinity of present 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. Satellite telemeter at station.

REMARKS.--Records good. Station discontinued as a daily streamflow station on Mar. 1, 1968, due to backwater from storage in Toledo Bend Reservoir. Since water year 1961, at least 10% of contributing drainage area has been regulated. Flow may also be slightly affected at times by discharge from one floodwater-retarding structure. This structure controls runoff from 9.70 mi^2 in the Mill Creek drainage basin. Numerous diversions above station for oil field operations, municipal and industrial uses.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--57 years (water years 1904-1960), 3,325 ft^3/s (2,407,000 acre-ft/yr).

AVERAGE DISCHARGE FOR REGULATED PERIOD.--7 years (water years 1961-1967), 2,252 ft^3/s (1,632,000 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1884 reached a stage of 39.4 ft at present site and datum. Stage determined from high-water mark.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1904-1960: Maximum discharge, 92,000 ft^3/s Apr. 8, 1945, gage height, 44.07 ft, from floodmark; minimum, 16 ft^3/s, Sept. 26-28, Oct. 3, 4, 1939.

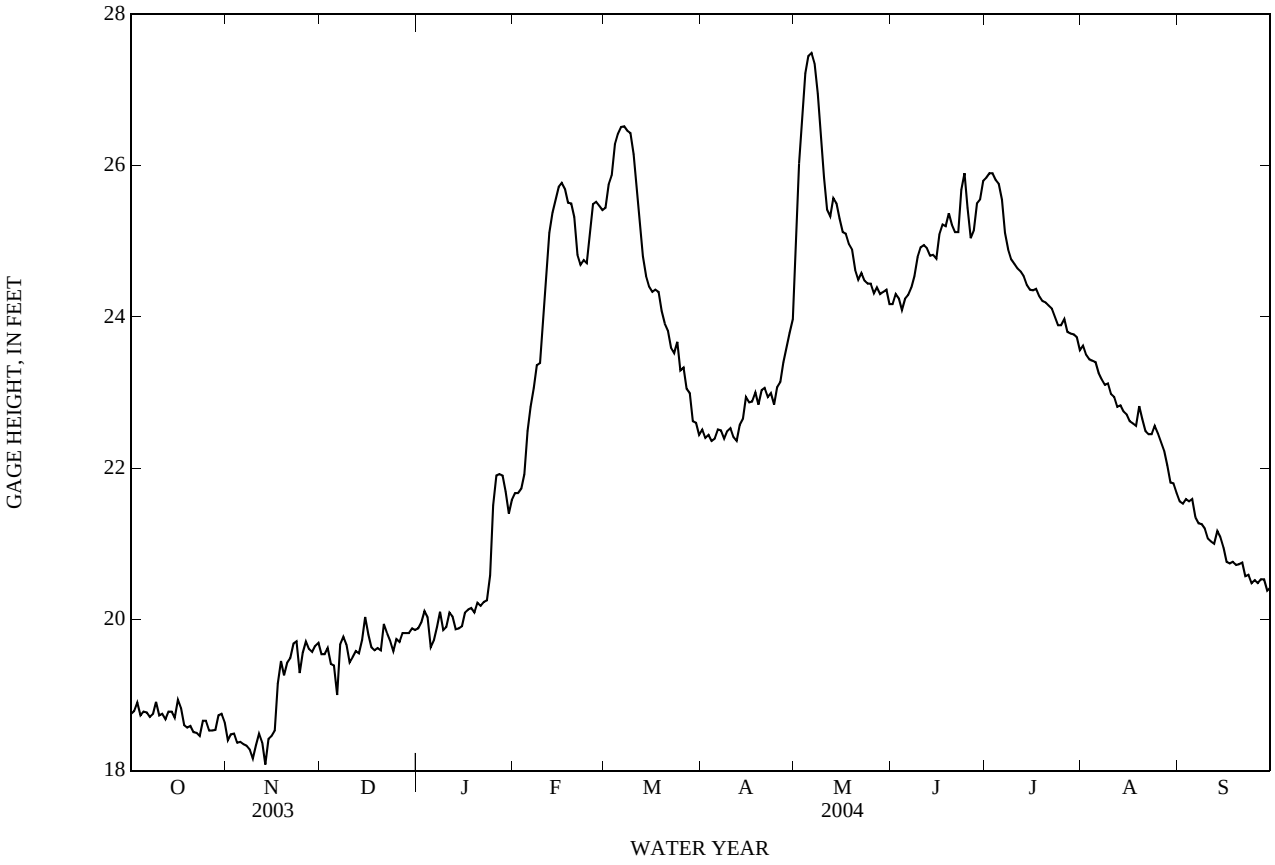
EXTREMES FOR REGULATED PERIOD.--WATER YEARS, 1961-1967: Maximum gage height, 34.78 ft Apr. 16. 1991; minimum since initial filling of Toledo Bend Reservoir in June 1968, 16.85 ft, Nov. 9, 1987. Maximum discharge, 46,800 ft^3/s May 6, 1966, gage height, 38.46 ft; minimum, 25 ft^3/s, Aug. 13, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 27.49 ft, May 6; minimum gage height, 17.82 ft, Nov. 13.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.75	18.40	19.54	19.88	21.67	25.44	22.51	24.97	24.17	25.84	23.62	21.56
2	18.79	18.48	19.54	19.96	21.67	25.75	22.40	26.03	24.30	25.90	23.50	21.53
3	18.90	18.49	19.62	20.11	21.73	25.87	22.44	26.58	24.24	25.90	23.44	21.59
4	18.73	18.37	19.41	20.03	21.92	26.28	22.36	27.22	24.09	25.81	23.42	21.56
5	18.78	18.38	19.39	19.63	22.49	26.42	22.39	27.45	24.24	25.76	23.40	21.59
6	18.77	18.35	19.00	19.72	22.81	26.51	22.51	27.49	24.29	25.55	23.26	21.35
7	18.71	18.33	19.67	19.90	23.06	26.52	22.50	27.35	24.39	25.11	23.17	21.27
8	18.75	18.28	19.77	20.10	23.36	26.46	22.39	26.95	24.54	24.89	23.10	21.26
9	18.91	18.16	19.67	19.86	23.39	26.43	22.49	26.41	24.79	24.76	23.12	21.20
10	18.73	18.34	19.43	19.90	23.97	26.15	22.53	25.84	24.92	24.70	22.98	21.07
11	18.75	18.49	19.50	20.09	24.62	25.71	22.41	25.42	24.95	24.64	22.94	21.03
12	18.68	18.37	19.58	20.04	25.11	25.22	22.36	25.33	24.91	24.60	22.81	21.00
13	18.78	18.08	19.55	19.87	25.38	24.80	22.57	25.57	24.81	24.54	22.83	21.17
14	18.78	18.42	19.73	19.88	25.54	24.54	22.65	25.50	24.82	24.42	22.75	21.09
15	18.70	18.46	20.03	19.91	25.72	24.40	22.94	25.30	24.77	24.36	22.71	20.95
16	18.94	18.53	19.80	20.09	25.77	24.33	22.87	25.12	25.09	24.35	22.62	20.76
17	18.83	19.15	19.63	20.13	25.69	24.36	22.88	25.10	25.22	24.37	22.59	20.74
18	18.60	19.45	19.59	20.15	25.51	24.33	23.00	24.96	25.20	24.27	22.56	20.76
19	18.57	19.26	19.62	20.09	25.50	24.08	22.84	24.89	25.37	24.21	22.82	20.72
20	18.59	19.43	19.59	20.22	25.32	23.91	23.03	24.62	25.22	24.19	22.65	20.73
21	18.51	19.49	19.94	20.18	24.82	23.82	23.06	24.49	25.12	24.15	22.49	20.75
22	18.50	19.68	19.82	20.23	24.69	23.59	22.94	24.58	25.12	24.11	22.45	20.57
23	18.46	19.71	19.72	20.25	24.75	23.52	22.99	24.48	25.68	24.00	22.45	20.59
24	18.66	19.29	19.58	20.58	24.71	23.67	22.84	24.44	25.90	23.89	22.56	20.48
25	18.66	19.56	19.74	21.51	25.09	23.29	23.07	24.44	25.44	23.89	22.46	20.52
26	18.53	19.71	19.70	21.90	25.49	23.33	23.14	24.31	25.04	23.97	22.35	20.48
27	18.53	19.61	19.82	21.92	25.52	23.05	23.40	24.39	25.14	23.80	22.23	20.53
28	18.54	19.57	19.82	21.90	25.47	22.99	23.60	24.30	25.50	23.78	22.04	20.53
29	18.73	19.65	19.82	21.69	25.41	22.62	23.79	24.33	25.55	23.77	21.81	20.38
30	18.75	19.69	19.88	21.40	---	22.60	23.97	24.36	25.80	23.73	21.80	20.42
31	18.64	---	19.86	21.58	---	22.44	---	24.17	---	23.56	21.67	---
MAX	18.94	19.71	20.03	21.92	25.77	26.52	23.97	27.49	25.90	25.90	23.62	21.59

08022500 Sabine River at Logansport, LA—Continued



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 mi^2.

PERIOD OF RECORD.--Oct. 1966 to current year.

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

REMARKS.--No estimated daily contents. Records good. 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 dam is owned by the Sabine River Authority. The capacity table is based on U.S. Geological Survey topographic maps. There are many diversions above station for oil field operations and municipal supply. Conservation pool storage is 4,472,900 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	185.0
Design flood	175.3
Top of gates	173.0
Top of power drawdown storage (top of conservation pool)	172.0
Top of power head storage	162.2
Crest of spillway (controlled)	145.0
Lowest gated outlet (invert)	100.0

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, 3,008,000 acre-ft, Oct. 12,13, 2001, elevation, 162.81 ft.

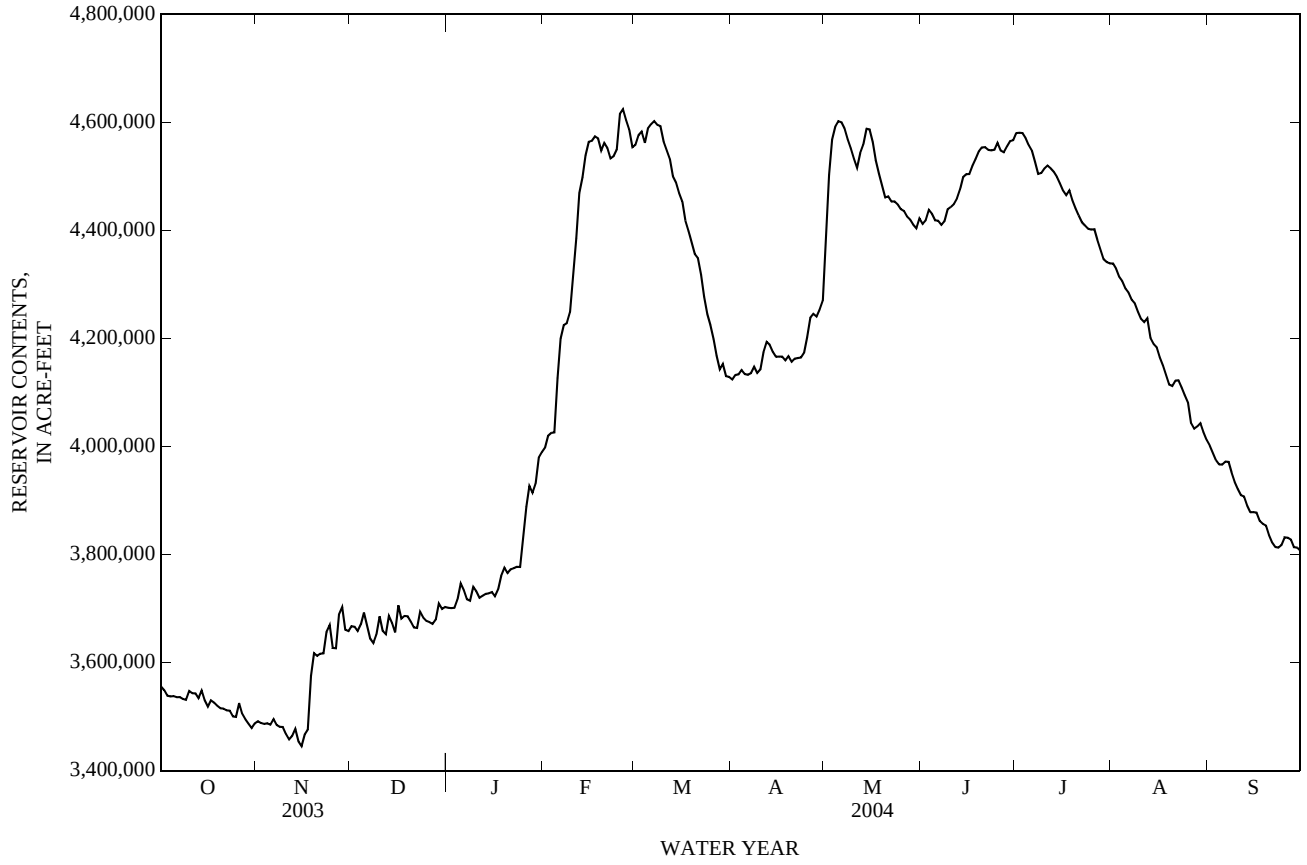
EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,653,000 acre-ft, Feb. 25, gage height, 172.96 ft; minimum contents, 3,434,000 acre-ft, Nov. 15, gage height, 165.74 ft.

RESERVOIR STORAGE, ACRE FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,556,000	3,492,000	3,668,000	3,701,000	3,998,000	4,558,000	4,124,000	4,369,000	4,412,000	4,580,000	4,339,000	4,002,000
2	3,549,000	3,488,000	3,666,000	3,701,000	4,020,000	4,577,000	4,132,000	4,503,000	4,419,000	4,581,000	4,329,000	3,988,000
3	3,539,000	3,487,000	3,659,000	3,702,000	4,025,000	4,583,000	4,134,000	4,568,000	4,438,000	4,580,000	4,314,000	3,975,000
4	3,537,000	3,488,000	3,671,000	3,717,000	4,026,000	4,562,000	4,142,000	4,592,000	4,431,000	4,571,000	4,306,000	3,967,000
5	3,538,000	3,485,000	3,692,000	3,747,000	4,127,000	4,589,000	4,134,000	4,602,000	4,419,000	4,558,000	4,292,000	3,967,000
6	3,536,000	3,495,000	3,668,000	3,735,000	4,200,000	4,597,000	4,133,000	4,600,000	4,418,000	4,547,000	4,285,000	3,972,000
7	3,536,000	3,485,000	3,644,000	3,717,000	4,225,000	4,603,000	4,136,000	4,589,000	4,410,000	4,527,000	4,272,000	3,972,000
8	3,533,000	3,481,000	3,636,000	3,714,000	4,228,000	4,595,000	4,148,000	4,569,000	4,417,000	4,504,000	4,265,000	3,952,000
9	3,531,000	3,481,000	3,652,000	3,740,000	4,249,000	4,593,000	4,136,000	4,552,000	4,439,000	4,506,000	4,249,000	3,934,000
10	3,547,000	3,468,000	3,685,000	3,732,000	4,318,000	4,564,000	4,143,000	4,533,000	4,443,000	4,515,000	4,237,000	3,921,000
11	3,543,000	3,458,000	3,659,000	3,720,000	4,386,000	4,549,000	4,174,000	4,516,000	4,449,000	4,520,000	4,230,000	3,910,000
12	3,543,000	3,465,000	3,652,000	3,724,000	4,469,000	4,532,000	4,193,000	4,544,000	4,459,000	4,515,000	4,237,000	3,907,000
13	3,534,000	3,477,000	3,687,000	3,727,000	4,498,000	4,500,000	4,188,000	4,559,000	4,476,000	4,509,000	4,200,000	3,890,000
14	3,548,000	3,454,000	3,673,000	3,728,000	4,539,000	4,489,000	4,175,000	4,588,000	4,499,000	4,500,000	4,190,000	3,878,000
15	3,530,000	3,445,000	3,656,000	3,731,000	4,564,000	4,469,000	4,166,000	4,587,000	4,504,000	4,487,000	4,184,000	3,879,000
16	3,519,000	3,467,000	3,706,000	3,723,000	4,566,000	4,453,000	4,167,000	4,564,000	4,505,000	4,474,000	4,165,000	3,878,000
17	3,530,000	3,476,000	3,681,000	3,736,000	4,574,000	4,418,000	4,166,000	4,530,000	4,520,000	4,465,000	4,150,000	3,862,000
18	3,526,000	3,575,000	3,686,000	3,761,000	4,570,000	4,399,000	4,159,000	4,505,000	4,532,000	4,474,000	4,132,000	3,857,000
19	3,520,000	3,618,000	3,686,000	3,776,000	4,548,000	4,379,000	4,167,000	4,484,000	4,546,000	4,456,000	4,115,000	3,854,000
20	3,516,000	3,612,000	3,676,000	3,766,000	4,562,000	4,356,000	4,157,000	4,461,000	4,554,000	4,441,000	4,112,000	3,836,000
21	3,515,000	3,616,000	3,665,000	3,773,000	4,552,000	4,349,000	4,163,000	4,463,000	4,554,000	4,428,000	4,122,000	3,822,000
22	3,512,000	3,617,000	3,664,000	3,775,000	4,533,000	4,318,000	4,164,000	4,453,000	4,549,000	4,416,000	4,123,000	3,814,000
23	3,511,000	3,657,000	3,694,000	3,777,000	4,538,000	4,277,000	4,165,000	4,454,000	4,548,000	4,409,000	4,109,000	3,813,000
24	3,500,000	3,669,000	3,683,000	3,777,000	4,550,000	4,245,000	4,174,000	4,448,000	4,549,000	4,403,000	4,096,000	3,818,000
25	3,500,000	3,627,000	3,677,000	3,833,000	4,616,000	4,225,000	4,202,000	4,440,000	4,562,000	4,402,000	4,082,000	3,832,000
26	3,525,000	3,627,000	3,675,000	3,889,000	4,625,000	4,199,000	4,239,000	4,436,000	4,548,000	4,402,000	4,044,000	3,831,000
27	3,505,000	3,689,000	3,672,000	3,927,000	4,604,000	4,168,000	4,246,000	4,426,000	4,545,000	4,382,000	4,033,000	3,828,000
28	3,495,000	3,703,000	3,680,000	3,914,000	4,587,000	4,143,000	4,241,000	4,420,000	4,556,000	4,364,000	4,037,000	3,814,000
29	3,487,000	3,661,000	3,709,000	3,931,000	4,554,000	4,153,000	4,253,000	4,411,000	4,565,000	4,347,000	4,043,000	3,813,000
30	3,479,000	3,658,000	3,699,000	3,980,000	---	4,130,000	4,270,000	4,404,000	4,567,000	4,341,000	4,027,000	3,807,000
31	3,487,000	---	3,703,000	3,990,000	---	4,129,000	---	4,422,000	---	4,339,000	4,012,000	---
MEAN	3,523,000	3,547,000	3,675,000	3,779,000	4,409,000	4,410,000	4,173,000	4,503,000	4,494,000	4,469,000	4,172,000	3,886,000
MAX	3,556,000	3,703,000	3,709,000	3,990,000	4,625,000	4,603,000	4,270,000	4,602,000	4,567,000	4,581,000	4,339,000	4,002,000
MIN	3,479,000	3,445,000	3,636,000	3,701,000	3,998,000	4,129,000	4,124,000	4,369,000	4,410,000	4,339,000	4,012,000	3,807,000

CAL YR 2003 MEAN 4,004,000 MAX 4,643,000 MIN 3,445,000
WTR YR 2004 MEAN 4,086,000 MAX 4,625,000 MIN 3,445,000

08025350 Toledo Bend Reservoir near Burkeville, TX—Continued



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 mi^2.

PERIOD OF RECORD.--Oct. 1971 to current year. Water-quality records: Chemical data: Oct. 1967 to Sept. 1986. Biochemical data: Oct. 1967 to Sept. 1986.

GAGE.--Water-stage recorders. Datum of gage is NGVD of 1929 (levels by Sabine River Authority). Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. 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 relations and operation logs. Tainter gate releases, low-flow sluiceway releases, bypass gate releases, and turbine leakages are based on discharge measurements and operation logs. Since installation of gage in Oct. 1971, at least 10% of contributing drainage area has been regulated.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

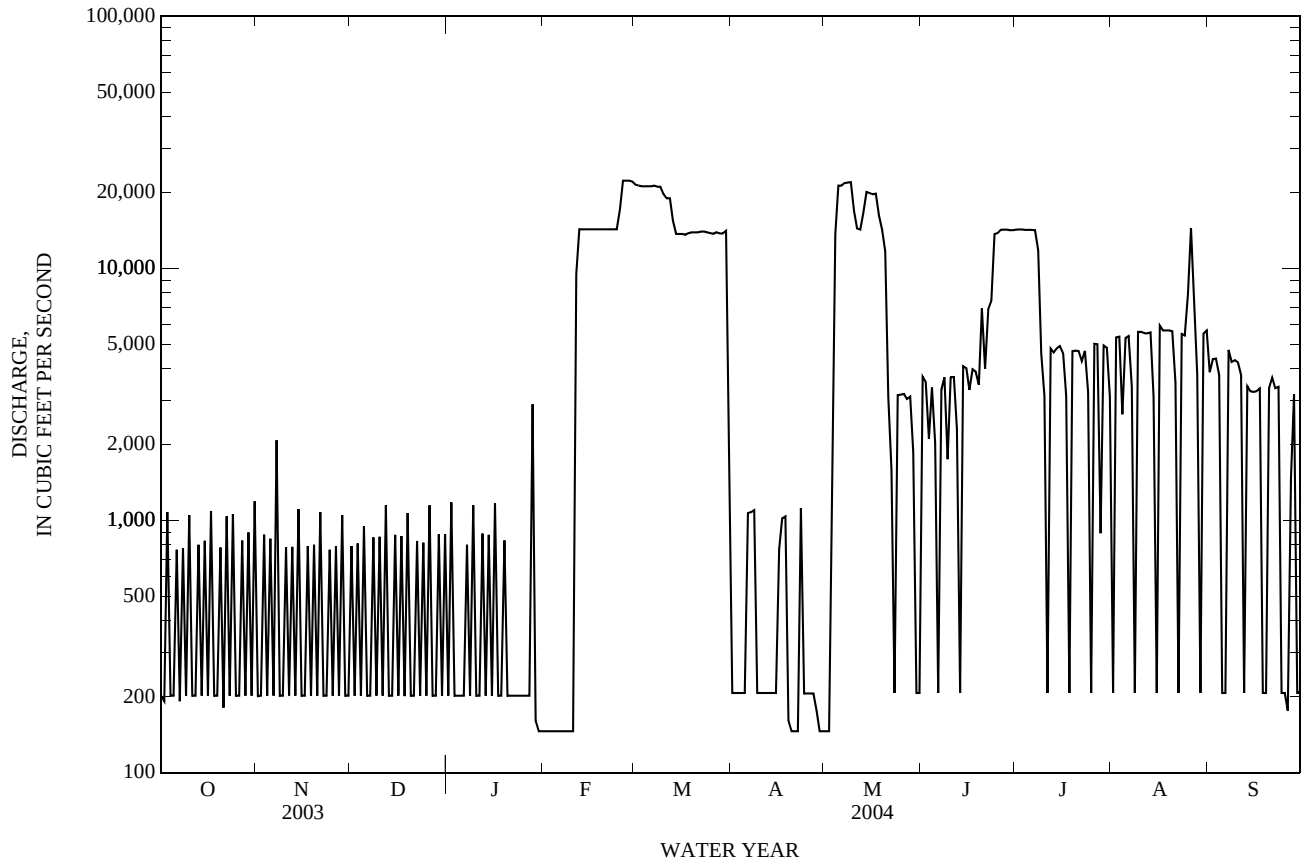
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202	201	792	202	146	21,500	207	146	3,720	14,300	207	3,880
2	192	202	202	1,180	146	21,300	207	146	3,550	14,300	5,330	4,370
3	1,080	878	811	202	146	21,200	207	3,820	2,110	14,300	5,370	4,390
4	202	202	202	202	146	21,200	207	13,700	3,370	14,200	2,640	3,780
5	202	847	948	202	146	21,200	207	21,300	2,030	14,200	5,300	207
6	766	202	202	202	146	21,200	1,070	21,300	207	14,200	5,400	207
7	192	2,080	202	801	146	21,300	1,080	21,800	3,310	14,200	3,400	4,750
8	776	202	857	202	146	21,100	1,100	21,900	3,700	11,800	207	4,260
9	202	202	202	1,150	146	21,100	207	22,000	1,750	4,610	5,600	4,330
10	1,050	781	862	202	146	19,700	207	16,900	3,710	3,120	5,600	4,250
11	202	202	202	202	9,510	19,000	207	14,400	3,710	207	5,540	3,780
12	202	786	1,150	887	14,300	19,000	207	14,300	2,310	4,810	5,520	207
13	801	202	202	202	14,300	15,500	207	16,600	207	4,640	5,570	3,410
14	202	1,110	202	877	14,300	13,700	207	20,100	4,090	4,820	3,110	3,260
15	831	202	877	202	14,300	13,700	207	19,900	4,020	4,920	207	3,240
16	202	202	202	1,170	14,300	13,700	771	19,700	3,300	4,610	5,940	3,260
17	1,090	791	867	202	14,300	13,600	1,020	19,800	3,980	3,120	5,680	3,340
18	202	202	201	202	14,300	13,800	1,040	16,200	3,900	207	5,680	207
19	202	801	1,070	834	14,300	13,900	161	14,300	3,460	4,690	5,680	207
20	781	202	202	202	14,300	13,900	146	11,700	6,930	4,720	5,640	3,350
21	181	1,080	202	202	14,300	13,900	146	3,100	4,010	4,700	3,520	3,690
22	1,040	202	827	202	14,300	14,000	146	1,590	6,870	4,290	207	3,350
23	202	202	202	202	14,300	14,000	1,120	207	7,420	4,710	5,490	3,390
24	1,060	766	817	202	14,300	13,900	206	3,140	13,700	3,230	5,420	207
25	202	202	202	202	17,200	13,800	206	3,160	13,800	207	7,930	207
26	202	791	1,150	202	22,300	13,700	206	3,180	14,200	5,020	14,500	176
27	832	202	202	202	22,300	13,900	206	3,030	14,200	5,010	7,800	1,480
28	202	1,050	202	2,890	22,300	13,800	176	3,100	14,300	890	3,790	3,170
29	897	202	882	161	22,100	13,800	146	1,870	14,200	4,950	207	207
30	202	202	202	146	---	14,100	146	207	14,200	4,850	5,510	207
31	1,190	---	882	146	---	4,740	---	207	---	3,100	5,680	---
TOTAL	15,789	15,396	16,225	14,282	303,070	504,240	11,576	332,803	180,264	196,931	147,675	74,769
MEAN	509	513	523	461	10,450	16,270	386	10,740	6,009	6,353	4,764	2,492
MAX	1,190	2,080	1,150	2,890	22,300	21,500	1,120	22,000	14,300	14,300	14,500	4,750
MIN	181	201	201	146	146	4,740	146	146	207	207	207	176
AC-FT	31,320	30,540	32,180	28,330	601,100	1,000,000	22,960	660,100	357,600	390,600	292,900	148,300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004, BY WATER YEAR (WY)

MEAN	1,292	2,150	5,403	9,229	10,080	11,590	8,073	7,259	5,480	4,653	3,797	3,273
MAX	6,809	13,340	17,720	27,680	23,850	44,240	19,270	22,170	24,960	18,790	6,732	11,770
(WY)	(1992)	(1995)	(1975)	(1974)	(1999)	(2001)	(1991)	(1991)	(1989)	(1989)	(1976)	(2001)
MIN	59.0	50.7	74.5	90.0	339	231	247	311	508	493	470	424
(WY)	(1976)	(1976)	(1976)	(1978)	(1981)	(1972)	(1978)	(1984)	(1996)	(1996)	(1996)	(1983)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1972 - 2004	
ANNUAL TOTAL	1,628,240		1,813,020			
ANNUAL MEAN	4,461		4,954		6,007	
HIGHEST ANNUAL MEAN					10,370	1995
LOWEST ANNUAL MEAN					517	1996
HIGHEST DAILY MEAN	26,300	Mar 5	22,300	Feb 26	117,000	Jan 31, 1999
LOWEST DAILY MEAN	146	Jul 28	146	Jan 30	11	Dec 12, 2001
ANNUAL SEVEN-DAY MINIMUM	176	Jan 31	146	Jan 30	25	Dec 7, 2001
ANNUAL RUNOFF (AC-FT)	3,230,000		3,596,000		4,352,000	
10 PERCENT EXCEEDS	13,800		14,300		14,800	
50 PERCENT EXCEEDS	2,350		1,150		3,840	
90 PERCENT EXCEEDS	176		202		146	

08025360 Sabine River at Toledo Bend Reservoir near Burkeville, TX—Continued



08026000 Sabine River near Burkeville, TX

LOCATION.--Lat 31°03'50", long 93°31'10", Newton County, Hydrologic Unit 12010005, near left edge of low-water channel on 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 mi^2.

PERIOD OF RECORD.--Sept. 1955 to current year. Published as "below Toledo Bend near Burkeville" for period 1955-75. Water-quality records: Chemical data: May 1968 to Sept. 1986. Biochemical data: May 1968 to Sept. 1986. Pesticide data: Oct. 1972 to Sept. 1981.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 60.59 ft above NGVD of 1929. Prior to Aug. 23, 1958, nonrecording gage at current site. Prior to Jan. 1, 1989, at present site at datum 10.00 ft higher. Telephone telemeter at station. Satellite telemeter at station.

REMARKS.--Records fair. Since water year 1961, at least 10% of contributing drainage area has been regulated.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--5 years (water years 1956-1960) 5,180 ft^3/s (3,749,000 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1860: 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. Flood of May 23, 1953, reached a stage of 45.3 ft, current datum, from floodmarks.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1956-1960: Maximum discharge, 52,900 ft^3/s, May 15, 1957, gage height, 32.43 ft; minimum, 60 ft^3/s, Sept. 26-30, 1956.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,710	678	578	842	1,150	23,800	1,060	7,330	1,970	19,400	1,710	5,280
2	478	217	652	656	583	23,500	473	8,390	3,860	18,800	3,380	4,940
3	845	424	474	973	423	23,600	391	4,620	3,060	17,700	5,870	4,910
4	902	589	673	332	361	23,500	348	9,550	3,320	16,700	4,020	4,660
5	362	429	432	293	2,670	23,500	313	17,400	3,020	16,400	4,440	2,280
6	579	579	782	273	4,770	23,500	430	22,500	1,460	16,400	5,730	536
7	712	809	269	409	3,810	23,500	1,070	23,400	1,860	16,400	4,220	2,650
8	527	1,340	424	651	1,830	23,400	1,080	24,100	3,690	16,000	1,780	4,860
9	651	230	667	629	656	23,300	939	23,600	2,890	e11,500	3,350	4,930
10	830	402	527	975	1,280	22,800	280	21,400	2,880	e6,000	5,590	4,910
11	627	550	700	367	8,490	21,400	526	16,700	4,040	e2,800	5,670	4,690
12	290	408	611	515	20,600	21,200	573	20,000	3,230	e3,400	5,690	2,270
13	489	536	1,290	726	19,100	19,600	656	23,600	1,560	e4,600	5,680	2,060
14	589	566	564	475	17,400	16,400	622	28,300	2,740	e4,300	4,170	3,680
15	455	669	688	690	16,700	16,600	457	26,600	4,550	e4,250	1,760	3,610
16	573	228	809	527	15,800	16,400	529	23,500	4,320	e4,250	3,590	3,610
17	588	453	524	1,040	15,000	16,200	862	22,400	4,630	3,940	5,740	3,620
18	653	1,690	717	571	14,700	16,200	742	21,000	4,510	1,780	5,770	2,100
19	232	1,790	518	678	14,500	16,100	948	17,600	3,680	2,920	5,790	461
20	411	1,170	838	784	14,500	16,100	206	16,300	5,210	4,990	5,780	1,960
21	541	834	278	341	14,400	16,200	176	5,370	6,500	5,040	4,600	3,730
22	609	767	385	298	14,300	16,200	167	2,860	5,960	4,710	1,930	3,890
23	561	328	689	281	14,900	16,200	518	1,410	8,100	4,980	3,470	3,690
24	571	582	474	281	15,100	16,200	657	1,780	16,200	3,940	5,760	2,220
25	646	655	670	1,920	17,100	16,300	367	3,350	17,100	1,800	6,160	559
26	221	532	534	2,110	23,400	16,200	818	3,350	17,200	2,910	15,300	466
27	427	1,710	860	1,220	24,100	16,300	585	3,300	17,100	5,060	11,900	1,080
28	577	2,330	271	2,220	23,500	16,300	371	3,240	18,100	5,100	5,390	2,540
29	470	1,380	1,020	1,340	23,600	16,500	238	2,690	17,400	5,070	2,390	1,930
30	594	480	1,290	1,310	---	16,900	239	1,330	17,000	5,040	3,780	447
31	596	---	836	1,680	---	11,200	---	379	---	3,840	6,240	---
TOTAL	19,316	23,355	20,044	25,407	344,723	585,100	16,641	407,349	207,140	240,020	156,650	88,569
MEAN	623	778	647	820	11,890	18,870	555	13,140	6,905	7,743	5,053	2,952
MAX	2,710	2,330	1,290	2,220	24,100	23,800	1,080	28,300	18,100	19,400	15,300	5,280
MIN	221	217	269	273	361	11,200	167	379	1,460	1,780	1,710	447
AC-FT	38,310	46,320	39,760	50,390	683,800	1,161,000	33,010	808,000	410,900	476,100	310,700	175,700

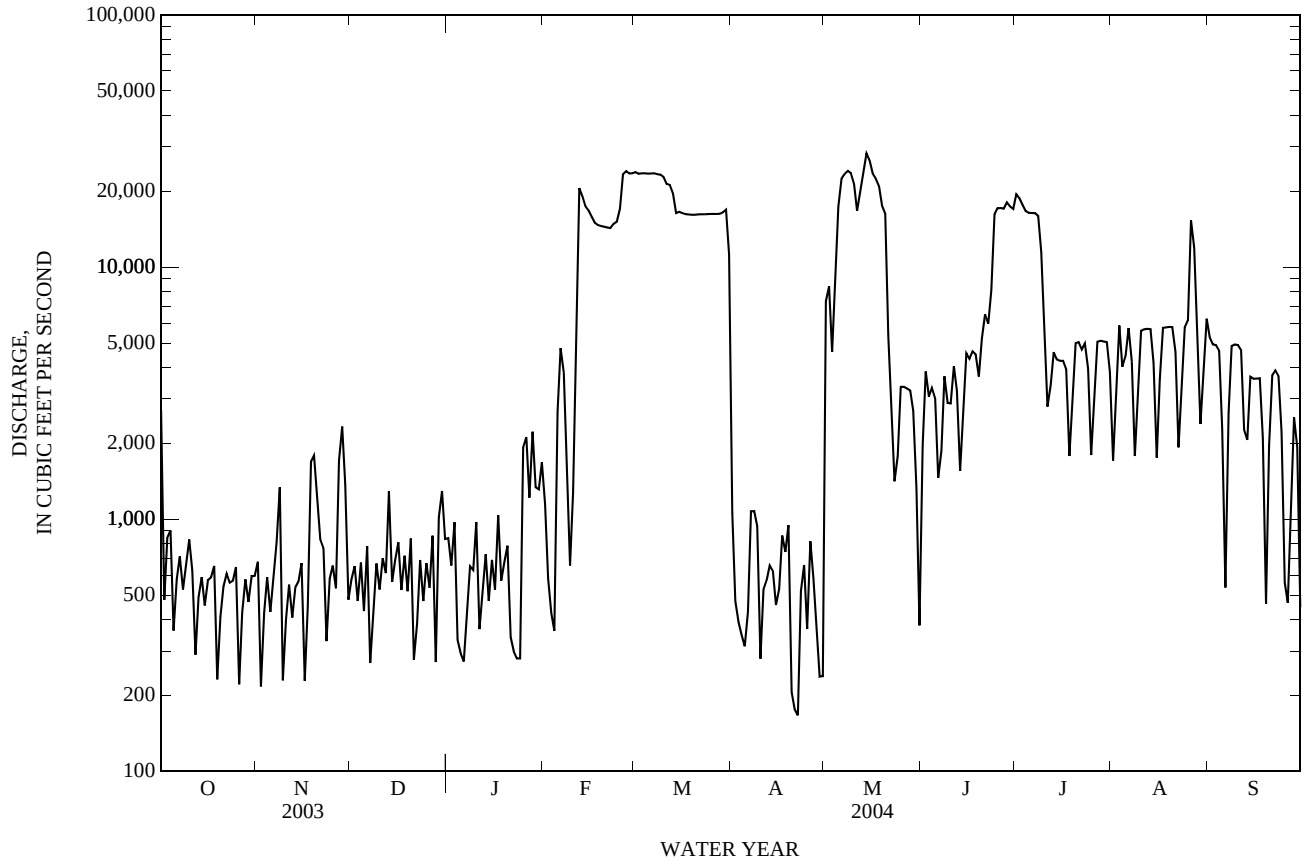
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004z, BY WATER YEAR (WY)

MEAN	1,235	2,009	5,572	8,442	9,386	10,800	8,131	7,769	5,285	4,102	3,100	2,927
MAX	6,846	12,880	17,990	28,510	27,320	45,040	26,530	32,070	25,310	23,750	6,662	11,660
(WY)	(1992)	(1995)	(1962)	(1974)	(1999)	(2001)	(1969)	(1966)	(1989)	(1989)	(1976)	(2001)
MIN	82.5	86.2	247	484	266	485	231	471	400	166	91.7	77.6
(WY)	(1968)	(1968)	(1968)	(1968)	(1968)	(1968)	(1971)	(1967)	(1970)	(1964)	(1967)	(1967)

08026000 Sabine River near Burkeville, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004z	
ANNUAL TOTAL	1,878,230		2,134,314			
ANNUAL MEAN	5,146		5,831		5,715	
HIGHEST ANNUAL MEAN					11,190	1995
LOWEST ANNUAL MEAN					548	1967
HIGHEST DAILY MEAN	27,700	Mar 5	28,300	May 14	117,000	Feb 1, 1999
LOWEST DAILY MEAN	217	Nov 2	167	Apr 22	38	Sep 14, 1967
ANNUAL SEVEN-DAY MINIMUM	480	Nov 10	416	Apr 20	41	Sep 9, 1967
MAXIMUM PEAK FLOW			29,000	May 14	124,000	Feb 1, 1999
MAXIMUM PEAK STAGE			31.80	May 14	48.05	Feb 1, 1999
ANNUAL RUNOFF (AC-FT)	3,725,000		4,233,000		4,140,000	
10 PERCENT EXCEEDS	14,800		17,500		15,300	
50 PERCENT EXCEEDS	3,010		2,240		2,770	
90 PERCENT EXCEEDS	480		410		278	

z Period of regulated streamflow.
e Estimated



08028500 Sabine River near Bon Wier, TX

LOCATION.--Lat 30°44'49", long 93°36'30", Newton County, Hydrologic Unit 12010005, near left bank on 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 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 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 NGVD 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, nonrecording 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. Telephone telemeter at station. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1961, at least 10% of contributing drainage area has been regulated.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--37 years (water years 1924-1960) 7,155 ft^3/s (5,184,000 acre-ft/yr).

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.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1924-1960: Maximum discharge, 115,000 ft^3/s, May 19, 1953, gage height, 38.70 ft, current datum; minimum, 160 ft^3/s, Sept. 29, 1956.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,070	820	1,700	2,580	6,130	25,000	9,040	2,650	1,530	24,000	4,660	6,370
2	2,250	1,030	1,570	2,150	4,870	24,900	3,030	15,800	3,340	26,000	2,670	5,500
3	859	606	1,580	1,830	3,530	24,700	2,050	13,500	5,090	23,500	5,010	5,220
4	937	649	1,310	1,890	2,710	24,700	1,820	12,100	4,320	20,900	6,740	5,200
5	1,090	921	1,420	1,320	3,370	24,600	1,670	18,200	4,660	18,600	4,740	4,860
6	705	687	1,150	1,160	9,270	24,600	1,600	23,100	4,030	17,800	5,570	2,500
7	869	910	1,380	1,070	9,250	24,500	2,020	23,000	2,430	17,400	6,460	1,210
8	1,000	1,070	940	1,130	7,640	24,400	2,610	23,700	3,170	16,900	4,930	3,310
9	830	1,430	975	1,520	5,030	24,100	2,440	23,900	5,020	14,000	2,470	5,030
10	1,280	663	1,380	1,720	4,000	23,900	2,090	23,400	4,120	8,270	4,400	5,140
11	1,450	639	1,360	1,840	9,160	23,000	3,240	20,100	4,360	5,890	6,220	5,110
12	1,270	893	1,470	1,300	26,400	21,800	6,260	19,100	4,990	3,390	6,420	4,780
13	829	661	2,020	1,280	30,400	21,400	5,470	26,900	4,130	5,130	6,430	2,400
14	872	861	3,740	1,450	27,500	19,000	4,330	33,500	2,460	6,450	6,400	2,670
15	1,020	752	2,600	1,190	26,600	17,500	3,150	38,600	4,200	6,260	4,810	3,840
16	811	1,070	2,020	1,370	23,800	17,500	2,380	37,800	5,780	6,220	2,400	3,830
17	986	736	1,850	1,500	20,100	17,000	2,110	33,700	6,400	6,130	4,570	3,840
18	875	2,380	1,480	3,370	17,500	16,700	2,300	30,100	6,600	4,860	6,270	3,900
19	1,040	4,840	1,530	2,850	16,300	16,500	2,190	25,700	6,050	2,590	6,350	2,250
20	636	3,890	1,280	2,340	15,600	16,400	2,040	21,200	5,350	4,180	6,410	1,050
21	681	2,680	1,480	2,000	15,200	16,300	1,350	16,000	7,470	5,840	6,480	2,400
22	907	2,060	1,000	1,450	14,900	16,300	1,220	8,270	7,070	5,910	5,370	3,930
23	845	1,870	1,020	1,250	15,100	16,200	1,150	5,130	8,220	5,610	2,780	4,050
24	957	1,820	1,410	1,160	16,400	16,200	1,430	3,230	13,400	5,850	4,650	4,290
25	806	2,140	1,330	3,740	18,100	16,200	1,860	3,830	24,800	4,730	6,510	3,260
26	997	1,870	1,410	8,890	22,200	16,200	3,020	4,940	24,100	2,620	9,110	1,980
27	596	1,660	1,190	6,830	26,200	16,100	3,750	4,850	22,300	4,690	13,900	1,230
28	663	3,100	1,440	4,930	26,400	16,100	2,640	4,720	23,200	6,260	9,980	1,460
29	923	3,680	1,410	4,690	25,300	16,300	1,860	4,650	23,800	6,090	5,720	2,690
30	730	2,550	3,690	4,890	---	17,000	1,480	3,880	22,000	6,030	2,670	1,860
31	947	---	3,450	7,060	---	16,700	---	2,460	---	5,940	4,560	---
TOTAL	32,731	48,938	51,585	81,750	448,960	611,800	81,600	528,010	264,390	298,040	175,660	105,160
MEAN	1,056	1,631	1,664	2,637	15,480	19,740	2,720	17,030	8,813	9,614	5,666	3,505
MAX	4,070	4,840	3,740	8,890	30,400	25,000	9,040	38,600	24,800	26,000	13,900	6,370
MIN	596	606	940	1,070	2,710	16,100	1,150	2,460	1,530	2,590	2,400	1,050
AC-FT	64,920	97,070	102,300	162,200	890,500	1,214,000	161,900	1,047,000	524,400	591,200	348,400	208,600

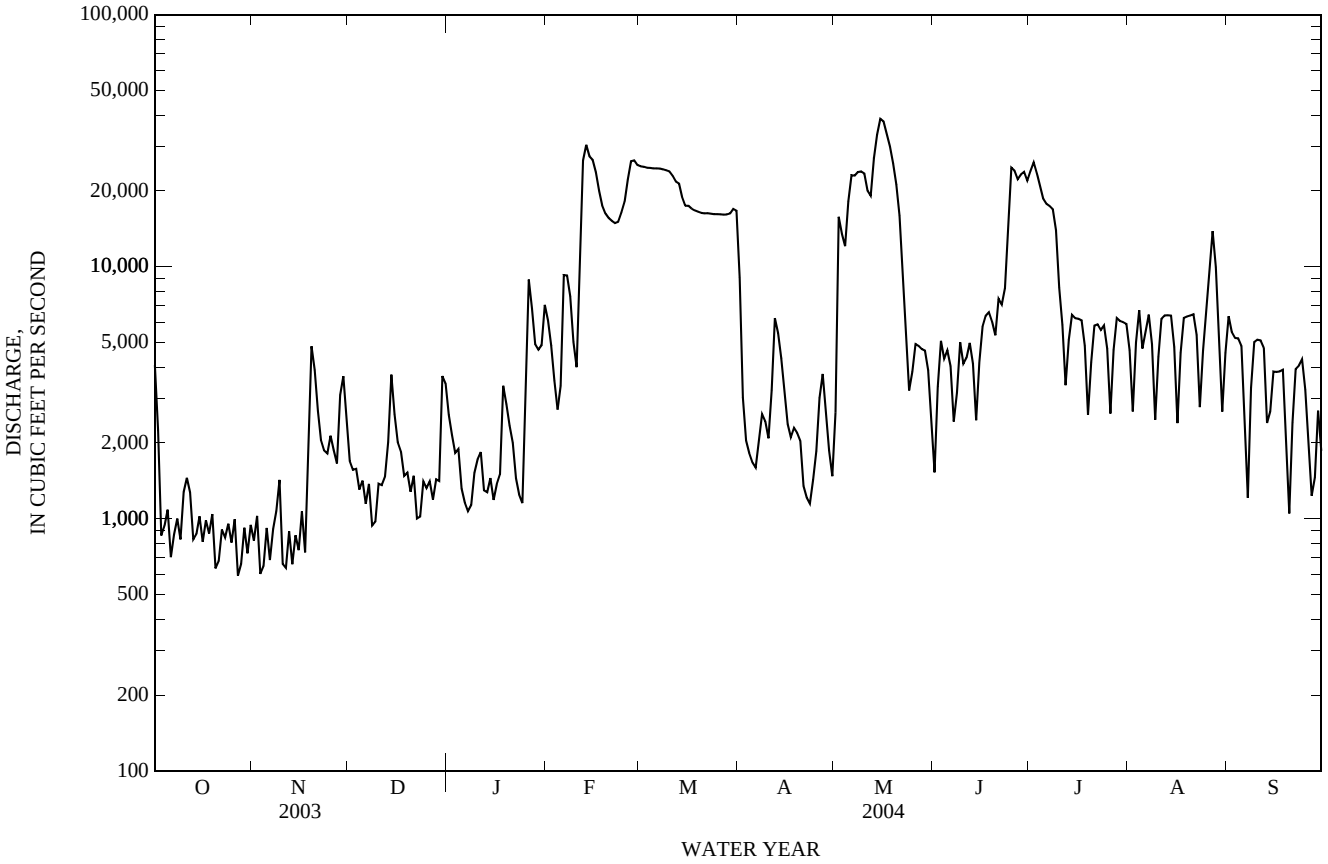
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004z, BY WATER YEAR (WY)

MEAN	1,816	2,892	7,042	10,120	11,360	12,440	9,740	8,892	6,252	4,970	3,639	3,499
MAX	8,948	13,250	21,420	30,930	31,390	46,850	27,370	31,210	26,340	31,490	7,288	12,310
(WY)	(2002)	(1995)	(1983)	(1974)	(1999)	(2001)	(1969)	(1966)	(1989)	(1989)	(1976)	(2001)
MIN	188	217	822	994	746	1,288	634	1,011	663	530	211	206
(WY)	(1968)	(1968)	(1981)	(2000)	(1968)	(1981)	(1971)	(1996)	(1970)	(1964)	(1967)	(1967)

08028500 Sabine River near Bon Wier, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004z	
ANNUAL TOTAL	2,228,884		2,728,624			
ANNUAL MEAN	6,107		7,455		6,869	
HIGHEST ANNUAL MEAN					12,670	1975
LOWEST ANNUAL MEAN					1,172	1967
HIGHEST DAILY MEAN	31,100	Mar 6	38,600	May 15	98,000	Jul 4, 1989
LOWEST DAILY MEAN	596	Oct 27	596	Oct 27	134	Nov 9, 1966
ANNUAL SEVEN-DAY MINIMUM	791	Nov 10	791	Nov 10	142	Nov 3, 1966
MAXIMUM PEAK FLOW			39,500	May 15	98,200	Jul 4, 1989
MAXIMUM PEAK STAGE			33.16	May 15	37.90	Jul 4, 1989
ANNUAL RUNOFF (AC-FT)	4,421,000		5,412,000		4,977,000	
10 PERCENT EXCEEDS	16,700		23,000		17,100	
50 PERCENT EXCEEDS	3,450		4,040		3,740	
90 PERCENT EXCEEDS	931		994		728	

z Period of regulated streamflow.



08028500 Sabine River near Bon Wier, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--CHEMICAL DATA: Oct. 1969 to current year.
BIOCHEMICAL DATA: Oct. 1969 to May 1973.
SEDIMENT DATA: Apr. 1957 to Sept. 1962.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Nov. 1969 to June 1983.
WATER TEMPERATURE: Nov. 1969 to June 1983.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 407 microsiemens/cm, Aug. 31, 1978; minimum daily, 33 microsiemens/cm, Dec. 14, 2001.
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 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Color, water, fltrd, Pt-Co units (00080)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)
OCT							
04...	1830	1,290	55	181	24.0	13.6	25.3
18...	1845	1,190	35	165	24.0	13.7	20.8
25...	1840	1,090	35	166	23.5	13.6	21.1
DEC							
06...	1610	1,090	75	257	13.0	13.5	56.1
13...	1615	2,410	70	197	12.0	12.5	35.8
20...	1730	1,380	70	209	11.0	12.8	39.6
27...	1635	1,220	65	189	15.0	13.0	32.0
FEB							
07...	1605	8,940	100	50	11.0	3.60	6.2
12...	1530	29,500	80	71	11.0	6.60	7.8
20...	1030	15,700	50	132	15.0	13.7	15.4
27...	1610	26,700	60	124	12.5	13.2	14.5
MAR							
06...	1630	24,200	35	135	15.0	13.7	17.2
13...	1610	21,400	35	137	15.0	13.8	16.6
20...	1650	16,300	55	136	16.5	13.7	16.5
27...	1600	16,100	45	143	15.5	14.8	17.0
APR							
02...	1810	2,460	65	143	20.5	12.0	20.0
09...	1655	2,320	55	152	22.5	11.7	22.7
17...	1620	2,160	65	131	22.5	8.12	22.4
JUN							
05...	1400	5,380	60	142	27.5	13.0	18.7
12...	1915	5,520	65	143	28.0	13.7	18.3
19...	1945	6,370	70	126	27.5	11.2	16.6
26...	1305	23,900	80	112	25.0	10.2	12.7
JUL							
03...	1925	22,700	60	112	27.0	14.1	19.5
10...	1935	7,730	70	130	27.5	11.7	15.3
17...	1545	6,980	40	141	32.0	13.5	16.3
24...	1925	6,310	50	150	29.5	10.7	12.8

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08029500 Big Cow Creek near Newton, TX

LOCATION.--Lat 30°49'08", long 93°47'08", Newton County, Hydrologic Unit 12010005, on right bank near center of span on 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 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 134.69 ft above NGVD of 1929. Prior to Dec. 19, 1957, nonrecording gage at same site and datum. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1907, 27.5 ft in Apr. 1922, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

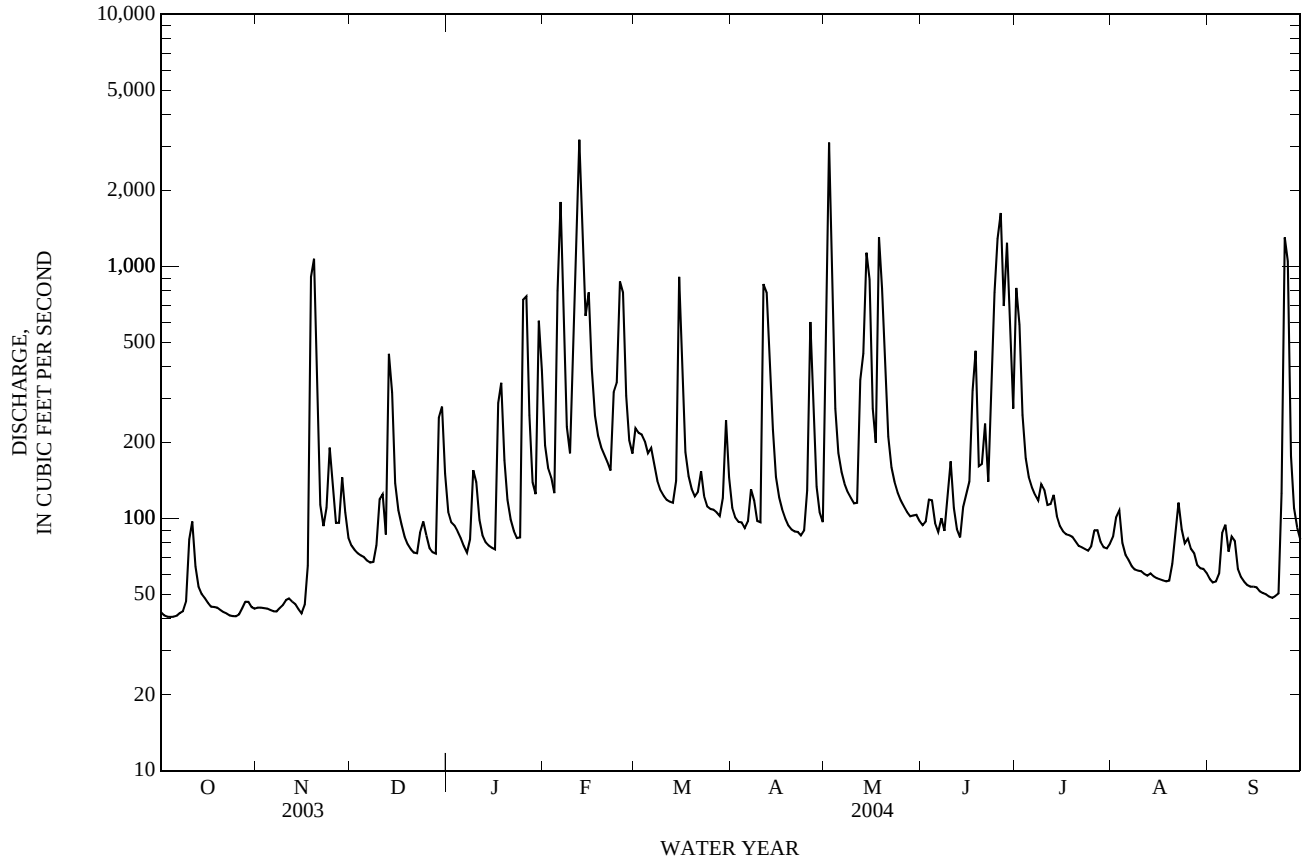
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	44	78	106	195	228	110	313	94	822	85	58
2	41	44	75	97	159	219	101	3,100	97	587	101	56
3	41	44	73	94	145	216	97	1,290	119	257	108	56
4	41	44	71	89	126	202	97	273	118	174	80	61
5	41	43	70	84	800	182	92	182	96	146	72	88
6	41	43	68	78	1,800	191	98	153	88	133	69	94
7	42	43	67	73	700	164	131	137	100	124	65	74
8	43	44	67	83	231	141	118	127	89	118	63	85
9	47	45	78	156	181	130	98	121	122	137	62	81
10	83	47	119	139	679	123	97	115	169	130	62	63
11	97	48	125	99	1,530	119	852	116	110	113	60	59
12	64	47	86	86	3,180	117	789	355	91	114	59	56
13	54	46	450	80	1,480	116	438	452	84	124	61	54
14	50	44	316	78	637	141	226	1,130	111	102	59	54
15	48	42	138	77	789	910	146	889	125	93	58	54
16	46	45	108	75	392	348	121	273	140	89	57	53
17	45	65	95	287	256	183	109	200	322	87	57	51
18	45	910	85	346	213	147	100	1,310	463	86	56	51
19	44	1,070	79	170	192	131	94	819	161	85	57	50
20	43	263	76	119	179	123	90	398	165	81	66	49
21	43	113	73	99	168	127	89	211	238	78	89	48
22	42	93	73	89	155	154	88	160	140	77	116	49
23	41	110	88	84	317	123	86	140	345	76	91	50
24	41	191	97	84	345	112	90	127	788	75	80	126
25	41	135	86	739	872	109	129	118	1,290	78	83	1,300
26	42	96	76	762	789	108	602	112	1,630	90	76	1,050
27	44	96	73	257	307	106	319	106	697	90	73	177
28	47	146	73	139	205	102	134	102	1,240	81	65	110
29	47	106	251	125	181	121	106	103	518	77	64	92
30	45	84	278	609	---	246	97	103	273	76	63	83
31	44	---	151	388	---	146	---	98	---	79	61	---
TOTAL	1,476	4,191	3,643	5,791	17,203	5,585	5,744	13,133	10,023	4,479	2,218	4,332
MEAN	47.6	140	118	187	593	180	191	424	334	144	71.5	144
MAX	97	1,070	450	762	3,180	910	852	3,100	1,630	822	116	1,300
MIN	41	42	67	73	126	102	86	98	84	75	56	48
AC-FT	2,930	8,310	7,230	11,490	34,120	11,080	11,390	26,050	19,880	8,880	4,400	8,590

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2004, BY WATER YEAR (WY)

MEAN	72.0	122	173	192	216	176	164	151	117	71.7	55.3	73.2
MAX	278	551	489	645	743	377	533	817	414	426	221	491
(WY)	(1995)	(2003)	(1983)	(1974)	(1984)	(1999)	(1953)	(1953)	(1993)	(1989)	(1973)	(1998)
MIN	17.4	27.3	39.3	42.2	57.4	46.4	29.4	31.7	16.6	14.2	14.5	17.3
(WY)	(1957)	(1968)	(1982)	(1982)	(1996)	(1996)	(1971)	(1971)	(1971)	(1971)	(1956)	(1956)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1952 - 2004	
ANNUAL TOTAL	41,872		77,818			
ANNUAL MEAN	115		213		132	
HIGHEST ANNUAL MEAN					266	1999
LOWEST ANNUAL MEAN					46.1	1965
HIGHEST DAILY MEAN	1,720	Jan 1	3,180	Feb 12	9,720	Feb 12, 1984
LOWEST DAILY MEAN	34	Aug 10	41	Oct 2	10	Jul 7, 1971
ANNUAL SEVEN-DAY MINIMUM	36	Aug 4	41	Oct 1	11	Jul 17, 1971
MAXIMUM PEAK FLOW			5,030	May 2	20,200	Apr 29, 1953
MAXIMUM PEAK STAGE			16.51	May 2	19.45	Apr 29, 1953
ANNUAL RUNOFF (AC-FT)	83,050		154,400		95,380	
10 PERCENT EXCEEDS	197		480		230	
50 PERCENT EXCEEDS	73		100		65	
90 PERCENT EXCEEDS	43		47		28	

08029500 Big Cow Creek near Newton, TX—Continued



08030500 Sabine River near Ruliff, TX

LOCATION.--Lat 30°18'13", long 93°44'37", Newton County, Hydrologic Unit 12010005, on 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 mi^2.

PERIOD OF RECORD.--Oct. 1924 to current year. Water-quality records: Chemical data: Sept. 1945 to Sept. 1946, Oct. 1947 to Sept. 1998. Biochemical data: Feb. 1968 to Sept. 1998. Radiochemical data: Oct. 1969 to Sept. 1995. Pesticide data: Jan. 1968 to May 1982. Sediment data: Oct. 1974 to Sept. 1995.

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 NGVD 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. Telephone telemeter at station. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1961, at least 10% of contributing drainage area has been regulated.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--36 years (water years 1925-1960) 8,780 ft^3/s (6,359,000 acre-ft/yr).

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.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1925-1960: Maximum discharge, 121,000 ft^3/s, May 22, 1953, gage height, 29.98 ft, current datum; minimum, 270 ft^3/s, several days in Sept. and Oct. 1956.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,010	1,130	5,230	7,100	14,400	23,400	16,000	2,920	4,420	26,700	6,520	5,730
2	3,230	1,110	3,810	6,720	15,200	23,600	16,000	4,030	3,090	26,500	6,310	5,720
3	3,470	1,200	2,900	5,440	14,900	23,300	14,600	7,680	2,760	26,400	5,150	6,240
4	2,220	1,130	2,610	4,060	12,900	23,000	10,400	10,900	4,070	27,500	4,050	6,110
5	1,410	936	2,230	3,490	10,600	22,800	6,020	13,300	4,970	26,600	5,360	5,860
6	1,470	1,030	2,060	2,880	8,950	22,600	3,540	14,600	5,010	24,100	6,130	5,690
7	1,330	1,050	1,820	2,290	9,780	22,300	3,000	15,300	4,990	21,200	5,790	4,780
8	1,180	1,050	1,780	2,000	11,900	22,000	3,360	16,300	4,170	19,200	6,010	2,770
9	1,350	1,070	1,660	2,020	13,800	21,800	3,930	17,400	3,220	18,000	6,260	2,270
10	1,910	1,460	1,460	2,490	15,100	21,600	3,990	18,400	4,080	17,400	5,190	3,920
11	3,090	1,340	1,660	2,910	15,600	21,400	3,700	20,000	4,910	16,500	3,710	4,910
12	3,380	1,010	1,930	3,170	16,700	21,200	3,930	22,400	4,650	14,400	4,950	5,310
13	3,210	1,020	2,510	2,770	19,000	20,900	6,250	23,000	4,950	11,300	5,980	5,340
14	2,490	1,040	3,680	2,280	23,800	21,000	8,050	25,500	5,110	8,070	6,450	4,470
15	1,780	1,030	5,990	2,230	35,700	20,900	8,850	28,100	4,390	7,090	6,650	2,890
16	1,610	1,070	6,940	2,030	39,000	20,200	8,340	32,800	4,120	7,090	6,510	3,340
17	1,410	1,640	5,810	2,610	34,700	19,200	6,550	37,900	6,050	7,100	5,160	3,770
18	1,370	2,750	4,410	5,730	30,400	18,400	4,430	38,600	7,240	7,070	3,700	3,890
19	1,270	4,920	3,330	9,160	26,100	17,900	3,430	39,400	8,130	6,770	5,010	3,930
20	1,340	7,700	2,790	11,600	22,400	17,400	3,130	36,800	8,520	5,600	6,030	3,550
21	1,220	9,130	2,320	10,600	20,100	17,000	2,890	32,800	8,350	4,050	6,540	2,110
22	1,030	8,950	2,200	8,230	18,700	16,700	2,410	27,900	8,000	4,970	6,780	1,620
23	1,100	6,950	1,980	5,970	17,900	16,400	1,970	23,100	8,460	5,850	6,770	2,990
24	1,100	5,050	1,690	3,930	17,500	16,300	1,770	18,400	9,830	6,150	5,780	3,900
25	1,210	4,320	1,850	4,480	17,700	16,300	1,760	13,800	13,100	6,270	4,210	4,220
26	1,130	4,630	2,000	7,640	18,100	16,200	2,540	9,260	16,000	6,330	5,320	4,300
27	1,200	4,610	2,080	11,200	18,700	16,100	3,530	7,070	19,500	5,210	6,450	3,800
28	1,120	4,230	1,890	14,100	20,000	16,100	4,690	6,310	25,800	4,000	7,740	3,180
29	951	4,630	2,320	15,000	21,900	16,100	4,670	5,940	27,600	5,200	9,040	2,540
30	1,060	5,530	3,350	15,200	---	16,000	3,560	5,680	26,900	6,190	9,720	2,620
31	1,090	---	5,430	14,600	---	15,900	---	5,380	---	6,500	8,370	---
TOTAL	52,741	92,716	91,720	193,930	561,530	604,000	167,290	580,970	262,390	385,310	187,640	121,770
MEAN	1,701	3,091	2,959	6,256	19,360	19,480	5,576	18,740	8,746	12,430	6,053	4,059
MAX	3,470	9,130	6,940	15,200	39,000	23,600	16,000	39,400	27,600	27,500	9,720	6,240
MIN	951	936	1,460	2,000	8,950	15,900	1,760	2,920	2,760	4,000	3,700	1,620
AC-FT	104,600	183,900	181,900	384,700	1,114,000	1,198,000	331,800	1,152,000	520,500	764,300	372,200	241,500

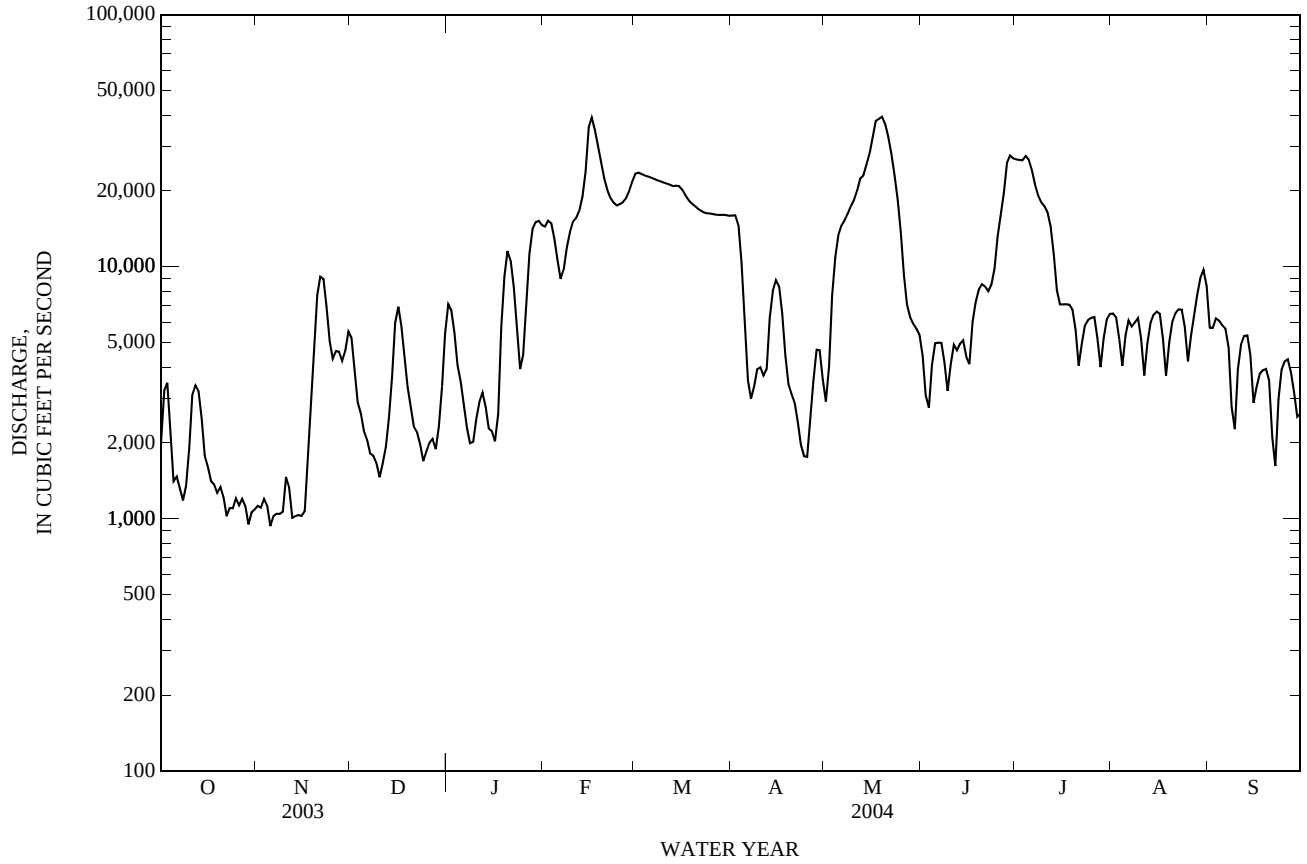
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004z, BY WATER YEAR (WY)

MEAN	2,650	3,795	8,597	12,100	13,090	14,030	11,350	9,934	7,568	5,923	4,155	4,206
MAX	12,860	16,030	22,070	35,570	33,170	48,230	33,240	32,980	26,240	42,320	7,982	12,530
(WY)	(2002)	(2003)	(1983)	(1961)	(1999)	(2001)	(1969)	(1966)	(1989)	(1989)	(1975)	(1998)
MIN	292	327	1,366	1,237	1,344	1,679	1,030	1,395	1,383	805	382	333
(WY)	(1968)	(1968)	(1981)	(2000)	(2000)	(2000)	(1971)	(1996)	(1963)	(1967)	(1967)	(1967)

08030500 Sabine River near Ruliff, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004z	
ANNUAL TOTAL	2,389,270		3,302,007			
ANNUAL MEAN	6,546		9,022		8,094	
HIGHEST ANNUAL MEAN					14,210	1975
LOWEST ANNUAL MEAN					1,959	1967
HIGHEST DAILY MEAN	27,700	Feb 26	39,400	May 19	108,000	Jul 6, 1989
LOWEST DAILY MEAN	936	Nov 5	936	Nov 5	278	Oct 28, 1967
ANNUAL SEVEN-DAY MINIMUM	1,070	Nov 3	1,070	Nov 3	282	Oct 9, 1967
MAXIMUM PEAK FLOW			40,500	Feb 16	109,000	Jul 6, 1989
MAXIMUM PEAK STAGE			25.37	Feb 16	29.15	Jul 6, 1989
ANNUAL RUNOFF (AC-FT)	4,739,000		6,550,000		5,864,000	
10 PERCENT EXCEEDS	16,400		21,900		18,900	
50 PERCENT EXCEEDS	4,680		5,680		4,840	
90 PERCENT EXCEEDS	1,360		1,470		1,190	

z Period of regulated streamflow.



08031000 Cow Bayou near Mauriceville, TX

LOCATION.--Lat 30°11'10", long 93°54'30", Orange County, Hydrologic Unit 12010005, on left bank at downsteam end of bridge on State Highway 12, 0.4 mi downstream from Kansas City Southern Railway Co. bridge, and 2.7 mi southwest of Mauriceville.

DRAINAGE AREA.--83.3 mi^2.

PERIOD OF RECORD.--Mar. 1952 to Sept. 1955 (daily mean discharge), Oct. 1956 to Sept. 1957 (monthly discharges only), Oct. 1957 to Sept. 1986, Oct. 2002 to current year.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.27 ft below NGVD of 1929. Prior to Oct. 23, 1957, nonrecording gage at present site and former datum. Prior to Sept. 7, 1984, at datum 5.00 ft higher. Satellite telemeter at station.

REMARKS.--Records good. No significant diversions. Base flow is partly sustained by springs. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	0.52	105	251	695	187	6.8	319	5.6	398	0.16	0.21
2	1.7	0.43	82	253	688	137	6.1	527	4.5	436	0.12	0.22
3	1.3	0.40	63	245	640	125	5.3	385	3.7	403	0.10	0.23
4	0.50	0.33	49	219	488	111	4.6	402	2.8	300	0.09	0.25
5	0.20	0.29	38	172	555	100	3.9	367	3.2	173	0.10	6.4
6	0.47	0.32	28	116	441	89	6.2	294	4.1	79	0.10	1.0
7	0.44	0.33	20	80	348	74	21	187	3.0	43	0.11	0.24
8	0.13	0.20	16	85	283	61	37	86	2.4	24	0.11	0.17
9	244	0.16	13	117	230	48	65	40	2.0	14	0.13	0.20
10	1,050	0.08	18	105	306	39	76	20	1.7	9.3	0.11	0.17
11	871	0.08	20	101	798	30	81	52	1.4	6.8	0.12	0.17
12	633	0.09	17	97	966	24	85	584	1.2	5.1	0.15	0.20
13	392	0.08	235	89	898	18	89	566	1.2	3.6	0.19	0.24
14	244	0.07	243	80	923	107	95	1,200	1.6	2.6	0.23	0.27
15	149	0.07	240	69	908	366	90	1,160	1.8	1.8	0.21	0.58
16	85	0.07	232	72	756	351	74	1,130	256	1.5	0.21	0.61
17	44	0.06	214	757	555	263	55	1,030	203	1.0	0.16	0.60
18	26	225	195	902	389	174	36	802	106	0.83	0.15	0.64
19	14	215	167	855	283	120	21	522	68	0.70	0.16	0.52
20	8.1	293	126	861	199	83	12	386	75	0.58	0.16	0.23
21	4.9	375	88	807	129	55	7.5	312	144	0.53	0.26	0.28
22	2.9	391	61	679	90	37	5.6	312	93	0.50	0.16	0.20
23	2.4	354	69	467	95	25	4.3	310	118	0.49	0.16	4.3
24	1.6	298	65	311	108	18	4.0	256	738	0.40	0.14	28
25	1.5	230	54	491	260	14	6.2	163	1,010	0.92	0.13	2.8
26	2.6	190	46	580	235	11	11	80	848	5.6	0.13	0.58
27	e2.2	178	39	662	242	10	23	45	881	0.80	0.14	0.26
28	e1.6	163	35	663	241	10	37	25	841	0.35	0.23	0.55
29	1.3	151	404	598	225	9.4	33	14	815	0.16	0.24	0.43
30	0.81	131	313	921	---	9.1	24	9.2	531	0.14	0.26	0.13
31	0.58	---	256	792	---	7.8	---	6.9	---	0.11	0.23	---
TOTAL	3,790.13	3,197.58	3,551	12,497	12,974	2,713.3	1,025.5	11,592.1	6,767.2	1,913.81	4.95	50.68
MEAN	122	107	115	403	447	87.5	34.2	374	226	61.7	0.16	1.69
MAX	1,050	391	404	921	966	366	95	1,200	1,010	436	0.26	28
MIN	0.13	0.06	13	69	90	7.8	3.9	6.9	1.2	0.11	0.09	0.13
AC-FT	7,520	6,340	7,040	24,790	25,730	5,380	2,030	22,990	13,420	3,800	9.8	101

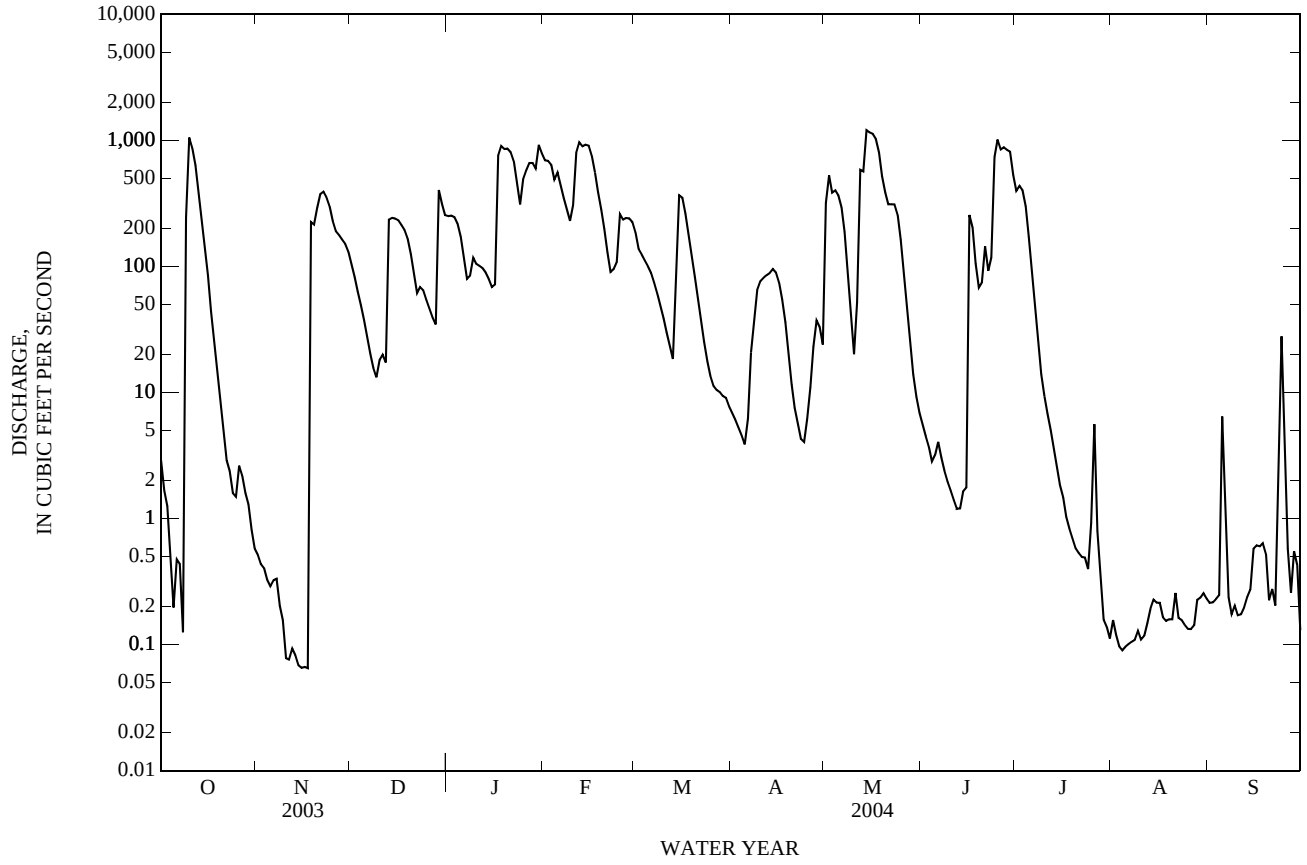
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2004h, BY WATER YEAR (WY)

MEAN	68.8	75.2	141	188	228	119	141	120	89.4	46.2	21.3	82.1
MAX	622	689	581	879	961	373	841	536	532	320	293	816
(WY)	(2003)	(2003)	(2003)	(1961)	(1959)	(1957)	(1979)	(1953)	(1968)	(1959)	(1983)	(1963)
MIN	0.00	0.00	0.14	5.68	5.25	3.00	0.26	0.04	0.09	0.00	0.02	0.00
(WY)	(1957)	(1956)	(1955)	(1970)	(1957)	(1954)	(1963)	(1978)	(1960)	(1956)	(1956)	(1954)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1952 - 2004h	
ANNUAL TOTAL	41,721.46		60,077.25			
ANNUAL MEAN	114		164		109	
HIGHEST ANNUAL MEAN					244	2003
LOWEST ANNUAL MEAN					12.0	1970
HIGHEST DAILY MEAN	1,840	Feb 24	1,200	May 14	4,460	Sep 19, 1963
LOWEST DAILY MEAN	0.00	May 28	0.06	Nov 17	0.00	Aug 15, 1952
ANNUAL SEVEN-DAY MINIMUM	0.00	May 27	0.07	Nov 11	0.00	Sep 21, 1952
MAXIMUM PEAK FLOW			1,230	May 14	4,600	Sep 19, 1963
MAXIMUM PEAK STAGE			17.63	May 14	18.16	Oct 28, 1970
ANNUAL RUNOFF (AC-FT)	82,750		119,200		78,770	
10 PERCENT EXCEEDS	311		570		305	
50 PERCENT EXCEEDS	5.7		36		8.0	
90 PERCENT EXCEEDS	0.02		0.17		0.09	

h See PERIOD OF RECORD paragraph.
e Estimated

08031000 Cow Bayou near Mauriceville, TX—Continued



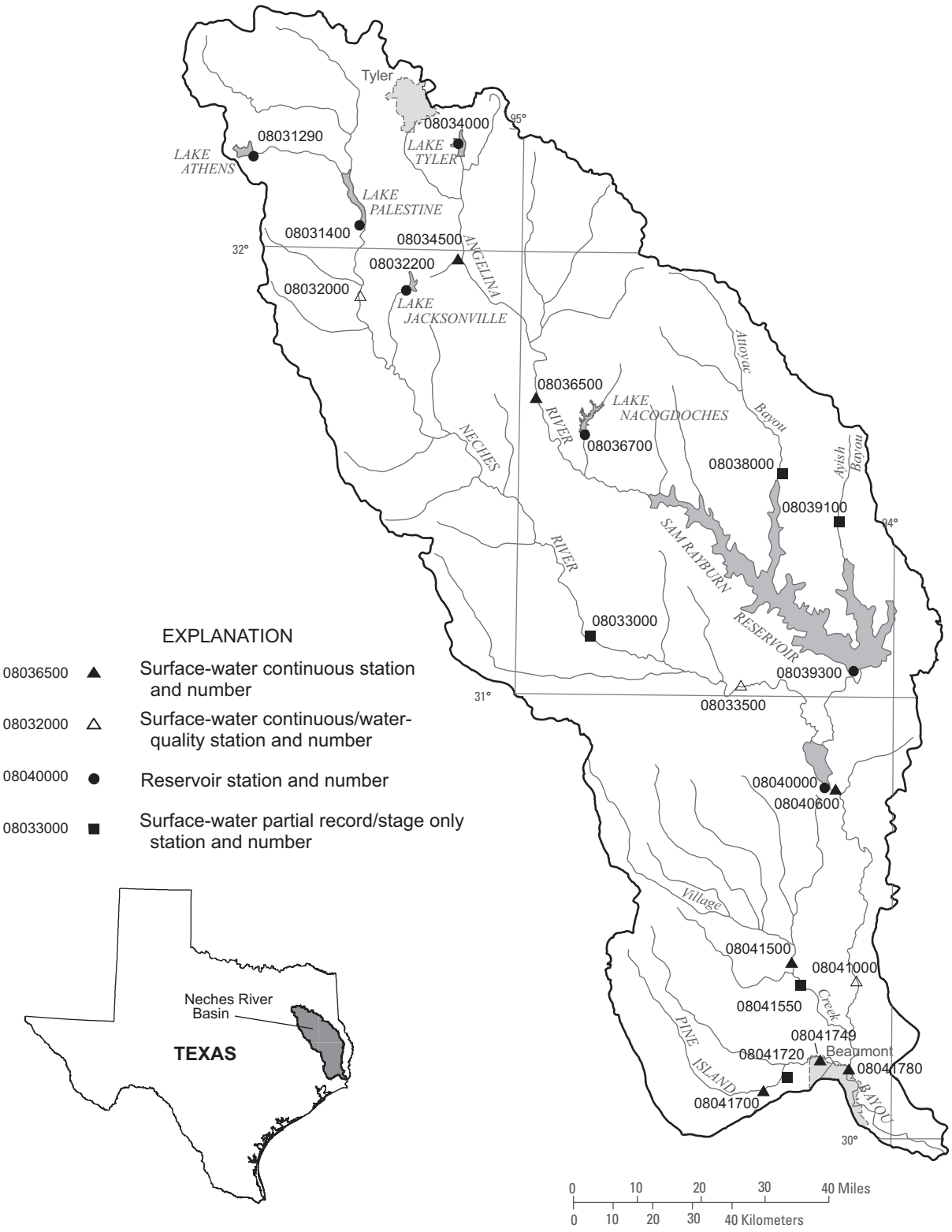


Figure 10.--Map showing location of gaging stations in the Neches River Basin

08031290 Lake Athens near Athens, TX

LOCATION.--Lat 32°12'15", long 95°43'30", Henderson County, Hydrologic Unit 12020001, at upstream side of dam on Flat Creek, 5.0 mi downstream from Underwood Lake, 8.0 mi east of Athens, and 18.0 mi upstream from Neches River.

DRAINAGE AREA.--21.6 mi^2.

PERIOD OF RECORD.--Oct. 1967 to Sept. 1983, Apr. 1999 to Sept. 2002 (contents), Oct. 2002 to current year. Water-quality records: Chemical data: Oct. 1975 to Sept. 1983.

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

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 3,000 ft long. Deliberate impoundment began Nov. 1, 1962, and the dam was completed in May 1963. The emergency spillway is an uncontrolled 300-foot-wide channel cut through natural ground at the left end of the dam. The service spillway is an uncontrolled 6 x 6 foot square drop inlet that is connected to a concrete conduit of the same size that extends through the dam. A 4.0 by 5.5 foot inlet box with slide valve that connects to an 18-inch diameter concrete conduit extends through the dam and serves as the low-flow service outlet. Water is used for municipal supply by the city of Athens. Data regarding the dam and lake are given in the following table:

	Elevation (feet)
Top of dam	453.0
Crest of spillway	446.0
Crest of drop inlet	440.0
Normal operating level	440.0
Lowest gated outlet (invert)	396.5

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 36,500 acre-ft, May 10, 1968, elevation, 442.37 ft; minimum contents since operating level was reached (May 7, 1968), 25,180 acre-ft, Oct. 15, 2000, elevation, 437.48 ft.

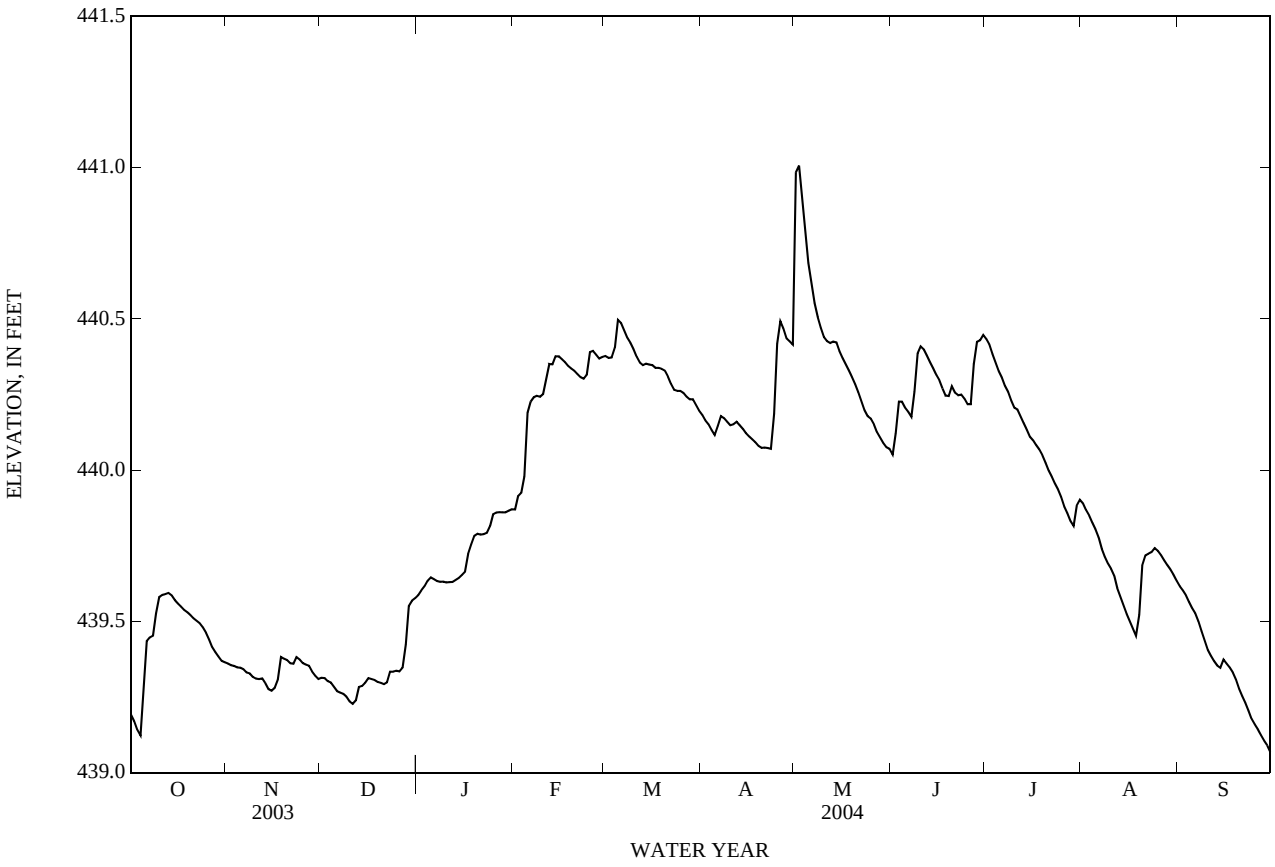
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 441.12 ft, May 1; minimum elevation, 439.05 ft, Sept. 30.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	439.19	439.36	439.31	439.59	439.87	440.38	440.18	440.98	440.05	440.43	439.89	439.62
2	439.17	439.36	439.31	439.60	439.91	440.37	440.16	441.01	440.12	440.41	439.87	439.60
3	439.14	439.35	439.30	439.62	439.93	440.37	440.15	440.89	440.23	440.38	439.85	439.59
4	439.12	439.35	439.30	439.63	439.98	440.40	440.13	440.78	440.23	440.36	439.83	439.56
5	439.27	439.35	439.28	439.65	440.19	440.50	440.12	440.68	440.21	440.33	439.80	439.54
6	439.43	439.34	439.27	439.64	440.23	440.49	440.15	440.61	440.19	440.31	439.78	439.53
7	439.45	439.33	439.26	439.63	440.24	440.46	440.18	440.55	440.18	440.28	439.74	439.50
8	439.45	439.33	439.26	439.63	440.25	440.44	440.17	440.51	440.26	440.26	439.71	439.47
9	439.53	439.32	439.25	439.63	440.24	440.42	440.16	440.47	440.39	440.23	439.69	439.44
10	439.58	439.31	439.24	439.63	440.25	440.40	440.15	440.44	440.41	440.21	439.67	439.41
11	439.59	439.31	439.23	439.63	440.30	440.38	440.15	440.43	440.40	440.20	439.65	439.39
12	439.59	439.31	439.24	439.63	440.35	440.36	440.16	440.42	440.38	440.18	439.61	439.37
13	439.59	439.30	439.28	439.64	440.35	440.35	440.15	440.42	440.36	440.16	439.58	439.35
14	439.59	439.28	439.29	439.64	440.38	440.35	440.14	440.42	440.34	440.13	439.55	439.35
15	439.57	439.27	439.30	439.65	440.38	440.35	440.12	440.39	440.31	440.11	439.52	439.37
16	439.56	439.28	439.31	439.66	440.37	440.35	440.11	440.37	440.30	440.10	439.50	439.36
17	439.55	439.31	439.31	439.72	440.36	440.34	440.10	440.35	440.27	440.08	439.48	439.35
18	439.54	439.38	439.31	439.75	440.35	440.34	440.09	440.33	440.25	440.07	439.45	439.33
19	439.53	439.38	439.30	439.78	440.34	440.33	440.08	440.31	440.24	440.05	439.52	439.31
20	439.52	439.37	439.30	439.79	440.33	440.33	440.07	440.28	440.28	440.02	439.68	439.28
21	439.51	439.36	439.29	439.79	440.32	440.31	440.07	440.26	440.26	440.00	439.72	439.25
22	439.50	439.36	439.30	439.79	440.31	440.28	440.07	440.23	440.25	439.98	439.72	439.23
23	439.49	439.38	439.33	439.79	440.30	440.27	440.07	440.20	440.25	439.96	439.73	439.21
24	439.48	439.37	439.33	439.82	440.31	440.26	440.19	440.18	440.24	439.94	439.74	439.18
25	439.46	439.36	439.34	439.85	440.39	440.26	440.42	440.17	440.22	439.91	439.73	439.16
26	439.44	439.36	439.33	439.86	440.39	440.25	440.49	440.15	440.22	439.88	439.72	439.14
27	439.42	439.35	439.35	439.86	440.38	440.24	440.47	440.13	440.35	439.86	439.70	439.12
28	439.40	439.33	439.42	439.86	440.37	440.23	440.44	440.11	440.42	439.83	439.69	439.11
29	439.38	439.32	439.55	439.86	440.37	440.23	440.43	440.09	440.43	439.82	439.67	439.09
30	439.37	439.31	439.57	439.87	---	440.21	440.41	440.08	440.45	439.88	439.65	439.07
31	439.36	---	439.58	439.87	---	440.20	---	440.07	---	439.90	439.63	---
MEAN	439.44	439.34	439.32	439.72	440.27	440.34	440.19	440.40	440.28	440.11	439.68	439.34
MAX	439.59	439.38	439.58	439.87	440.39	440.50	440.49	441.01	440.45	440.43	439.89	439.62
MIN	439.12	439.27	439.23	439.59	439.87	440.20	440.07	440.07	440.05	439.82	439.45	439.07

WTR YR 2004 MEAN 439.87 MAX 441.01 MIN 439.07

08031290 Lake Athens near Athens, TX—Continued



08031400 Lake Palestine near Frankston, TX

LOCATION.--Lat 32°03'12", long 95°26'12", Anderson County, Hydrologic Unit 12020001, in outlet tower near right bank, 140 ft upstream from Blackburn Crossing Dam on Neches River, 5.0 mi east of Frankston, 21 mi upstream from Neches River near Neches (station 08032000), and at mile 354.0.

DRAINAGE AREA.--839 mi^2.

PERIOD OF RECORD.--Feb. 1962 to June 1995, May 1999 to Sept. 2002 (contents). Oct. 2002 to current year. Water-quality records: Chemical data: Oct. 1976 to Sept. 1984.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Sept. 20, 1962, nonrecording gage read once daily. Satellite telemeter at station.

REMARKS.--Records good. 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. Enlargement of the 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. The dam is owned by the Upper Neches River Municipal Water Authority. The 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. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	364.0
Design flood	355.3
Crest of spillway	345.0
Lowest gated outlet (invert)	298.0

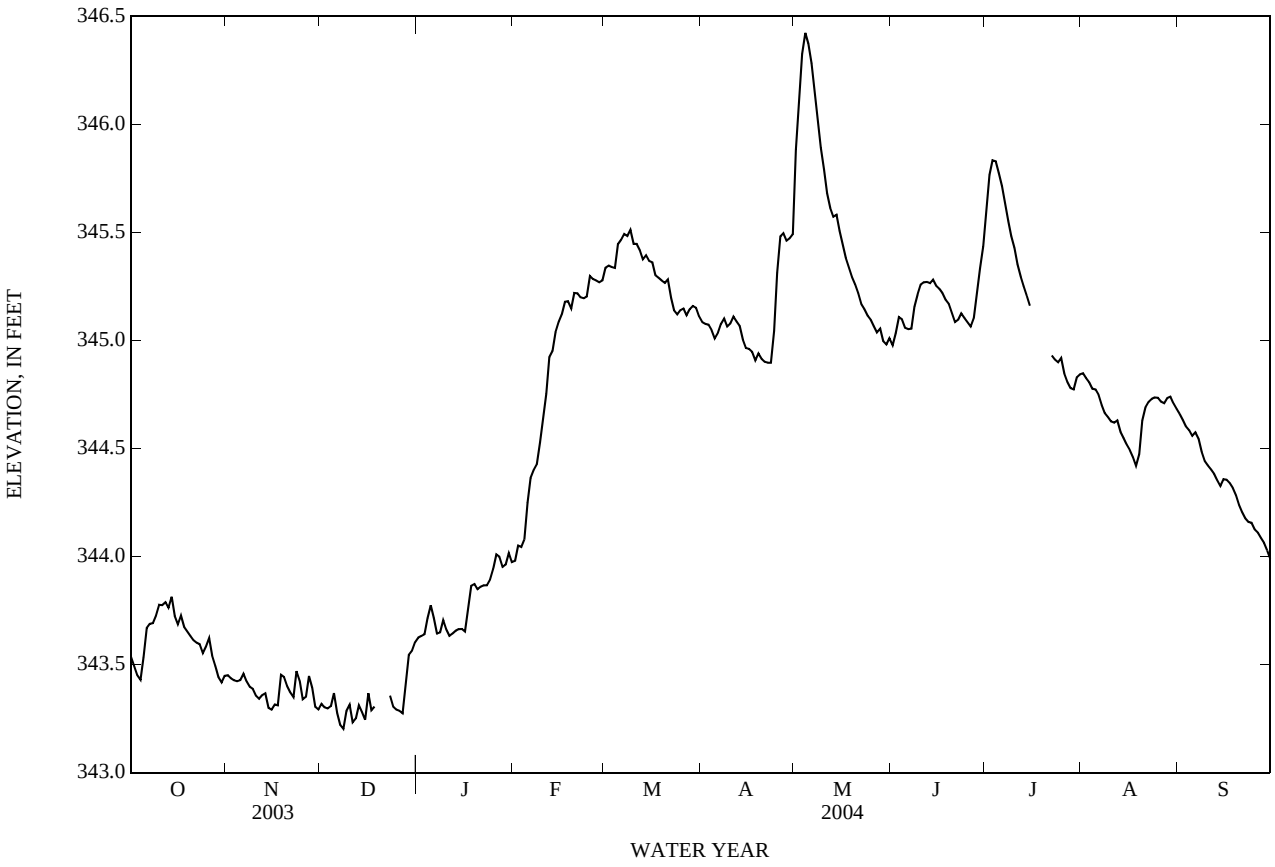
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 531,100 acre-ft, May 19, 1989, elevation, 349.31 ft; minimum since first appreciable storage, 11,450 acre-ft Nov. 28, 1970, elevation 310.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 346.44 ft, May 4; minimum elevation, 343.09 ft, Dec. 8.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	343.54	343.45	343.32	343.62	343.98	345.34	345.08	345.88	344.98	345.60	344.85	344.66
2	343.49	343.44	343.30	343.63	344.05	345.35	345.08	346.13	345.03	345.77	344.83	344.63
3	343.45	343.43	343.30	343.64	344.04	345.34	345.07	346.33	345.11	345.83	344.81	344.60
4	343.43	343.42	343.31	343.72	344.08	345.34	345.05	346.42	345.10	345.83	344.78	344.58
5	343.53	343.43	343.37	343.77	344.25	345.45	345.01	346.37	345.06	345.78	344.77	344.56
6	343.67	343.46	343.28	343.72	344.36	345.47	345.04	346.28	345.05	345.71	344.75	344.58
7	343.69	343.42	343.22	343.64	344.40	345.49	345.08	346.16	345.05	345.64	344.70	344.55
8	343.69	343.40	343.20	343.65	344.43	345.48	345.10	346.02	345.16	345.55	344.66	344.49
9	343.73	343.39	343.29	343.71	344.53	345.51	345.07	345.89	345.21	345.48	344.64	344.44
10	343.78	343.36	343.31	343.66	344.64	345.45	345.08	345.79	345.26	345.43	344.63	344.42
11	343.78	343.34	343.23	343.63	344.75	345.45	345.11	345.68	345.27	345.35	344.62	344.40
12	343.79	343.36	343.25	343.64	344.92	345.42	345.09	345.61	345.27	345.30	344.63	344.38
13	343.76	343.37	343.31	343.66	344.95	345.38	345.07	345.57	345.26	345.25	344.58	344.35
14	343.81	343.30	343.28	343.66	345.04	345.39	345.00	345.58	345.28	345.21	344.55	344.33
15	343.73	343.29	343.25	343.67	345.09	345.37	344.97	345.51	345.25	345.16	344.52	344.36
16	343.69	343.32	343.37	343.65	345.12	345.36	344.96	345.45	345.24	---	344.49	344.36
17	343.73	343.31	343.29	343.75	345.18	345.30	344.95	345.38	345.22	---	344.46	344.34
18	343.67	343.45	343.31	343.86	345.18	345.29	344.91	345.34	345.19	---	344.42	344.32
19	343.65	343.44	---	343.87	345.15	345.28	344.94	345.29	345.17	---	344.47	344.28
20	343.63	343.40	---	343.85	345.22	345.27	344.91	345.26	345.13	---	344.63	344.24
21	343.61	343.37	---	343.86	345.22	345.28	344.90	345.22	345.08	---	344.69	344.20
22	343.60	343.35	---	343.87	345.20	345.20	344.90	345.17	345.10	344.93	344.72	344.18
23	343.59	343.47	343.36	343.87	345.20	345.14	344.90	345.14	345.13	344.91	344.73	344.16
24	343.55	343.42	343.31	343.89	345.20	345.12	345.04	345.11	345.10	344.90	344.74	344.16
25	343.58	343.34	343.29	343.94	345.30	345.14	345.31	345.10	345.08	344.92	344.73	344.13
26	343.62	343.35	343.29	344.01	345.28	345.15	345.48	345.07	345.06	344.85	344.72	344.11
27	343.54	343.45	343.27	344.00	345.28	345.12	345.50	345.04	345.10	344.81	344.71	344.09
28	343.49	343.39	343.40	343.95	345.27	345.14	345.46	345.05	345.22	344.78	344.73	344.06
29	343.44	343.30	343.55	343.96	345.28	345.16	345.47	345.00	345.33	344.77	344.74	344.03
30	343.42	343.29	343.56	344.02	---	345.15	345.49	344.98	345.44	344.83	344.71	343.99
31	343.45	---	343.60	343.97	---	345.11	---	345.01	---	344.84	344.68	---
MEAN	343.62	343.38	---	343.79	344.85	345.30	345.10	345.54	345.16	---	344.67	344.33
MAX	343.81	343.47	---	344.02	345.30	345.51	345.50	346.42	345.44	---	344.85	344.66
MIN	343.42	343.29	---	343.62	343.98	345.11	344.90	344.98	344.98	---	344.42	343.99

08031400 Lake Palestine near Frankston, TX—Continued



08032000 Neches River near Neches, TX

LOCATION.--Lat 31°53'32", long 95°25'50", Cherokee County, 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 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Feb. 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 NGVD of 1929. Prior to Oct. 27, 1945, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--Records fair. Since water year 1962, at least 10% of contributing drainage area has been regulated. No known diversions.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--22 years (water years 1940-1961), 804 ft^3/s (582,500 acre-ft/yr).

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.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1940-1961: Maximum discharge, 45,500 ft^3/s, Apr. 2, 1945, gage height, 22.07 ft; no flow Oct. 3-5, 1939.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	96	124	288	169	755	378	1,790	217	875	149	108
2	129	99	124	238	203	842	335	3,090	233	971	128	105
3	128	100	124	207	247	851	316	3,980	329	1,080	112	103
4	129	100	124	188	220	849	314	4,010	411	1,220	107	103
5	133	103	123	176	326	1,060	289	3,960	377	1,340	103	104
6	180	105	123	169	419	1,310	253	3,940	328	1,410	103	103
7	191	107	121	158	390	1,300	359	3,700	327	1,410	107	112
8	163	110	122	150	324	1,220	448	3,290	369	1,360	118	118
9	160	115	126	151	254	1,140	438	2,850	649	1,240	119	e115
10	219	118	138	150	325	1,080	357	2,450	782	1,090	111	e113
11	215	119	149	146	391	1,020	371	2,130	778	951	105	e110
12	178	119	140	144	586	963	441	1,890	738	804	123	e108
13	160	118	168	145	665	914	424	1,690	657	659	131	e105
14	149	114	195	147	614	864	373	1,530	598	558	105	e104
15	142	110	181	147	660	857	287	1,430	582	484	99	e102
16	135	118	170	149	628	839	234	1,320	563	415	97	e100
17	132	144	157	234	591	804	210	1,160	534	335	97	e98
18	131	182	148	322	586	728	194	978	494	291	96	e97
19	129	219	142	275	566	667	172	817	453	280	97	e96
20	128	188	140	238	524	631	175	692	431	210	151	e94
21	127	185	137	200	556	609	170	601	382	167	220	94
22	126	169	137	178	562	610	163	520	320	139	263	92
23	125	152	168	169	544	522	157	435	373	122	242	92
24	126	142	211	170	534	442	267	385	381	112	226	90
25	125	134	214	300	573	414	943	345	334	110	213	91
26	130	129	202	308	738	417	1,760	314	310	153	168	90
27	133	133	174	250	770	410	2,020	280	311	139	141	89
28	129	136	164	210	739	387	1,940	253	456	84	126	89
29	117	132	259	185	699	418	1,680	255	577	68	124	89
30	96	125	321	182	---	444	1,440	220	726	111	123	88
31	93	---	309	176	---	434	---	205	---	174	112	---
TOTAL	4,388	3,921	5,135	6,150	14,403	23,801	16,908	50,510	14,020	18,362	4,216	3,002
MEAN	142	131	166	198	497	768	564	1,629	467	592	136	100
MAX	219	219	321	322	770	1,310	2,020	4,010	782	1,410	263	118
MIN	93	96	121	144	169	387	157	205	217	68	96	88
AC-FT	8,700	7,780	10,190	12,200	28,570	47,210	33,540	100,200	27,810	36,420	8,360	5,950

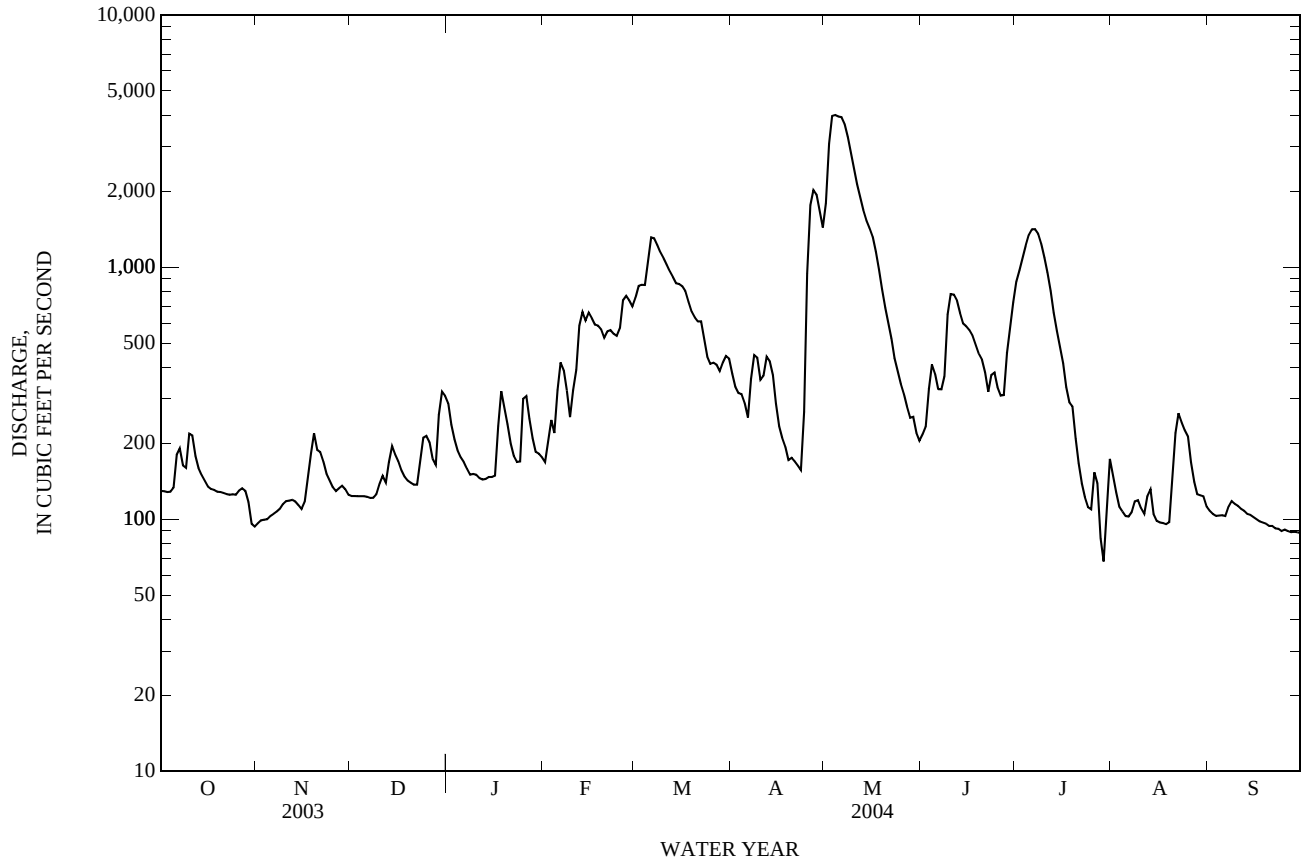
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004z, BY WATER YEAR (WY)

MEAN	215	405	790	912	1,116	1,324	1,170	1,207	761	230	119	189
MAX	2,064	2,559	3,344	4,389	3,097	5,206	4,162	5,289	4,129	1,076	617	1,313
(WY)	(1974)	(1975)	(1992)	(1998)	(1992)	(2001)	(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)

08032000 Neches River near Neches, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004z	
ANNUAL TOTAL	190,612		164,816			
ANNUAL MEAN	522		450		701	
HIGHEST ANNUAL MEAN					1,358	1995
LOWEST ANNUAL MEAN					106	1972
HIGHEST DAILY MEAN	6,950	Feb 23	4,010	May 4	26,200	May 13, 1968
LOWEST DAILY MEAN	93	Oct 31	68	Jul 29	3.3	Nov 1, 1963
ANNUAL SEVEN-DAY MINIMUM	98	Oct 30	89	Sep 24	3.4	Oct 29, 1963
MAXIMUM PEAK FLOW			4,140	May 3	26,900	May 13, 1968
MAXIMUM PEAK STAGE			15.16	May 3	19.46	May 13, 1968
ANNUAL RUNOFF (AC-FT)	378,100		326,900		507,800	
10 PERCENT EXCEEDS	1,050		1,030		1,730	
50 PERCENT EXCEEDS	215		210		258	
90 PERCENT EXCEEDS	128		104		61	

z Period of regulated streamflow.
e Estimated



08032000 Neches River near Neches, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Dec. 1969 to current year.
BIOCHEMICAL DATA: Oct. 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Dec. 1969 to Sept. 1991.
WATER TEMPERATURE: Dec. 1983 to Sept. 1991.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (1974-1988): Maximum, 1,190 microsiemens/cm, Aug. 29, 1976; minimum, 65 microsiemens/cm, 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 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
NOV													
17...	1655	148	765	8.4	88	7.2	220	18.0	13	43	10.5	4.21	4.98
MAR													
15...	1545	859	768	9.7	95	6.7	203	14.7	14	44	11.0	4.05	4.06
JUL													
23...	1445	122	770	3.9	51	6.9	231	29.5	17	55	14.2	4.64	4.85
AUG													
26...	1200	167	760	7.0	90	7.4	210	28.1	18	43	10.7	3.90	4.98
SEP													
13...	1200	117	762	8.1	100	7.6	257	25.9	14	52	13.6	4.36	4.86

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
NOV													
17...	1	19.1	30	31.0	<.2	15.5	13.9	118	.36	<.04	--	.25	<.008
MAR													
15...	1	17.9	30	25.4	<.2	11.4	17.7	109	.44	<.04	--	E.06n	<.008
JUL													
23...	1	21.8	38	31.7	<.2	11.6	19.3	131	.47	.09	.17	.18	.009
AUG													
26...	1	15.1	24	24.6	<.2	17.1	17.5	110	.39	E.03n	.18	.20	.012
SEP													
13...	1	23.9	38	37.0	<.2	11.5	16.4	135	.51	E.02n	--	.11	<.008

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Organic nitrogen, water, fltrd, mg/L (00607)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
NOV			
17...	--	<.02	<.04
MAR			
15...	--	<.02	<.04
JUL			
23...	.39	<.02	<.04
AUG			
26...	--	<.02	<.04
SEP			
13...	--	<.02	<.04

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

Value qualifier codes used in this table:
n -- Below the LRL and above the LT-MDL

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08032200 Lake Jacksonville near Jacksonville, TX

LOCATION.--Lat 31°54'30", long 95°18'35", Cherokee County, Hydrologic Unit 12020001, on concrete deck of city of Jacksonville pump platform, on Gum Creek, 2.0 mi upstream of Pine Grove, and 5.0 mi southwest of Jacksonville.

DRAINAGE AREA.--34.0 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is NAVD of 1988 and is obtained from Texas Water Development Board Report 126, "Engineering Data on Dams and Reservoirs in Texas", Part I, Nov. 1973. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 2,700 ft long, including a 350-ft uncontrolled spillway. Deliberate impoundment began in June 1957. The uncontrolled spillway is an excavated channel cut through natural ground and located at the right end of the dam. The low-flow outlet consists of an 18-inch concrete pressure pipe through the dam with valve on the upstream side. The dam is owned by the city of Jacksonville. The water is used for municipal and recreational purposes in the Jacksonville area. There are no known diversions. Data regarding the dam use the datum from TWDB Report 126 and are given in the following table:

	Elevation (feet)
Top of dam	438.0
Crest of uncontrolled spillway	431.0
Lowest gated outlet (invert)	372.0

EXTREMES FOR PERIOD OF RECORD.--1999 to 2002: Maximum contents, 32,800 acre-ft, June 8, 2001; minimum contents, 26,610 acre-ft, Sept. 30, 2000; 1999 to current year: Maximum elevation, 424.08 ft, May 1, 2004; minimum elevation, 418.84 ft, Sept. 30, 2002.

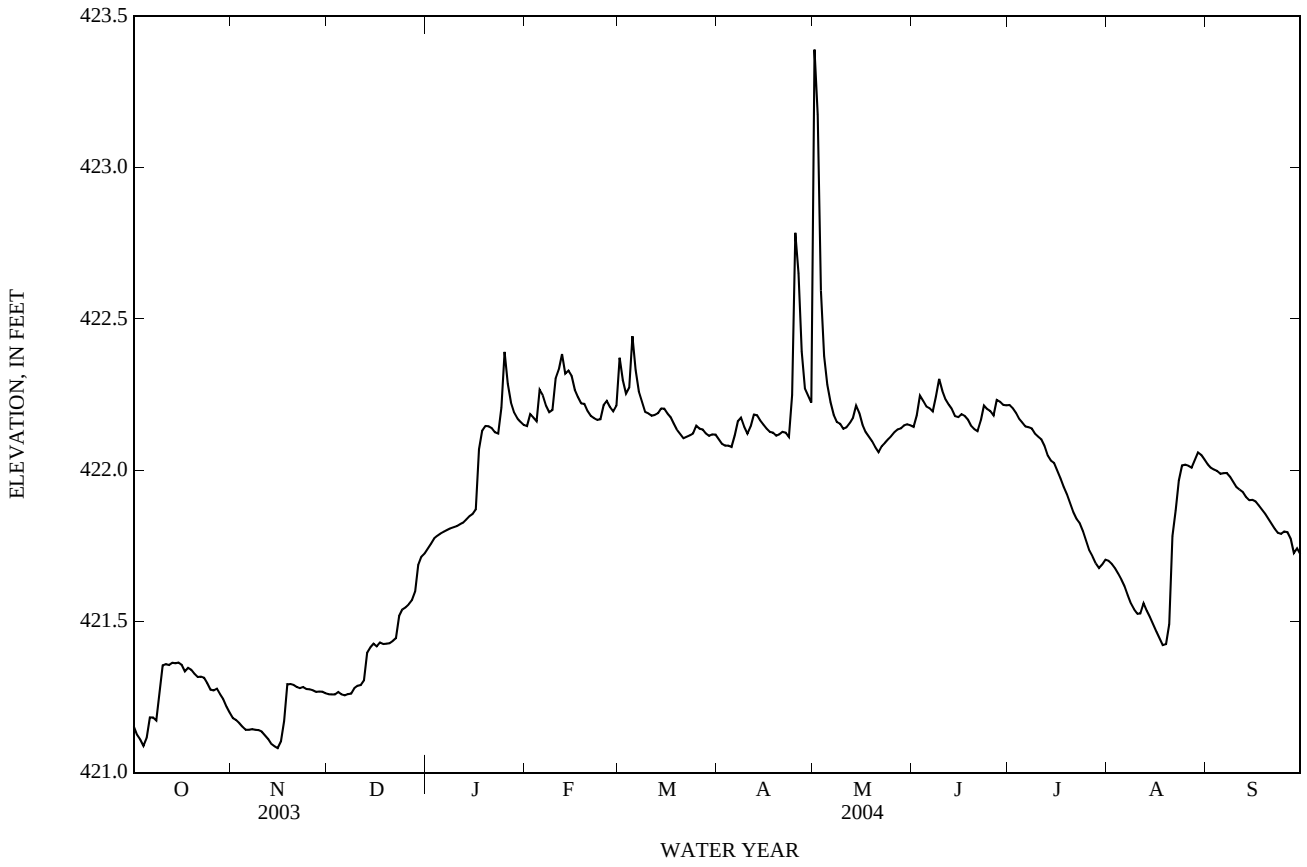
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 424.08 ft, May 1; minimum elevation, 421.07 ft, Oct. 4-5 and Nov. 14-15.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	421.15	421.18	421.26	421.74	422.15	422.37	422.10	423.39	422.14	422.22	421.70	422.02
2	421.13	421.17	421.26	421.76	422.19	422.30	422.09	423.17	422.18	422.20	421.69	422.01
3	421.11	421.16	421.26	421.77	422.17	422.25	422.08	422.59	422.25	422.19	421.68	422.00
4	421.09	421.15	421.27	421.78	422.16	422.27	422.08	422.38	422.23	422.17	421.66	422.00
5	421.12	421.14	421.26	421.79	422.27	422.44	422.08	422.28	422.21	422.16	421.64	421.99
6	421.18	421.14	421.26	421.80	422.25	422.33	422.11	422.22	422.20	422.14	421.62	421.99
7	421.18	421.14	421.26	421.80	422.21	422.26	422.16	422.18	422.19	422.14	421.59	421.99
8	421.17	421.14	421.26	421.81	422.19	422.23	422.17	422.16	422.24	422.14	421.56	421.98
9	421.27	421.14	421.28	421.81	422.20	422.19	422.14	422.15	422.30	422.12	421.54	421.96
10	421.35	421.14	421.29	421.81	422.30	422.19	422.12	422.14	422.26	422.11	421.53	421.94
11	421.36	421.12	421.29	421.82	422.33	422.18	422.14	422.14	422.23	422.10	421.53	421.94
12	421.36	421.11	421.30	421.83	422.38	422.18	422.18	422.16	422.22	422.08	421.56	421.93
13	421.36	421.10	421.40	421.84	422.32	422.19	422.18	422.17	422.20	422.05	421.54	421.91
14	421.36	421.09	421.41	421.85	422.33	422.20	422.16	422.21	422.18	422.03	421.51	421.90
15	421.36	421.08	421.43	421.86	422.31	422.20	422.15	422.19	422.18	422.02	421.49	421.90
16	421.36	421.10	421.42	421.87	422.27	422.19	422.14	422.15	422.19	422.00	421.47	421.90
17	421.33	421.17	421.43	422.07	422.24	422.18	422.13	422.13	422.18	421.97	421.44	421.88
18	421.35	421.29	421.43	422.13	422.22	422.15	422.12	422.11	422.17	421.94	421.42	421.87
19	421.34	421.29	421.43	422.15	422.22	422.13	422.11	422.10	422.15	421.92	421.42	421.86
20	421.33	421.29	421.43	422.14	422.20	422.12	422.12	422.08	422.14	421.89	421.49	421.84
21	421.32	421.28	421.44	422.14	422.18	422.11	422.13	422.06	422.13	421.86	421.78	421.82
22	421.32	421.28	421.44	422.13	422.17	422.11	422.12	422.08	422.16	421.84	421.87	421.81
23	421.31	421.28	421.52	422.12	422.17	422.12	422.11	422.09	422.21	421.82	421.97	421.79
24	421.30	421.28	421.54	422.21	422.17	422.12	422.25	422.10	422.20	421.80	422.02	421.79
25	421.27	421.28	421.55	422.39	422.22	422.15	422.78	422.11	422.20	421.77	422.02	421.80
26	421.27	421.27	421.56	422.29	422.23	422.14	422.65	422.13	422.18	421.73	422.01	421.79
27	421.28	421.27	421.57	422.22	422.21	422.13	422.39	422.13	422.23	421.71	422.01	421.77
28	421.26	421.27	421.60	422.19	422.19	422.12	422.27	422.14	422.23	421.69	422.03	421.73
29	421.24	421.27	421.69	422.17	422.21	422.11	422.25	422.15	422.22	421.68	422.06	421.74
30	421.22	421.26	421.71	422.16	---	422.12	422.22	422.15	422.21	421.69	422.05	421.72
31	421.20	---	421.72	422.15	---	422.12	---	422.15	---	421.70	422.04	---
MEAN	421.27	421.20	421.42	421.99	422.23	422.19	422.19	422.24	422.20	421.96	421.71	421.89
MAX	421.36	421.29	421.72	422.39	422.38	422.44	422.78	423.39	422.30	422.22	422.06	422.02
MIN	421.09	421.08	421.26	421.74	422.15	422.11	422.08	422.06	422.13	421.68	421.42	421.72

CAL YR 2003 MEAN 421.78 MAX 423.14 MIN 421.08
WTR YR 2004 MEAN 421.87 MAX 423.39 MIN 421.08

08032200 Lake Jacksonville near Jacksonville, TX—Continued



08033000 Neches River near Diboll, TX

LOCATION.--Lat 31°07'58", long 94°48'35", Angelina County, 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 mi^2.

PERIOD OF RECORD.--Oct. 1923 to Sept. 1925, Mar. 1939 to Sept. 1985 (daily mean discharge). Monthly discharge only for some periods, published in WSP 1312. Oct. 1985 to Sept. 1989 (annual maximum), Oct. 1989 to current year (peak discharges greater than base discharge). Water-quality records: Chemical data: Oct. 1969 to Sept. 1981. Biochemical data: Oct. 1969 to Sept. 1981. Specific conductance: Oct. 1969 to Sept. 1981. Water temperature: Oct. 1969 to Sept. 1981.

REVISED RECORDS.--WSP 1242: 1950. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 136.46 ft above NGVD 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 upstream; all at present datum. Satellite telemeter at station.

REMARKS.--Records good. Since water year 1962, at least 10% of contributing drainage area has been regulated.

AVERAGE DISCHARGE.--26 years (water years 1923-25, 1939-61) unregulated, 1,807 ft^3/s (1,309,000 acre-ft/yr); 24 years (water years 1962-85) regulated, 1,353 ft^3/s (980,200 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,900 ft^3/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 ft^3/s, from rating curve extended above 40,000 ft^3/s); flood in 1900 reached a stage of 19.9 ft (discharge, about 80,000 ft^3/s), from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 12	1800	10,600	14.62	May 14	1700	*11,800	*14.84
Mar 2	1700	6,120	13.36	Jun 30	0500	7,020	13.72

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08033500 Neches River near Rockland, TX

LOCATION.--Lat 31°01'30", long 94°23'58", Tyler County, Hydrologic Unit 12020003, on 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 mi^2.

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 NGVD 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. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1962, at least 10% of contributing drainage area has been regulated.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--58 years (water years 1904-1961), 2,362 ft^3/s (1,711,000 acre-ft/yr).

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 ft^3/s).

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1904-1961: Maximum discharge, 49,800 ft^3/s May 6, 1944 (gage height, 35.04 ft), present site; minimum observed during period of daily records, 1.6 ft^3/s Sept. 28-30, and Oct. 1, 2, 1956.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	282	273	1,210	1,230	5,000	7,510	3,300	4,460	959	13,100	378	691
2	270	283	983	1,090	4,910	8,050	2,950	7,270	865	14,400	366	534
3	256	288	735	985	4,730	8,910	2,990	7,200	816	13,800	541	444
4	246	285	572	904	4,470	9,430	2,950	6,890	800	12,500	711	386
5	239	277	498	866	5,300	9,470	2,620	6,500	807	11,100	800	339
6	232	265	456	982	5,960	9,260	2,020	6,380	858	9,520	763	304
7	226	253	431	1,080	5,610	8,680	1,620	6,450	894	7,690	635	283
8	221	246	414	950	5,040	7,950	1,430	6,630	988	5,580	508	274
9	228	245	412	893	4,560	7,300	1,400	6,790	1,740	3,960	422	269
10	298	242	438	830	5,250	6,740	1,400	6,840	2,370	3,230	353	263
11	401	244	512	787	7,220	6,210	2,690	6,860	2,040	3,520	302	261
12	493	241	642	734	10,200	5,810	2,980	7,550	1,950	3,410	264	257
13	568	236	1,060	681	10,900	5,440	2,680	7,430	2,160	2,930	240	251
14	589	233	1,730	644	12,800	5,050	2,440	8,280	2,360	2,510	237	237
15	581	240	1,770	611	14,300	4,780	2,270	9,300	2,120	2,170	244	227
16	564	252	1,490	589	14,700	4,680	2,170	11,500	2,290	1,940	233	208
17	536	340	1,350	1,650	14,100	4,510	2,010	13,100	2,300	1,740	222	204
18	496	3,000	1,170	3,260	13,000	4,370	1,790	13,600	2,010	1,630	211	204
19	448	2,150	963	4,100	11,800	4,250	1,560	13,200	1,750	1,730	207	184
20	403	1,960	804	3,880	10,700	4,020	1,350	12,200	1,590	1,610	223	171
21	363	1,840	707	3,760	9,570	3,770	1,170	10,900	1,510	1,280	260	164
22	333	1,730	638	3,630	8,490	3,340	1,030	9,430	1,710	989	327	160
23	314	1,440	584	3,420	7,740	2,940	912	7,890	1,790	782	395	156
24	297	1,130	547	3,130	7,440	2,670	835	6,250	2,800	654	556	315
25	289	964	522	5,210	7,860	2,490	1,030	4,820	4,910	578	803	762
26	281	831	509	5,810	8,190	2,350	2,000	3,950	6,280	652	993	1,190
27	275	909	520	5,990	8,340	2,180	1,930	3,270	7,190	833	1,120	2,280
28	272	2,510	540	5,260	8,030	1,970	1,960	2,530	7,970	705	1,210	2,310
29	271	2,490	736	4,790	7,250	1,910	2,260	1,810	8,140	578	1,260	2,100
30	267	1,500	1,070	4,980	---	2,950	2,610	1,360	9,870	484	1,210	1,380
31	268	---	1,380	5,140	---	4,120	---	1,110	---	431	956	---
TOTAL	10,807	26,897	25,393	77,866	243,460	163,110	60,357	221,750	83,837	126,036	16,950	16,808
MEAN	349	897	819	2,512	8,395	5,262	2,012	7,153	2,795	4,066	547	560
MAX	589	3,000	1,770	5,990	14,700	9,470	3,300	13,600	9,870	14,400	1,260	2,310
MIN	221	233	412	589	4,470	1,910	835	1,110	800	431	207	156
AC-FT	21,440	53,350	50,370	154,400	482,900	323,500	119,700	439,800	166,300	250,000	33,620	33,340

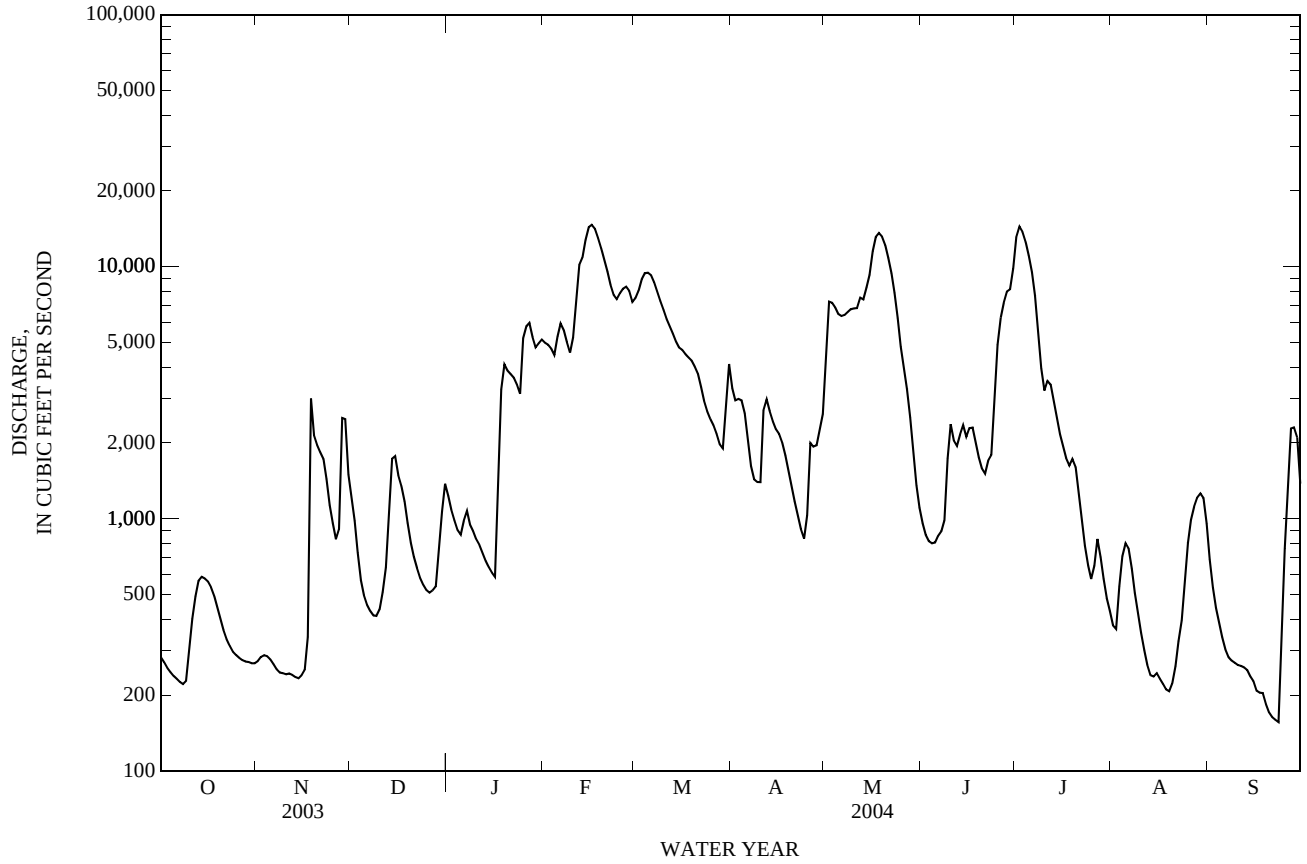
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004z, BY WATER YEAR (WY)

MEAN	824	1,389	2,710	3,821	4,128	4,409	3,654	3,661	2,697	1,173	380	494
MAX	10,620	7,673	8,982	13,170	13,930	15,890	11,990	12,730	10,510	11,260	2,673	3,042
(WY)	(1995)	(1999)	(1995)	(1998)	(1992)	(2001)	(1979)	(1969)	(2001)	(1989)	(1991)	(1979)
MIN	36.6	65.8	213	263	311	395	282	307	102	42.9	34.2	43.1
(WY)	(1964)	(1965)	(1981)	(1981)	(2000)	(1996)	(1971)	(1996)	(1971)	(1971)	(1964)	(1964)

08033500 Neches River near Rockland, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004z	
ANNUAL TOTAL	869,256		1,073,271			
ANNUAL MEAN	2,382		2,932		2,437	
HIGHEST ANNUAL MEAN					5,328	1995
LOWEST ANNUAL MEAN					352	1971
HIGHEST DAILY MEAN	18,600	Feb 27	14,700	Feb 16	41,600	Jul 2, 1989
LOWEST DAILY MEAN	185	Aug 30	156	Sep 23	18	Aug 30, 1970
ANNUAL SEVEN-DAY MINIMUM	195	Aug 25	178	Sep 17	23	Jul 21, 1971
MAXIMUM PEAK FLOW			14,800	Feb 16	42,300	Oct 20, 1994
MAXIMUM PEAK STAGE			23.42	Feb 16	33.29	Oct 20, 1994
ANNUAL RUNOFF (AC-FT)	1,724,000		2,129,000		1,765,000	
10 PERCENT EXCEEDS	5,700		8,040		6,440	
50 PERCENT EXCEEDS	963		1,420		950	
90 PERCENT EXCEEDS	269		257		116	

z Period of regulated streamflow.



08033500 Neches River near Rockland, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--CHEMICAL DATA: Apr. 1941 to Sept. 1942, Sept. 1945 to Sept. 1947, Dec. 1967 to current year.
BIOCHEMICAL DATA: Dec. 1967 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Apr. 1941 to Sept. 1942, Sept. 1945 to Sept. 1947.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Altitude of land surface feet (72000)	Instantaneous discharge, cfs (00061)	Drainage area, mi2 (81024)	Sampling method, code (82398)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)
NOV													
18...	1255	1028	80020	88.41	3,320	3,636	30	140	764	7.5	6.5	E7.1	63
MAR													
16...	1445	1028	80020	88.41	4,700	3,636	30	--	767	8.8	7.5	7.5	187
JUN													
10...	1015	1028	80020	88.41	2,450	3,636	30	--	770	5.5	7.0	7.6	181
JUL													
23...	1230	1028	80020	88.41	773	3,636	40	--	770	5.1	7.0	7.6	234
AUG													
19...	1430	1028	80020	88.41	211	3,636	30	30	775	6.8	7.1	7.6	243
SEP													
02...	0815	1028	80020	88.41	552	3,636	30	--	770	6.5	7.1	7.7	170

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)
NOV													
18...	73	--	21.0	4.98	.805	3.40	4.43	15	7.00	<.2	6.57	3.9	56
MAR													
16...	196	--	10.0	11.3	4.20	3.03	19.0	24	22.7	<.2	12.1	27.6	--
JUN													
10...	192	33.0	25.5	10.3c	3.20c	2.86c	18.8c	18	20.1	<.2	12.7	28.4	--
JUL													
23...	234	28.0	29.6	13.1	4.18	4.02	24.2	36	29.8	<.2	13.6	24.8	--
AUG													
19...	254	30.0	27.8	12.3	4.17	4.23	25.9	36	35.3	<.2	16.8	25.7	164
SEP													
02...	169	25.5	27.1	8.30c	3.18c	4.19c	17.0c	18	19.6	<.2	14.3	21.8	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium water, fltrd, ug/L (01025)
NOV													
18...	118d	.51	<.04	.12	E.004n	E.01n	E.03n	47	<.20	Mn	35	.06	<.04
MAR													
16...	--	.54	<.04	E.04n	<.008	<.02	E.02n	--	--	--	--	--	--
JUN													
10...	--	.43	<.04	.21	<.008	<.02	E.02n	--	--	--	--	--	--
JUL													
23...	--	.40	<.04	.11	<.008	<.02	<.04	--	--	--	--	--	--
AUG													
19...	30	.23	<.04	<.06	<.008	<.02	<.04	2	<.20	<2	55	<.06	<.04
SEP													
02...	--	.40	<.04	.20	<.008	.02	E.04n	--	--	--	--	--	--

08033500 Neches River near Rockland, TX—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Chrom-ium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Molyb-denum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
NOV													
18...	<.8	.864	1.9	226	.28	87.7	<.02	<.4	1.33	<3	<.2	1.9	.25
MAR													
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
19...	<.8	.129	1.1	59	<.08	5.3	<.02	.5	2.08	<3	<.2	1.8	.07
SEP													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Purpose site visit, code (50280)	Sample purpose code (71999)	Sample treat-ment, code (00115)	Sampler type, code (84164)	Type of sample related QA data, code (99111)
NOV					
18...	1,001	10.00	1	3060	1
MAR					
16...	1,001	10.00	1	3060	1
JUN					
10...	1,001	10.00	1	3060	1
JUL					
23...	1,001	10.00	1	3060	1
AUG					
19...	1,001	10.00	1	3060	30
SEP					
02...	1,001	10.00	1	3060	1

Remark codes used in this table:
< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

Value qualifier codes used in this table:
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

08034000 Lake Tyler near Whitehouse, TX

LOCATION.--Lat 32°14'30", long 95°10'33", Smith County, Hydrologic Unit 12020004, at city of Tyler pumphouse, 2.0 mi north of Whitehouse Dam on Prairie Creek, 3.0 mi northwest of Mud Creek, and 3.2 mi northeast of Whitehouse.

DRAINAGE AREA.--107 mi^2. Prior to May 29, 1968, 45.3 mi^2.

PERIOD OF RECORD.--Mar. 1949 to Sept. 1983, Apr. 1999 to Sept. 2002 (contents), Oct. 2002 to current year. Water-quality records: Chemical data: Oct. 1969 to Sept. 1984.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to May 3, 1949, nonrecording gage at dam. May 3, 1949, to July 11, 1951, nonrecording gage at pumphouse. July 12, 1951, to Feb. 1, 1968, water-stage recorder at intake tower in lake 660 ft south of pumphouse. All gages at same datum. Satellite telemeter at station.

REMARKS.--Records good. Originally Lake Tyler was formed by Whitehouse Dam. Deliberate impoundment began Jan. 8, 1949, and the dam was completed May 13, 1949. The construction of Mud Creek Dam began Feb. 11, 1966, and deliberate impoundment began Nov. 22, 1966; final completion of dam was in Jan. 1967. Whitehouse Dam is a rolled earthfill dam with an uncontrolled concrete spillway 200 ft wide near left end of dam. Mud Creek Dam is a rolled earthfill dam with an uncontrolled concrete spillway 300 ft wide near center of dam. On May 29, 1968, the lakes were joined through an interconnecting canal. An 18-inch conduit through the embankment of Mud Creek Dam serves as a low-flow outlet. Water is used for municipal supply for the cities of Tyler, Troop, and Whitehouse. The dam is owned and operated by the city of Tyler. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	390.0
Design flood	386.0
Crest of spillway	375.4
Bottom of interconnecting canal between lakes	355.0
Lowest gated outlet (invert at Mud Creek Dam)	350.0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 87,340 acre-ft, Feb. 3, 1975, elevation, 376.71 ft; maximum elevation, 378.3 ft, Apr. 24, 1966, prior to adjoining of lakes; minimum contents since joining of lakes, 53,100 acre-ft, Nov. 1, 2000, elevation, 369.00 ft.

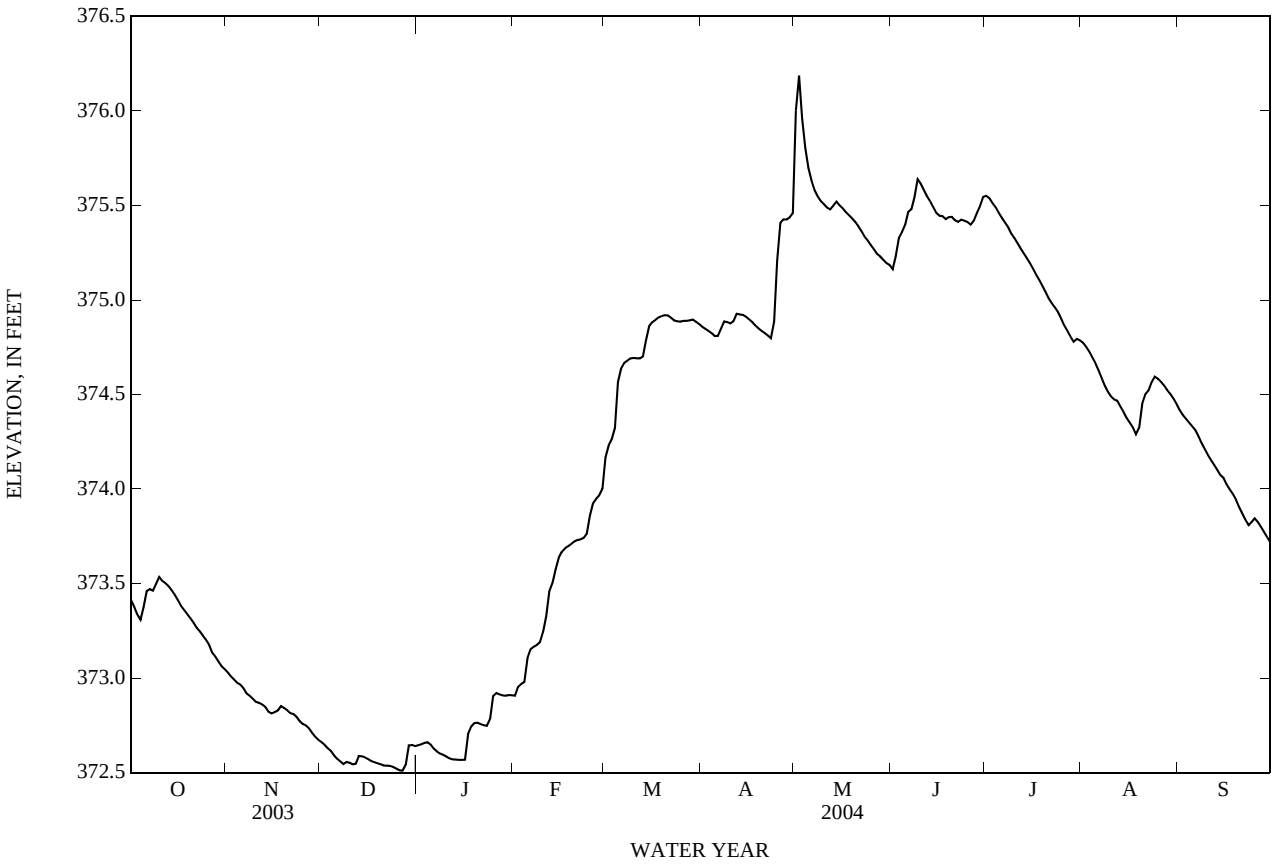
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 376.29 ft, May 1, 2; minimum elevation, 372.50 ft, Dec. 27, 28.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	373.41	373.03	372.66	372.64	372.91	374.17	374.86	376.00	375.16	375.55	374.77	374.42
2	373.38	373.01	372.65	372.65	372.95	374.23	374.85	376.19	375.23	375.54	374.75	374.39
3	373.34	372.99	372.63	372.66	372.97	374.26	374.84	375.96	375.33	375.51	374.73	374.37
4	373.31	372.98	372.62	372.66	372.98	374.32	374.82	375.80	375.36	375.49	374.70	374.35
5	373.37	372.97	372.59	372.65	373.11	374.57	374.81	375.70	375.40	375.46	374.66	374.33
6	373.46	372.95	372.57	372.63	373.15	374.64	374.81	375.63	375.46	375.43	374.63	374.31
7	373.47	372.92	372.56	372.61	373.17	374.67	374.85	375.58	375.48	375.41	374.59	374.28
8	373.46	372.91	372.55	372.60	373.18	374.68	374.89	375.55	375.54	375.38	374.55	374.24
9	373.50	372.89	372.56	372.59	373.19	374.69	374.88	375.52	375.64	375.35	374.51	374.21
10	373.54	372.87	372.55	372.59	373.24	374.69	374.88	375.51	375.62	375.33	374.49	374.18
11	373.51	372.87	372.54	372.58	373.33	374.69	374.89	375.49	375.58	375.30	374.47	374.15
12	373.50	372.86	372.55	372.57	373.46	374.69	374.93	375.48	375.55	375.27	374.47	374.13
13	373.49	372.85	372.59	372.57	373.50	374.70	374.92	375.50	375.52	375.25	374.44	374.10
14	373.47	372.82	372.59	372.57	373.57	374.79	374.92	375.52	375.49	375.22	374.41	374.07
15	373.44	372.81	372.58	372.57	373.64	374.86	374.91	375.50	375.46	375.19	374.38	374.06
16	373.41	372.82	372.57	372.57	373.67	374.88	374.90	375.48	375.45	375.16	374.35	374.02
17	373.38	372.83	372.56	372.71	373.69	374.89	374.88	375.47	375.44	375.13	374.33	374.00
18	373.36	372.85	372.56	372.74	373.70	374.91	374.87	375.45	375.43	375.10	374.29	373.97
19	373.34	372.84	372.55	372.76	373.71	374.91	374.85	375.43	375.44	375.07	374.32	373.94
20	373.32	372.83	372.54	372.76	373.72	374.92	374.84	375.41	375.44	375.04	374.45	373.91
21	373.29	372.81	372.54	372.76	373.73	374.92	374.83	375.39	375.42	375.01	374.50	373.87
22	373.27	372.81	372.54	372.75	373.73	374.91	374.81	375.36	375.41	374.98	374.52	373.84
23	373.25	372.80	372.54	372.75	373.74	374.89	374.80	375.34	375.42	374.96	374.57	373.81
24	373.22	372.77	372.53	372.78	373.76	374.89	374.88	375.31	375.42	374.94	374.59	373.83
25	373.20	372.76	372.52	372.91	373.86	374.89	375.21	375.29	375.41	374.90	374.58	373.84
26	373.18	372.75	372.51	372.92	373.92	374.89	375.41	375.27	375.40	374.86	374.57	373.83
27	373.14	372.73	372.51	372.91	373.95	374.89	375.43	375.24	375.42	374.84	374.55	373.80
28	373.11	372.71	372.54	372.91	373.97	374.89	375.43	375.23	375.46	374.81	374.52	373.77
29	373.09	372.69	372.64	372.91	374.00	374.90	375.44	375.21	375.50	374.78	374.50	373.74
30	373.06	372.67	372.65	372.91	---	374.88	375.46	375.19	375.54	374.79	374.48	373.72
31	373.05	---	372.64	372.91	---	374.87	---	375.19	---	374.79	374.45	---
MEAN	373.33	372.85	372.57	372.71	373.50	374.74	374.97	375.49	375.45	375.16	374.52	374.05
MAX	373.54	373.03	372.66	372.92	374.00	374.92	375.46	376.19	375.64	375.55	374.77	374.42
MIN	373.05	372.67	372.51	372.57	372.91	374.17	374.80	375.19	375.16	374.78	374.29	373.72

WTR YR 2004 MEAN 374.11 MAX 376.19 MIN 372.51

08034000 Lake Tyler near Whitehouse, TX—Continued



08034500 Mud Creek near Jacksonville, TX

LOCATION.--Lat 31°58'35", long 95°09'38", Cherokee County, Hydrologic Unit 12020004, on right bank on downstream side of bridge on U.S. Highway 79, 0.6 mi downstream from Caney Creek, 3.9 mi downstream from another Caney Creek, 4.0 mi downstream from Missouri Pacific Railroad Co. bridge, 6.9 mi east of Jacksonville, and 25.9 mi upstream from mouth.

DRAINAGE AREA.--376 mi^2.

PERIOD OF RECORD.--May 1939 to Sept. 1979, Oct. 2001 to current year.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 271.64 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good. Some regulation by Lake Tyler (station 08034000, capacity 80,900 acre-ft). Several diversions above station. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since May 1884, 20 ft, in May 1908 and Dec. 1913; flood in May 1884 was higher (stage unknown), from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	29	48	195	95	849	94	4,360	43	320	37	20
2	25	29	44	125	117	712	85	5,680	43	333	38	19
3	25	31	45	86	159	596	83	4,860	73	328	37	18
4	25	32	46	78	161	538	80	3,390	129	272	25	18
5	25	33	46	73	301	1,550	73	2,170	157	128	21	19
6	44	34	46	65	541	1,320	72	1,490	157	88	19	18
7	103	36	46	58	428	1,000	99	1,090	106	69	18	18
8	124	38	46	55	410	993	139	807	107	55	16	18
9	109	40	50	55	246	724	191	509	186	47	16	17
10	90	43	56	57	274	273	171	269	214	42	16	16
11	95	45	66	57	341	181	106	192	260	41	18	15
12	103	43	82	55	883	159	114	166	288	35	30	14
13	64	42	86	55	871	146	145	157	200	31	25	14
14	46	43	102	57	851	161	142	210	120	29	27	14
15	39	43	121	58	973	198	106	215	92	28	24	14
16	36	44	99	57	785	280	86	226	77	27	18	14
17	33	55	71	162	509	290	76	178	68	24	17	14
18	31	129	66	241	286	196	69	137	61	23	14	15
19	31	98	65	232	191	155	63	112	58	22	15	15
20	30	100	58	239	163	141	60	94	87	e20	24	14
21	30	93	56	163	145	131	59	84	143	19	94	14
22	29	62	56	102	133	120	59	73	123	19	116	13
23	29	52	70	84	124	109	59	65	159	19	138	13
24	28	48	79	96	122	105	119	60	188	20	159	14
25	28	46	90	530	250	109	1,060	55	177	22	88	15
26	60	46	84	585	525	113	2,000	52	89	21	76	17
27	51	48	67	365	437	113	1,310	50	98	19	49	19
28	37	47	61	181	394	106	1,360	48	129	18	32	18
29	38	46	93	119	254	122	1,370	47	146	18	26	16
30	32	52	139	104	---	111	916	46	205	19	24	15
31	30	---	170	98	---	109	---	49	---	24	23	---
TOTAL	1,495	1,527	2,254	4,487	10,969	11,710	10,366	26,941	3,983	2,180	1,280	478
MEAN	48.2	50.9	72.7	145	378	378	346	869	133	70.3	41.3	15.9
MAX	124	129	170	585	973	1,550	2,000	5,680	288	333	159	20
MIN	25	29	44	55	95	105	59	46	43	18	14	13
AC-FT	2,970	3,030	4,470	8,900	21,760	23,230	20,560	53,440	7,900	4,320	2,540	948

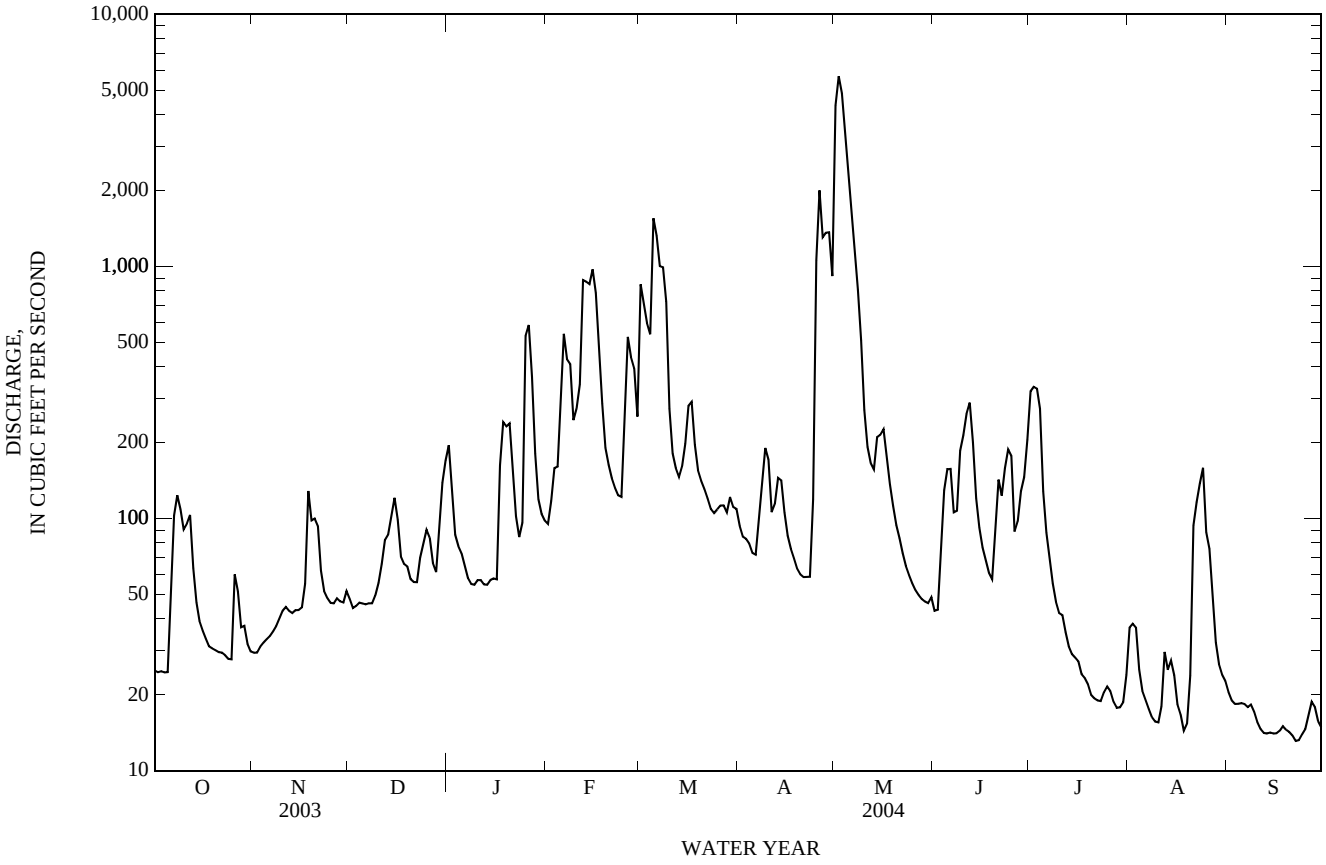
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004h, BY WATER YEAR (WY)

MEAN	83.7	206	283	342	434	427	457	474	230	81.9	27.2	57.2
MAX	846	1,584	1,505	1,294	1,467	1,387	2,089	2,326	1,250	971	188	388
(WY)	(1946)	(1941)	(1961)	(1961)	(2003)	(1945)	(1966)	(1944)	(1973)	(1945)	(1940)	(1973)
MIN	0.00	0.21	4.77	13.3	49.0	45.0	29.0	14.8	4.89	0.15	0.00	0.00
(WY)	(1940)	(1940)	(1957)	(1957)	(1967)	(1967)	(1972)	(1972)	(1971)	(1954)	(1939)	(1939)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004h	
ANNUAL TOTAL	118,338		77,670			
ANNUAL MEAN	324		212		258	
HIGHEST ANNUAL MEAN					606	1946
LOWEST ANNUAL MEAN					33.0	1964
HIGHEST DAILY MEAN	7,430	Feb 23	5,680	May 2	22,700	Apr 25, 1966
LOWEST DAILY MEAN	23	Aug 21	13	Sep 22	0.00	Jul 19, 1939
ANNUAL SEVEN-DAY MINIMUM	24	Aug 21	14	Sep 17	0.00	Jul 19, 1939
MAXIMUM PEAK FLOW			8,380	May 1	27,500	Apr 25, 1966
MAXIMUM PEAK STAGE			10.71	May 1	15.20	Apr 25, 1966
ANNUAL RUNOFF (AC-FT)	234,700		154,100		187,000	
10 PERCENT EXCEEDS	792		415		621	
50 PERCENT EXCEEDS	70		72		75	
90 PERCENT EXCEEDS	29		18		4.2	

h See Period of Record paragraph.
e Estimated

08034500 Mud Creek near Jacksonville, TX—Continued



08036500 Angelina River near Alto, TX

LOCATION.--Lat 31°40'10", long 94°57'24", Cherokee County, Hydrologic Unit 12020004, on left bank of rectified channel on 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 mi^2.

PERIOD OF RECORD.--May to Aug. 1940 (discharge measurements only), Sept. 1940 to Mar. 1949 (fragmentary for 1941-42, 1944-49), Feb. 1959 to current year. Water-quality records: Chemical data: Nov. 1961 to Sept. 1963.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 204.30 ft above NGVD 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. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in water year 1959, at least 10% of contributing drainage area has been regulated. No known diversions.

EXTREMES OUTSIDE PERIOD OF RECORD.--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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

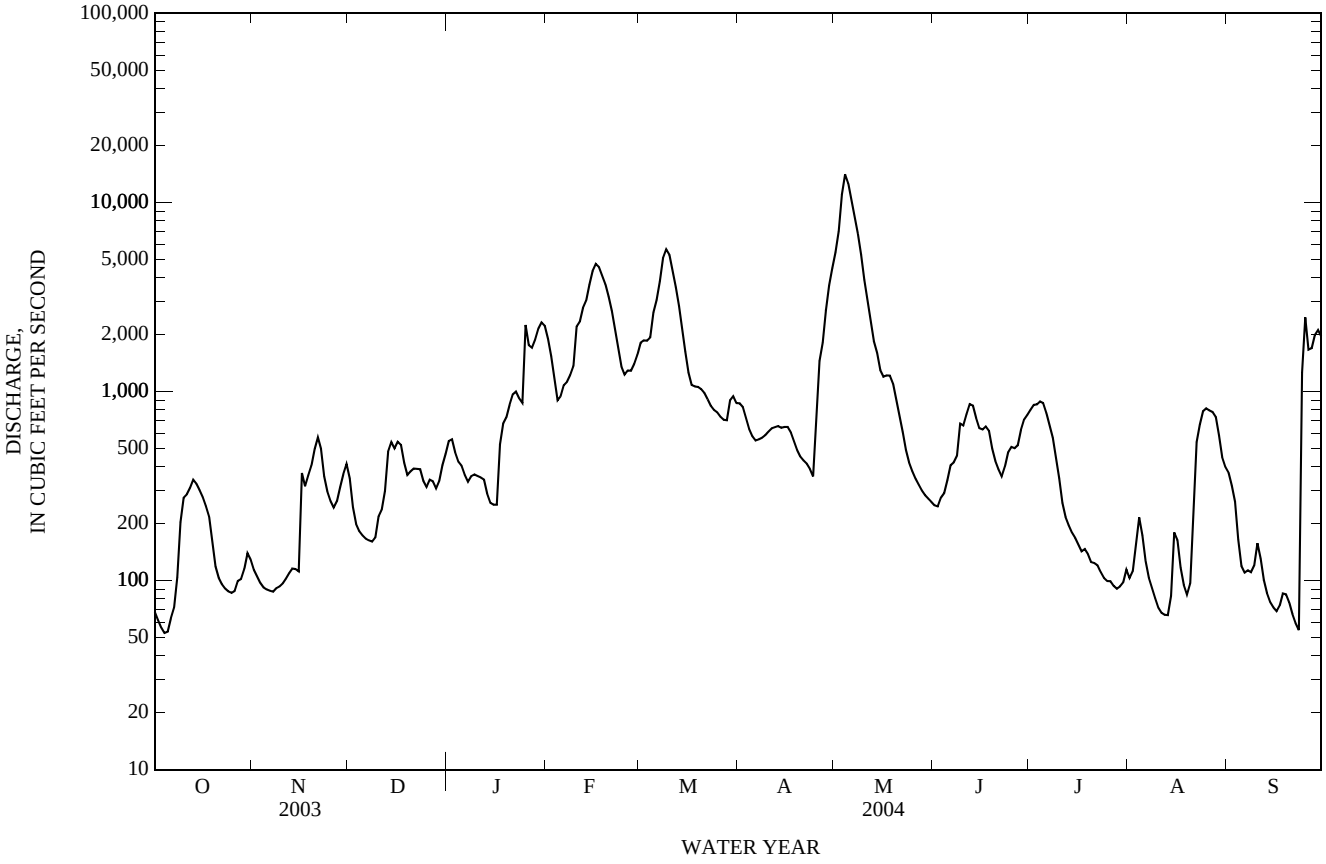
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	114	347	547	1,900	1,810	867	5,450	250	802	103	371
2	62	105	244	559	1,540	1,870	828	7,040	247	850	112	318
3	56	97	199	477	1,170	1,860	723	11,000	274	855	159	261
4	53	92	182	426	897	1,940	632	14,100	290	885	215	165
5	54	90	173	405	942	2,620	579	12,600	339	869	173	119
6	63	88	167	363	1,080	3,050	551	10,200	407	770	127	110
7	72	87	163	334	1,130	3,820	558	8,360	422	662	104	113
8	104	91	161	356	1,220	5,070	569	6,810	456	570	92	111
9	203	93	169	364	1,360	5,640	587	5,290	677	451	81	120
10	275	97	218	357	2,210	5,280	613	3,890	662	347	72	157
11	286	103	237	351	2,350	4,380	639	3,010	758	258	68	131
12	309	110	297	342	2,770	3,560	647	2,360	857	217	66	101
13	342	116	481	288	3,030	2,830	655	1,840	842	196	66	86
14	326	115	540	258	3,680	2,180	643	1,600	725	180	83	77
15	302	112	500	252	4,340	1,630	650	1,300	640	168	180	72
16	277	370	542	252	4,730	1,260	650	1,200	630	155	164	69
17	248	315	522	525	4,550	1,080	608	1,220	654	143	117	74
18	218	360	420	677	4,100	1,060	546	1,210	620	147	95	85
19	159	407	362	730	3,690	1,060	489	1,100	501	138	84	85
20	119	497	378	851	3,180	1,030	453	901	430	125	96	77
21	103	572	391	964	2,670	982	432	737	388	124	249	66
22	96	499	390	999	2,150	910	416	612	356	120	540	60
23	91	357	388	921	1,710	841	390	491	401	111	669	55
24	88	296	337	870	1,360	799	356	421	478	103	786	1,260
25	86	264	313	2,250	1,230	775	678	380	509	99	814	2,470
26	88	243	341	1,760	1,290	736	1,450	347	501	99	793	1,660
27	100	263	335	1,700	1,290	708	1,810	322	519	94	778	1,690
28	102	312	308	1,880	1,400	705	2,690	300	626	91	732	1,990
29	115	366	335	2,150	1,560	897	3,640	284	712	93	585	2,120
30	140	413	407	2,320	---	944	4,500	272	753	98	449	1,960
31	129	---	467	2,230	---	868	---	261	---	114	398	---
TOTAL	4,734	7,044	10,314	26,758	64,529	62,195	28,849	104,908	15,924	9,934	9,050	16,033
MEAN	153	235	333	863	2,225	2,006	962	3,384	531	320	292	534
MAX	342	572	542	2,320	4,730	5,640	4,500	14,100	857	885	814	2,470
MIN	53	87	161	252	897	705	356	261	247	91	66	55
AC-FT	9,390	13,970	20,460	53,070	128,000	123,400	57,220	208,100	31,590	19,700	17,950	31,800

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2004, BY WATER YEAR (WY)

MEAN	291	514	1,250	1,466	1,714	1,741	1,471	1,338	869	283	151	198
MAX	2,350	2,081	4,836	4,874	4,642	6,650	4,301	4,484	4,316	1,718	1,129	950
(WY)	(1974)	(1986)	(1961)	(1991)	(1983)	(2001)	(1969)	(1966)	(1993)	(1976)	(1997)	(1973)
MIN	5.56	18.0	67.8	150	158	183	172	119	34.2	7.91	19.5	16.0
(WY)	(1968)	(1968)	(1965)	(1981)	(1967)	(1967)	(1972)	(1972)	(1971)	(1998)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1959 - 2004	
ANNUAL TOTAL	339,738		360,272			
ANNUAL MEAN	931		984		935	
HIGHEST ANNUAL MEAN					1,917	1991
LOWEST ANNUAL MEAN					154	1964
HIGHEST DAILY MEAN	15,000	Feb 25	14,100	May 4	41,600	Mar 31, 1989
LOWEST DAILY MEAN	53	Oct 4	53	Oct 4	0.00	Jul 30, 1998
ANNUAL SEVEN-DAY MINIMUM	61	Oct 1	61	Oct 1	0.15	Jul 28, 1998
MAXIMUM PEAK FLOW			14,500	May 4	42,500	Mar 31, 1989
MAXIMUM PEAK STAGE			19.52	May 4	23.20	Mar 31, 1989
ANNUAL RUNOFF (AC-FT)	673,900		714,600		677,000	
10 PERCENT EXCEEDS	2,380		2,330		2,380	
50 PERCENT EXCEEDS	335		424		352	
90 PERCENT EXCEEDS	92		93		51	

08036500 Angelina River near Alto, TX—Continued



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 mi^2.

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

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

REMARKS.--No estimated daily contents. Records good. The lake is formed by a rolled earthfill dam. Deliberate impoundment began July 14, 1976. The dam is owned by the city of Nacogdoches. The 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. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	303.0
Top of design flood	298.5
Crest of spillway	286.0
Crest of drop inlet	279.0
Lowest gated outlet (invert of 30 in. conduit)	238.2

COOPERATION.--The capacity table, furnished by the Texas Water Development Board, dated June 16, 1994, is from a Mar. 1994 survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 58,730 acre-ft, Jan. 30, 1999, elevation, 286.67 ft; minimum contents after initial filling, 20,540 acre-ft, Nov. 26, 1977, elevation, 266.62 ft.

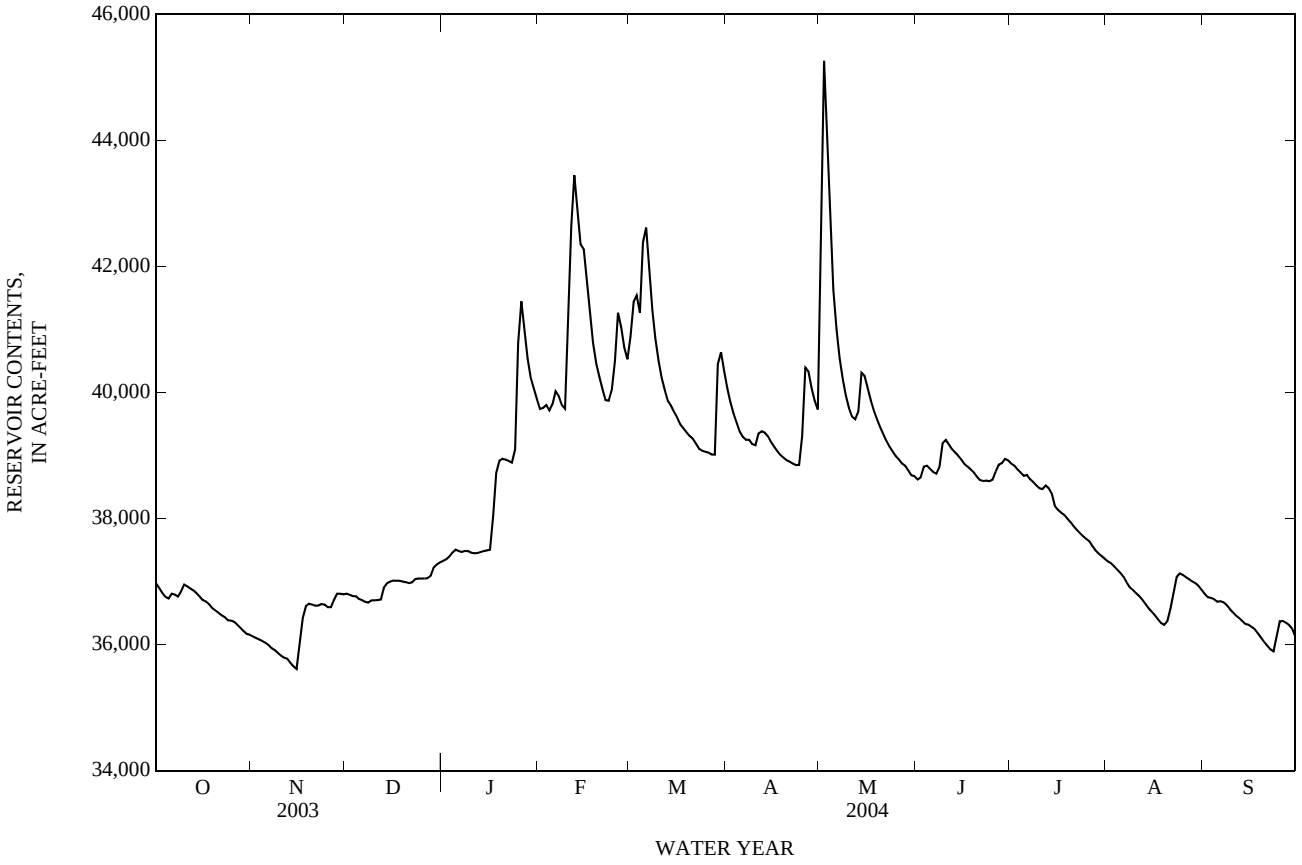
EXTREMES FOR CURRENT YEAR.--Maximum contents, 45,610 acre-ft, May 2, elevation, 281.69 ft; minimum contents, 35,570 acre-ft, Nov. 15, elevation, 277.11 ft.

RESERVOIR STORAGE, ACRE FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36,970	36,130	36,810	37,330	39,740	40,880	40,070	41,630	38,620	38,870	37,320	36,810
2	36,900	36,100	36,790	37,350	39,750	41,440	39,850	45,260	38,650	38,840	37,290	36,750
3	36,820	36,080	36,770	37,400	39,800	41,540	39,670	43,810	38,820	38,780	37,240	36,740
4	36,760	36,060	36,770	37,460	39,710	41,270	39,520	42,520	38,840	38,730	37,190	36,720
5	36,730	36,030	36,730	37,510	39,820	42,380	39,380	41,630	38,790	38,680	37,130	36,680
6	36,810	35,990	36,700	37,480	40,020	42,620	39,290	41,000	38,740	38,690	37,070	36,690
7	36,800	35,940	36,680	37,470	39,940	41,910	39,250	40,550	38,710	38,620	36,980	36,670
8	36,760	35,910	36,670	37,490	39,800	41,300	39,250	40,210	38,820	38,580	36,910	36,630
9	36,840	35,870	36,700	37,480	39,740	40,850	39,180	39,950	39,200	38,530	36,870	36,570
10	36,950	35,830	36,700	37,460	41,260	40,500	39,160	39,750	39,250	38,480	36,820	36,510
11	36,920	35,790	36,710	37,450	42,640	40,230	39,350	39,620	39,180	38,470	36,770	36,460
12	36,890	35,780	36,720	37,450	43,450	40,030	39,380	39,570	39,100	38,520	36,710	36,420
13	36,860	35,710	36,900	37,470	42,890	39,870	39,370	39,700	39,050	38,480	36,650	36,370
14	36,810	35,650	36,970	37,480	42,350	39,790	39,300	40,310	39,000	38,390	36,580	36,330
15	36,760	35,610	37,000	37,500	42,270	39,690	39,220	40,270	38,930	38,200	36,520	36,320
16	36,700	36,020	37,020	37,510	41,710	39,600	39,140	40,070	38,870	38,130	36,470	36,280
17	36,680	36,420	37,010	38,050	41,200	39,490	39,070	39,880	38,820	38,090	36,400	36,240
18	36,640	36,610	37,010	38,730	40,790	39,430	39,010	39,710	38,780	38,060	36,340	36,180
19	36,580	36,650	37,000	38,920	40,460	39,370	38,970	39,580	38,730	38,000	36,310	36,110
20	36,540	36,630	36,990	38,950	40,250	39,310	38,930	39,450	38,670	37,940	36,370	36,050
21	36,510	36,620	36,970	38,940	40,060	39,270	38,900	39,340	38,610	37,880	36,570	35,980
22	36,460	36,620	36,990	38,910	39,880	39,190	38,870	39,230	38,590	37,820	36,810	35,930
23	36,440	36,640	37,040	38,890	39,870	39,110	38,850	39,140	38,600	37,770	37,070	35,890
24	36,390	36,640	37,050	39,100	40,040	39,080	38,850	39,060	38,590	37,720	37,130	36,120
25	36,380	36,600	37,050	40,790	40,500	39,060	39,310	38,990	38,610	37,680	37,100	36,370
26	36,360	36,590	37,050	41,450	41,270	39,050	40,390	38,940	38,740	37,640	37,070	36,380
27	36,320	36,710	37,050	40,970	41,040	39,020	40,340	38,870	38,850	37,570	37,040	36,350
28	36,270	36,810	37,090	40,540	40,720	39,010	40,070	38,840	38,880	37,490	37,000	36,310
29	36,220	36,810	37,230	40,240	40,530	40,450	39,870	38,760	38,940	37,450	36,980	36,250
30	36,170	36,800	37,270	40,070	---	40,640	39,730	38,690	38,920	37,400	36,930	36,130
31	36,160	---	37,300	39,900	---	40,350	---	38,670	---	37,360	36,870	---
MEAN	36,630	36,260	36,930	38,510	40,740	40,180	39,380	40,100	38,830	38,160	36,860	36,370
MAX	36,970	36,810	37,300	41,450	43,450	42,620	40,390	45,260	39,250	38,870	37,320	36,810
MIN	36,160	35,610	36,670	37,330	39,710	39,010	38,850	38,670	38,590	37,360	36,310	35,890

CAL YR 2003 MEAN 38,030 MAX 45,800 MIN 35,610
WTR YR 2004 MEAN 38,240 MAX 45,260 MIN 35,610

08036700 Lake Nacogdoches near Nacogdoches, TX—Continued



08038000 Attoyac Bayou near Chireno, TX

LOCATION.--Lat 31°30'15", long 94°18'15", San Augustine County, Hydrologic Unit 12020005, near right bank on 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 mi^2.

PERIOD OF RECORD.--Jan. 1924 to Sept. 1925, July 1939 to Nov. 1954, and Oct. 1955 to Sept. 30, 1985 (daily mean discharge). Monthly discharge only for some periods, published in WSP 1312 and 1732. Oct. 1985 to Sept. 1989 (annual maximum), Oct. 1989 to current year (peak discharges greater than base discharge). Water-quality records: Chemical data: Oct. 1962 to Mar. 1963, Jan. 1994 to Aug. 1999. Biochemical data: Jan. 1994 to Aug. 1999.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 169.58 ft above NGVD of 1929. Jan. 24, 1924, to Aug. 29, 1925, and Sept. 6, 1957, to Oct. 27, 1958, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good. Flow is affected at times by discharge from the flood-detention pools of twelve floodwater-retarding structures. These structures control runoff from 46.7 mi^2 above this station.

AVERAGE DISCHARGE.--45 years (water years 1940-1954, 1956-1985), 479 ft^3/s, 12.93 in/yr, 347,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,900 ft^3/s Nov. 24, 1940 (gage height, 25.97 ft), maximum gage height, 26.01 ft on Jan. 30, 1999 (discharge, 31,700 ft^3/s); minimum, 0.8 ft^3/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 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 13	1500	5,330	18.12	Mar 7	1100	3,210	16.93
Feb 27	2100	2,520	16.40	May 3	1300	*8,050	*19.34
Mar 1	1200	3,630	17.22				

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08039100 Ayish Bayou near San Augustine, TX

LOCATION.--Lat 31°23'46", long 94°09'03", San Augustine County, Hydrologic Unit 12020005, near center of span on downstream side of bridge on State Highway 103, 3.0 mi upstream from Turkey Creek and 9.5 mi south of San Augine.

DRAINAGE AREA.--89.0 mi^2.

PERIOD OF RECORD.--Feb. 1959 to Sept. 1985 (daily mean discharge), Oct. 1985 to Sept. 1989 (annual maximum), Oct. 1989 to current year (peak discharges greater than base discharge).

REVISED RECORDS.--WSP 1922: 1959(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 190.22 ft above NGVD of 1929. Prior to June 2, 1959, nonrecording gage at same site and datum. Satellite telemeter at station.

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

AVERAGE DISCHARGE.--26 years (water years 1960-1985), 83.7 ft^3s, 12.77 in/yr, 60,640 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,200 ft^3s, Sept. 14, 1978, gage height, 18.02 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since Oct. 1957, 15,900 ft^3s, on Sept. 21 or 22, 1958, gage height, 17.5 ft, from floodmarks.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 25	2000	1,910	12.16	Mar 6	0000	1,610	11.83
Feb 6	0000	1,860	12.11	May 2	0400	2,600	12.73
Feb 12	0700	2,240	12.49	Jun 28	1100	1,820	12.07
Feb 25	2200	1,930	12.19	Jul 1	1600	2,000	12.26
Mar 1	2200	*3,210	*13.08				

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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 mi^2.

PERIOD OF RECORD.--Jan. 1965 to Sept. 2000 (U.S. Army Corps of Engineers furnished contents), Oct. 2000 to Sept. 2002 (daily mean contents). Oct. 2002 to current year. Water-quality records: Chemical data: Oct. 1964 to Sept. 1984, Sept. 1993 to Sept. 1999. Biochemical data: Nov. 1967 to Sept. 1984, Sept. 1993 to Sept. 1999.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Apr. 20, 1965, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good. 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 ft^3/s at maximum flood design. The flood-control outlet works consists of two 10.0 x 20.0-foot rectangular concrete-lined conduits controlled by two 10.0 x 20.0-foot tractor-type service gates and one 10.0 x 20.0-foot tractor-type emergency gate. Water for turbines is admitted through four 18.0 x 26.0-foot penstocks and controlled by two wheeled-leaf-type headgates. The dam is owned by the U.S. Army Corps of Engineers. 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 Feb. 1965. For statement regarding regulation by Natural Resource Conservation Service flood-water-retarding structures, see station 08038000. Conservation pool storage is 2,898,500 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	190.0
Design flood	183.0
Crest of spillway	176.0
Top of flood-control pool	173.0
Top of conservation pool (power pool)	l64.4
Top of power head and sediment pool	149.0
Lowest gated outlet (invert)	105.0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,283,000 acre-ft, Mar. 9, 1992, elevation, 174.95 ft; minimum since conservation storage was reached in 1968, 1,585,000 acre-ft, Aug. 10, 1996, elevation, 150.74 ft.

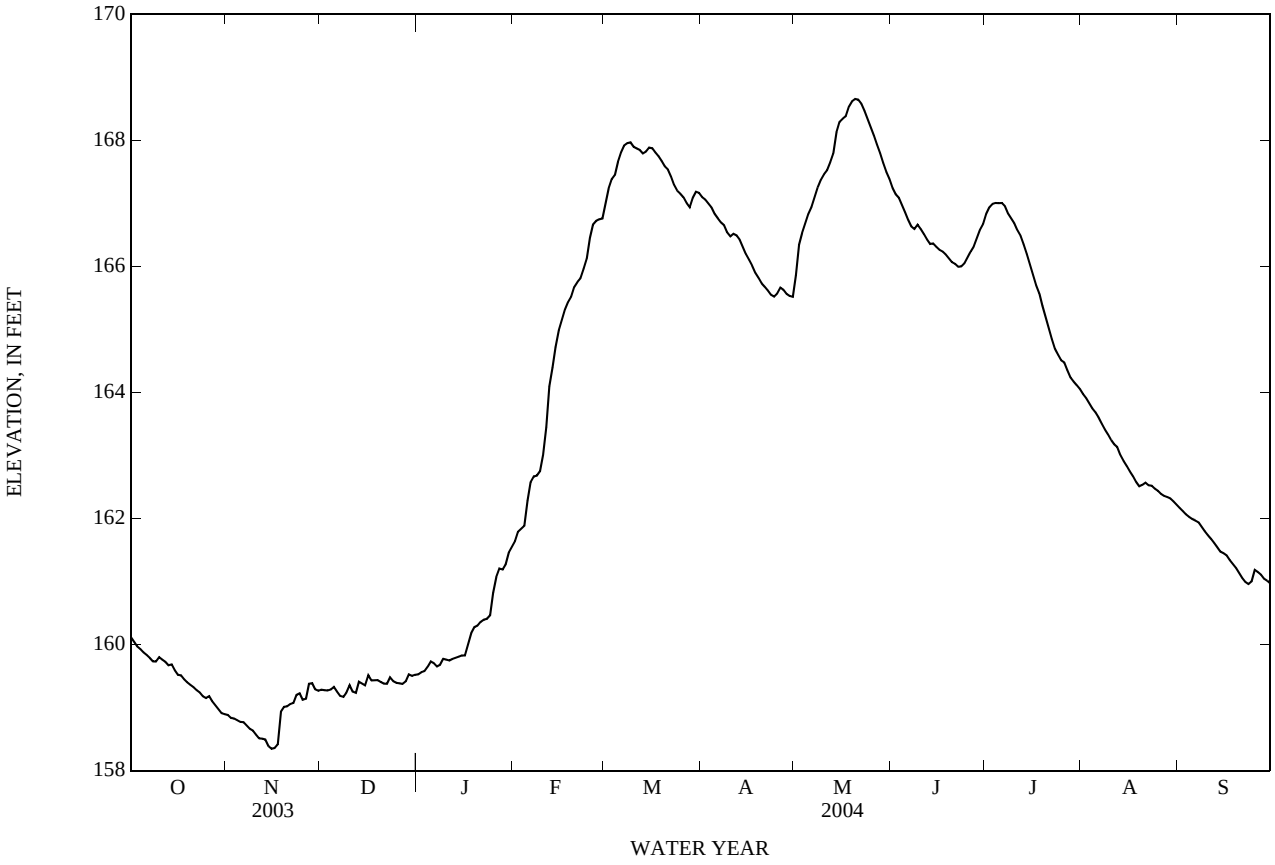
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 168.68 ft, May 20 and 21; minimum elevation, 158.30 ft, Nov. 16.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160.11	158.88	159.28	159.53	161.64	167.00	167.10	165.86	167.24	166.83	163.98	162.17
2	160.04	158.84	159.28	159.56	161.79	167.24	167.06	166.35	167.15	166.94	163.91	162.12
3	159.97	158.83	159.27	159.58	161.84	167.38	167.00	166.53	167.09	166.99	163.83	162.07
4	159.93	158.80	159.29	159.65	161.89	167.45	166.94	166.69	166.98	167.01	163.75	162.03
5	159.88	158.77	159.33	159.73	162.29	167.66	166.83	166.83	166.86	167.01	163.68	161.99
6	159.83	158.77	159.25	159.71	162.58	167.81	166.76	166.94	166.74	167.01	163.60	161.97
7	159.79	158.72	159.19	159.65	162.67	167.92	166.70	167.10	166.63	166.96	163.50	161.94
8	159.73	158.66	159.17	159.68	162.68	167.96	166.65	167.26	166.59	166.84	163.41	161.87
9	159.73	158.64	159.24	159.78	162.75	167.97	166.54	167.37	166.66	166.76	163.33	161.80
10	159.80	158.57	159.35	159.76	163.01	167.90	166.48	167.46	166.60	166.68	163.25	161.74
11	159.76	158.51	159.25	159.75	163.45	167.87	166.52	167.52	166.51	166.57	163.18	161.68
12	159.73	158.51	159.23	159.77	164.09	167.85	166.49	167.65	166.43	166.48	163.13	161.62
13	159.67	158.50	159.41	159.79	164.39	167.79	166.43	167.79	166.36	166.35	163.00	161.54
14	159.69	158.39	159.38	159.81	164.72	167.82	166.31	168.13	166.36	166.19	162.91	161.48
15	159.59	158.35	159.35	159.83	164.98	167.89	166.19	168.29	166.31	166.03	162.83	161.45
16	159.52	158.36	159.51	159.83	165.15	167.88	166.10	168.34	166.27	165.86	162.75	161.42
17	159.51	158.42	159.43	160.00	165.32	167.81	166.01	168.38	166.24	165.70	162.67	161.34
18	159.45	158.94	159.44	160.18	165.43	167.75	165.90	168.54	166.19	165.57	162.58	161.28
19	159.40	159.01	159.44	160.28	165.52	167.67	165.82	168.62	166.13	165.38	162.51	161.22
20	159.36	159.02	159.41	160.30	165.67	167.59	165.73	168.66	166.07	165.19	162.53	161.14
21	159.32	159.06	159.38	160.36	165.75	167.54	165.68	168.65	166.04	165.02	162.57	161.06
22	159.28	159.07	159.38	160.40	165.81	167.43	165.62	168.58	165.99	164.85	162.53	161.00
23	159.24	159.20	159.48	160.41	165.96	167.29	165.55	168.47	166.00	164.70	162.52	160.96
24	159.18	159.23	159.42	160.46	166.12	167.20	165.52	168.34	166.05	164.60	162.48	161.00
25	159.15	159.12	159.39	160.82	166.46	167.15	165.57	168.21	166.14	164.51	162.44	161.19
26	159.18	159.14	159.39	161.07	166.66	167.10	165.66	168.08	166.24	164.48	162.39	161.15
27	159.10	159.38	159.38	161.21	166.72	167.01	165.63	167.94	166.32	164.35	162.36	161.11
28	159.04	159.39	159.42	161.19	166.75	166.94	165.56	167.80	166.46	164.24	162.34	161.05
29	158.97	159.29	159.52	161.27	166.76	167.09	165.53	167.64	166.58	164.17	162.32	161.01
30	158.91	159.27	159.50	161.46	---	167.18	165.52	167.50	166.68	164.12	162.27	160.97
31	158.90	---	159.52	161.55	---	167.17	---	167.39	---	164.06	162.22	---
MEAN	159.51	158.85	159.36	160.21	164.44	167.53	166.18	167.71	166.46	165.72	162.93	161.48
MAX	160.11	159.39	159.52	161.55	166.76	167.97	167.10	168.66	167.24	167.01	163.98	162.17
MIN	158.90	158.35	159.17	159.53	161.64	166.94	165.52	165.86	165.99	164.06	162.22	160.96

CAL YR 2003 MEAN 163.30 MAX 169.82 MIN 158.35
WTR YR 2004 MEAN 163.36 MAX 168.66 MIN 158.35

08039300 Sam Rayburn Reservoir near Jasper, TX—Continued



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 mi^2.

PERIOD OF RECORD.--Apr. 1951 to Oct. 2000 (U.S. Army Corps of Engineers furnished contents). Oct. 2000 to Sept. 2002 (mean daily contents). Oct. 2002 to current year. Prior to Oct. 1967, published as "Dam B Reservoir at Town Bluff".

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Oct. 25, 1954, at site 490 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--Records good. 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 nonoverflow 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- x 35.0-foot tainter gates is located near right end of dam. The capacity of the spillways at maximum flood design is 218,300 ft^3/s. The capacity table is based on a survey made in 1945. The dam is owned by the U.S. Army Corps of Engineers. The water is used for industrial, municipal and irrigation supplies. Conservation pool storage is 69,700 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam (nonoverflow)	95.0
Design flood	93.0
Crest of uncontrolled spillway (top of tainter gates)	85.0
Top of conservation pool	81.0
Bottom of tainter gates (sill)	50.0

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.

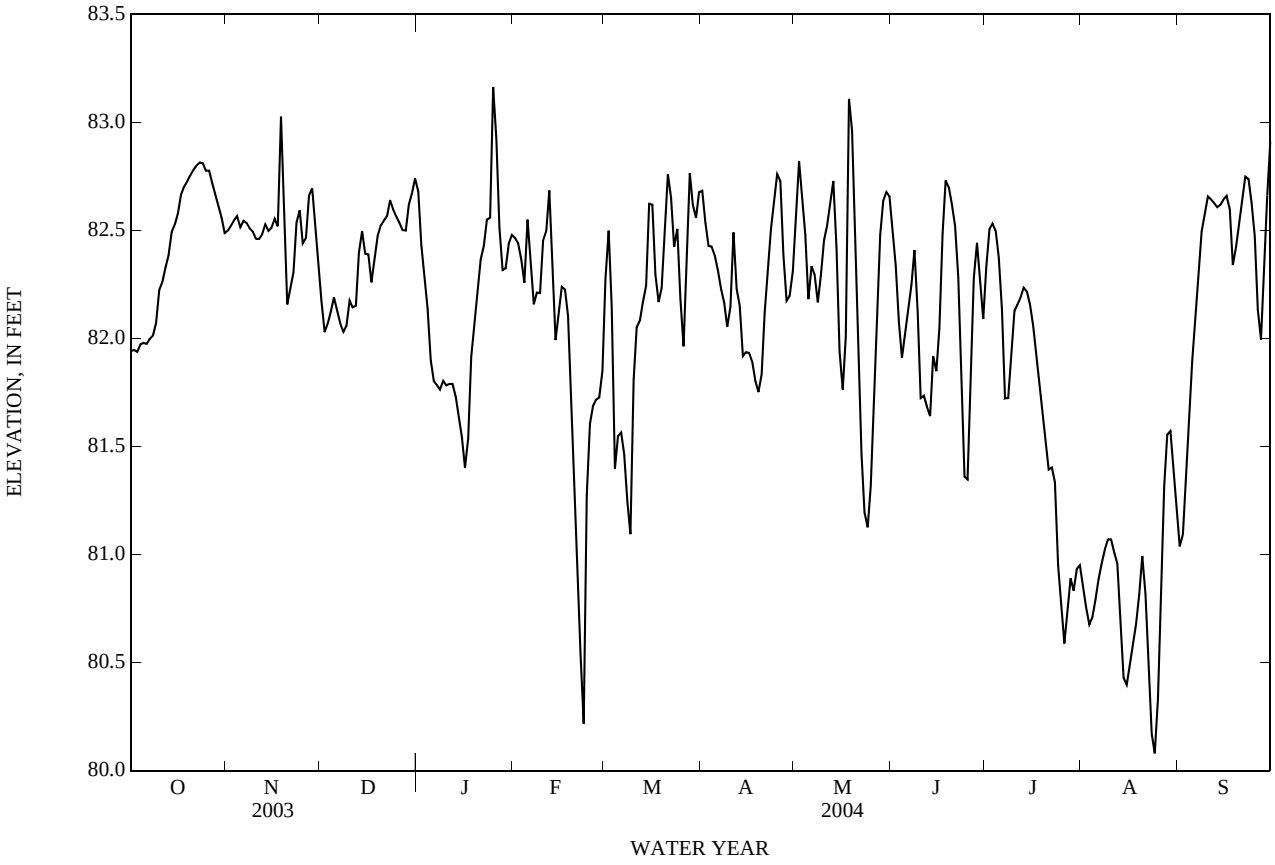
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 83.34 ft, Jan. 25; minimum elevation, 79.88 ft, Aug. 24.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81.94	82.50	82.17	82.68	82.47	82.28	82.68	82.60	82.48	82.33	80.85	81.04
2	81.95	82.52	82.03	82.43	82.44	82.50	82.54	82.82	82.34	82.51	80.76	81.09
3	81.94	82.55	82.07	82.28	82.37	82.15	82.43	82.64	82.07	82.53	80.68	81.30
4	81.97	82.57	82.13	82.14	82.26	81.40	82.43	82.48	81.91	82.50	80.71	81.59
5	81.98	82.51	82.19	81.90	82.55	81.55	82.38	82.18	82.02	82.38	80.79	81.89
6	81.98	82.54	82.13	81.80	82.38	81.56	82.31	82.33	82.12	82.13	80.89	82.11
7	82.00	82.53	82.07	81.78	82.16	81.46	82.23	82.30	82.25	81.72	80.96	82.32
8	82.01	82.51	82.03	81.76	82.21	81.24	82.17	82.17	82.41	81.72	81.02	82.49
9	82.07	82.49	82.06	81.80	82.21	81.09	82.05	82.29	82.13	81.93	81.07	82.58
10	82.22	82.46	82.18	81.78	82.45	81.81	82.15	82.45	81.72	82.13	81.07	82.66
11	82.26	82.46	82.14	81.79	82.50	82.05	82.49	82.52	81.73	82.16	81.01	82.64
12	82.33	82.48	82.15	81.79	82.69	82.08	82.23	82.63	81.69	82.19	80.96	82.63
13	82.38	82.53	82.40	81.73	82.40	82.17	82.15	82.73	81.64	82.23	80.65	82.61
14	82.49	82.50	82.50	81.64	81.99	82.24	81.92	82.42	81.92	82.22	80.43	82.62
15	82.53	82.51	82.39	81.54	82.12	82.62	81.94	81.94	81.85	82.16	80.40	82.64
16	82.58	82.55	82.39	81.40	82.24	82.62	81.93	81.76	82.05	82.06	80.49	82.66
17	82.67	82.52	82.26	81.54	82.23	82.30	81.89	82.01	82.48	81.94	80.58	82.60
18	82.70	83.03	82.37	81.92	82.10	82.17	81.80	83.11	82.73	81.81	80.68	82.34
19	82.73	82.66	82.47	82.08	81.84	82.23	81.75	82.96	82.70	81.66	80.82	82.42
20	82.76	82.16	82.52	82.23	81.54	82.53	81.83	82.47	82.62	81.52	80.99	82.53
21	82.78	82.23	82.55	82.37	81.09	82.76	82.12	81.95	82.52	81.39	80.82	82.65
22	82.80	82.31	82.57	82.43	80.54	82.65	82.33	81.47	82.28	81.40	80.49	82.75
23	82.81	82.54	82.64	82.55	80.22	82.42	82.51	81.19	81.73	81.34	80.17	82.74
24	82.81	82.59	82.60	82.56	81.27	82.51	82.64	81.13	81.36	80.95	80.08	82.63
25	82.78	82.44	82.56	83.16	81.61	82.19	82.76	81.32	81.35	80.76	80.33	82.47
26	82.78	82.47	82.53	82.92	81.69	81.96	82.73	81.68	81.80	80.59	80.84	82.13
27	82.72	82.66	82.50	82.52	81.72	82.41	82.39	82.04	82.28	80.74	81.32	82.00
28	82.66	82.70	82.50	82.32	81.73	82.77	82.17	82.48	82.44	80.89	81.56	82.32
29	82.61	82.53	82.62	82.32	81.85	82.62	82.20	82.64	82.29	80.83	81.57	82.66
30	82.56	82.36	82.67	82.44	---	82.56	82.31	82.68	82.09	80.93	81.42	82.91
31	82.49	---	82.74	82.48	---	82.68	---	82.66	---	80.95	81.24	---
MEAN	82.43	82.51	82.36	82.13	81.96	82.18	82.25	82.26	82.10	81.70	80.83	82.33
MAX	82.81	83.03	82.74	83.16	82.69	82.77	82.76	83.11	82.73	82.53	81.57	82.91
MIN	81.94	82.16	82.03	81.40	80.22	81.09	81.75	81.13	81.35	80.59	80.08	81.04

CAL YR 2003 MEAN 82.36 MAX 83.20 MIN 81.20
WTR YR 2004 MEAN 82.09 MAX 83.16 MIN 80.08

08040000 B.A. Steinhagen Lake at Town Bluff, TX—Continued



08040600 Neches River near Town Bluff, TX

LOCATION.--Lat 30°47'27", long 94°09'03", Jasper County, Hydrologic Unit 12020003, on left bank, 1.0 mi upstream from Walnut Run, 1.8 mi downstream from Town Bluff Dam, 2.0 mi northeast of Town Bluff, 6.5 mi downstream from Wolf Creek and at mile 114.9.

DRAINAGE AREA.--7,574 mi^2.

PERIOD OF RECORD.--Mar. 1951 to current year. Prior to Oct. 27, 1989, published as "Neches River at Town Bluff" (station 08040500).

REVISED RECORDS.--WSP 1732: Drainage area.

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

REMARKS.--Records good. Since installation of gage in water year 1951, at least 10% of contributing drainage area has been regulated. There are some diversions upstream from station. No flow at times.

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,410	1,970	3,540	3,090	6,900	14,400	10,700	9,470	11,200	13,300	5,050	4,120
2	2,280	1,900	2,660	2,810	6,830	16,100	11,000	18,200	11,100	16,800	4,980	2,450
3	2,320	1,890	1,700	2,300	6,750	17,000	10,400	16,800	10,500	17,300	4,780	1,770
4	2,220	1,950	1,610	2,600	6,720	16,200	10,100	14,400	8,370	17,200	4,480	1,510
5	2,410	2,270	1,600	2,910	11,300	15,100	10,100	13,400	7,170	16,800	4,410	1,570
6	2,340	1,940	1,650	2,240	14,800	15,000	10,100	10,800	7,090	16,200	4,420	1,560
7	2,220	2,080	1,750	1,820	10,300	15,000	9,990	11,600	7,080	16,100	4,360	1,540
8	2,200	2,100	1,750	1,750	7,100	15,700	9,240	12,300	8,490	15,400	4,350	1,790
9	2,210	2,110	1,670	1,670	6,750	15,300	8,830	12,300	12,900	13,600	4,330	2,080
10	2,240	2,060	1,610	1,440	9,170	14,500	8,020	12,800	11,700	12,400	4,600	2,370
11	2,230	1,920	1,670	1,310	14,600	15,300	10,900	13,600	9,480	12,400	4,340	2,630
12	2,190	1,910	1,660	1,400	19,000	15,000	13,500	14,400	9,340	12,400	4,340	2,630
13	2,180	1,850	1,780	1,620	17,600	14,700	12,100	14,500	9,240	12,400	4,740	2,630
14	2,160	1,910	2,730	1,660	16,500	14,600	11,300	15,100	9,370	12,300	4,180	2,640
15	2,170	1,890	3,430	1,690	15,700	15,100	9,590	14,400	8,640	12,300	e3,990	2,640
16	2,220	2,040	3,390	1,780	15,500	15,400	9,430	14,100	6,280	12,300	e3,810	2,630
17	2,200	3,290	2,560	1,900	16,200	14,900	9,420	14,200	6,060	12,200	e3,650	3,260
18	2,270	9,490	1,730	2,870	16,500	14,100	9,400	17,600	6,620	12,200	e3,480	3,790
19	2,250	10,000	1,670	3,440	16,400	13,200	8,920	19,100	7,370	12,000	3,330	1,950
20	2,250	4,970	1,660	3,390	16,300	12,500	6,800	18,700	7,400	12,100	4,200	1,810
21	2,250	1,990	1,670	3,390	16,200	13,000	4,890	19,100	7,340	11,800	5,590	1,790
22	2,250	1,830	1,700	3,690	16,000	13,500	4,820	19,200	8,420	11,100	5,640	2,030
23	2,250	2,050	1,790	4,510	13,800	12,900	4,870	19,000	10,100	11,000	5,270	3,160
24	2,260	2,690	1,810	4,600	7,280	11,000	5,450	17,700	9,700	9,500	4,090	4,650
25	2,250	2,600	1,810	8,360	10,300	10,900	6,480	14,800	10,000	7,790	3,010	5,690
26	2,250	1,970	1,790	12,400	10,900	9,600	11,300	12,100	10,000	6,910	1,450	5,860
27	2,260	1,930	1,790	10,200	12,300	8,040	9,830	10,900	11,100	5,910	1,720	4,060
28	2,260	2,630	1,780	7,830	13,200	8,370	8,020	9,840	13,900	5,820	2,600	2,450
29	2,190	4,290	1,820	6,730	14,100	9,010	6,680	10,500	14,300	5,500	3,800	2,340
30	2,460	4,100	1,930	7,060	---	9,200	6,560	10,500	12,700	4,620	4,470	2,770
31	2,270	---	2,050	7,090	---	9,580	---	10,900	---	4,820	4,480	---
TOTAL	69,920	85,620	61,760	119,550	365,000	414,200	268,740	442,310	282,960	362,470	127,940	82,170
MEAN	2,255	2,854	1,992	3,856	12,590	13,360	8,958	14,270	9,432	11,690	4,127	2,739
MAX	2,460	10,000	3,540	12,400	19,000	17,000	13,500	19,200	14,300	17,300	5,640	5,860
MIN	2,160	1,830	1,600	1,310	6,720	8,040	4,820	9,470	6,060	4,620	1,450	1,510
AC-FT	138,700	169,800	122,500	237,100	724,000	821,600	533,000	877,300	561,300	719,000	253,800	163,000

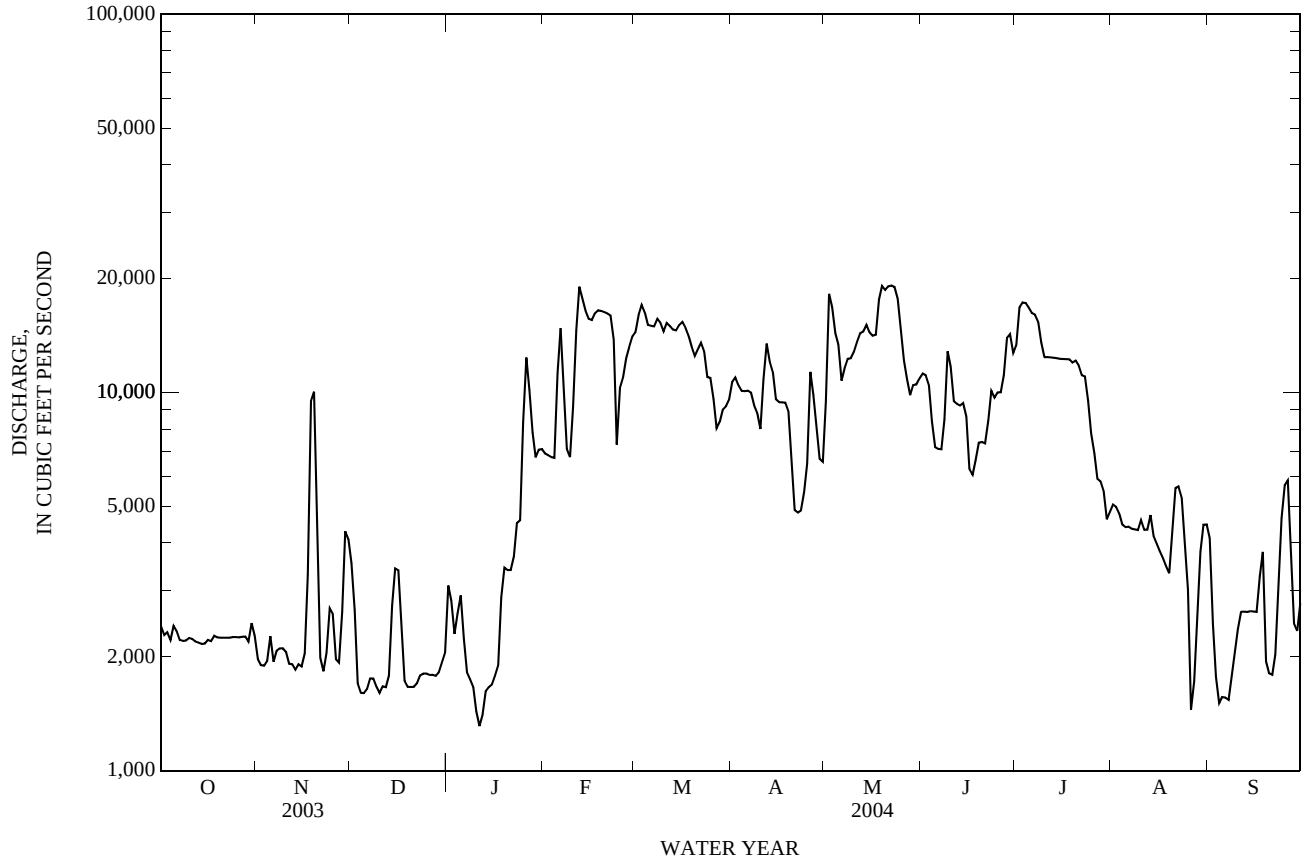
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004, BY WATER YEAR (WY)

MEAN	2,356	2,962	4,616	6,619	7,758	8,949	8,185	8,810	5,906	4,004	2,543	2,359
MAX	13,040	18,490	18,170	25,690	20,800	26,430	20,220	48,140	17,000	22,870	8,252	6,652
(WY)	(1995)	(1958)	(1961)	(1961)	(1974)	(1992)	(1969)	(1953)	(1979)	(1989)	(1979)	(1973)
MIN	88.1	32.0	18.6	120	252	1,038	1,231	1,003	856	756	288	124
(WY)	(1955)	(1957)	(1957)	(1957)	(1981)	(2000)	(1981)	(1971)	(1956)	(1964)	(1951)	(1956)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1951 - 2004	
ANNUAL TOTAL	2,291,080		2,682,640			
ANNUAL MEAN	6,277		7,330		5,446	
HIGHEST ANNUAL MEAN					12,010	1995
LOWEST ANNUAL MEAN					961	1971
HIGHEST DAILY MEAN	21,600	Mar 5	19,200	May 22	90,100	May 21, 1953
LOWEST DAILY MEAN	1,600	Dec 5	1,310	Jan 11	0.00	Oct 6, 1956
ANNUAL SEVEN-DAY MINIMUM	1,660	Dec 4	1,540	Jan 9	0.00	Nov 17, 1956
MAXIMUM PEAK FLOW			20,300	May 19	90,900	May 21, 1953
MAXIMUM PEAK STAGE			66.64	May 19	82.85	May 21, 1953
ANNUAL RUNOFF (AC-FT)	4,544,000		5,321,000		3,946,000	
10 PERCENT EXCEEDS	17,000		15,100		15,200	
50 PERCENT EXCEEDS	3,830		5,880		3,060	
90 PERCENT EXCEEDS	1,970		1,790		604	

e Estimated

08040600 Neches River near Town Bluff, TX—Continued



08041000 Neches River at Evadale, TX

LOCATION.--Lat 30°21'20", long 94°05'35", Jasper County, Hydrologic Unit 12020003, near right bank of low water channel at 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 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1904 to Dec. 1906, Apr. 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 NGVD 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. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1951, at least 10% of contributing drainage area has been regulated. There are some diversions upstream for municipal use.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--31 years (water years 1905-1906, 1922-1950) 7,089 ft^3/s (5,136,000 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1884 reached a stage of 26.2 ft, at former site (discharge, about 125,000 ft^3/s), and flood in Aug. 1915 reached a stage of 24.5 ft, at former site (discharge, about 102,000 ft^3/s). These are the highest floods since at least 1884. Stages furnished by Gulf, Colorado, and Santa Fe Railway Co.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1905-1906, 1922-1950: Maximum discharge, 92,100 ft^3/s May 11, 1944 (gage height, 23.58 ft, from floodmark), at site then in use; minimum daily, 148 ft^3/s Sept. 10, 1925.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,160	2,320	4,460	2,970	8,390	13,900	8,880	7,030	10,500	15,600	5,140	4,480
2	2,570	2,020	4,200	3,390	8,050	14,800	9,440	7,740	10,800	15,300	5,250	4,430
3	2,250	1,880	3,620	3,600	7,600	15,400	10,200	10,800	11,100	15,400	5,280	3,570
4	2,220	1,850	2,630	3,100	7,220	16,300	10,500	15,000	11,000	16,500	5,190	2,610
5	2,170	1,860	2,200	3,020	7,370	17,200	10,300	16,800	10,100	17,200	4,960	2,140
6	2,250	2,110	2,090	3,340	8,730	17,200	10,100	16,000	8,430	17,400	4,810	2,060
7	2,290	1,930	2,060	2,940	12,000	16,600	10,300	14,200	7,370	17,200	4,750	2,020
8	2,190	1,950	2,110	2,490	14,700	16,100	10,300	12,300	6,970	16,800	4,710	1,980
9	2,200	2,000	2,160	2,310	13,100	15,900	9,970	11,800	7,100	16,500	4,680	2,030
10	2,600	2,010	2,190	2,270	9,850	16,000	9,350	12,000	8,930	15,900	4,650	2,340
11	2,750	2,000	2,090	2,100	9,730	15,900	8,960	12,400	10,900	14,700	4,730	2,560
12	2,700	1,890	2,130	1,890	12,700	15,600	9,530	13,400	11,000	13,500	4,810	2,870
13	2,580	1,840	2,460	1,820	16,800	15,700	11,800	14,600	9,940	12,900	4,560	2,960
14	2,440	1,790	2,810	1,960	20,900	15,800	13,600	16,600	9,550	12,600	4,820	2,970
15	2,320	1,790	3,370	2,040	21,800	15,800	13,500	17,100	9,280	12,500	4,750	2,980
16	2,260	2,080	3,990	2,070	20,700	15,600	12,100	17,100	9,210	12,400	4,200	2,980
17	2,250	2,530	4,060	3,070	19,300	15,700	10,500	16,600	8,240	12,300	3,700	2,970
18	2,230	4,700	3,630	4,050	18,200	15,800	9,690	16,200	6,890	12,300	3,490	3,210
19	2,260	7,680	2,670	4,350	17,600	15,700	9,310	17,700	6,520	12,200	3,440	3,800
20	2,250	10,700	2,310	4,570	17,600	15,100	9,070	18,600	6,890	12,200	3,410	2,880
21	2,230	10,200	2,210	4,400	17,700	14,300	8,140	19,400	7,320	12,100	3,630	2,300
22	2,220	6,100	2,140	4,190	17,600	13,500	6,310	19,500	7,280	12,000	4,550	2,190
23	2,210	3,770	2,150	4,160	17,800	13,500	5,380	19,400	7,730	11,800	4,970	2,250
24	2,200	3,370	2,220	4,600	17,600	13,700	5,120	19,400	9,120	11,300	4,980	2,980
25	2,190	3,720	2,240	5,640	15,600	13,300	5,310	19,300	10,400	10,700	4,420	4,310
26	2,190	3,820	2,250	7,020	12,100	12,100	6,010	18,500	10,900	9,170	3,360	5,070
27	2,180	3,260	2,240	9,670	11,400	11,200	7,600	16,500	11,300	7,770	2,340	5,580
28	2,170	2,880	2,230	11,700	12,000	9,670	9,330	14,000	11,700	6,570	2,100	5,120
29	2,170	3,040	2,500	11,400	12,900	8,530	9,150	11,900	13,200	6,010	2,600	3,670
30	2,140	4,160	2,810	10,100	---	8,470	7,750	10,700	14,900	5,790	3,520	2,980
31	2,200	---	2,930	8,840	---	8,660	---	10,500	---	5,360	4,230	---
TOTAL	72,040	101,250	83,160	139,070	407,040	443,030	277,500	463,070	284,570	389,970	132,030	94,290
MEAN	2,324	3,375	2,683	4,486	14,040	14,290	9,250	14,940	9,486	12,580	4,259	3,143
MAX	3,160	10,700	4,460	11,700	21,800	17,200	13,600	19,500	14,900	17,400	5,280	5,580
MIN	2,140	1,790	2,060	1,820	7,220	8,470	5,120	7,030	6,520	5,360	2,100	1,980
AC-FT	142,900	200,800	164,900	275,800	807,400	878,800	550,400	918,500	564,400	773,500	261,900	187,000

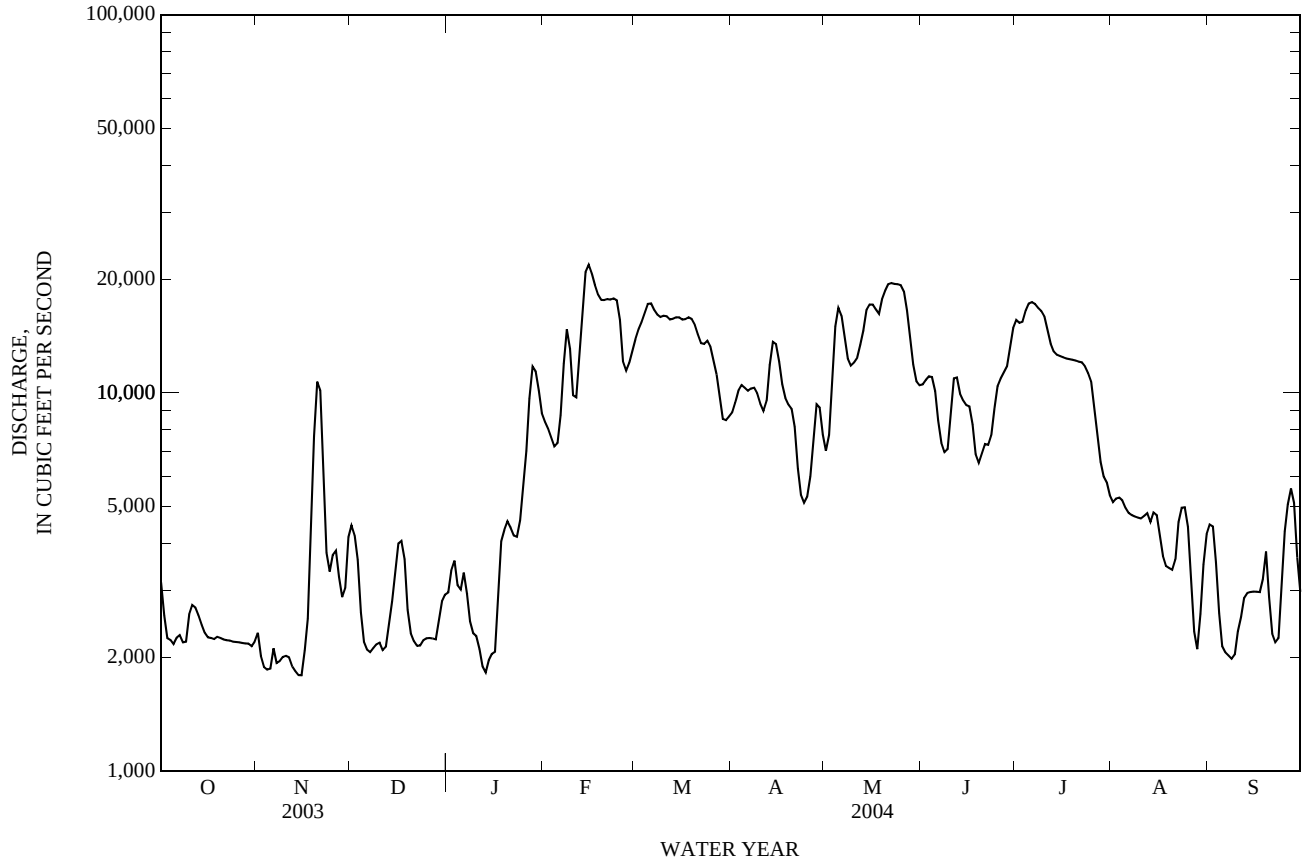
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004z, BY WATER YEAR (WY)

MEAN	2,580	3,196	5,102	7,465	8,497	9,853	9,143	9,409	6,621	4,573	2,785	2,525
MAX	15,780	16,580	18,680	31,060	22,720	28,790	21,440	46,790	19,920	25,680	9,644	7,090
(WY)	(1995)	(1958)	(1961)	(1961)	(1995)	(1992)	(1995)	(1953)	(1991)	(1989)	(1979)	(1979)
MIN	169	110	143	159	394	963	1,432	1,220	1,112	863	358	194
(WY)	(1955)	(1957)	(1957)	(1957)	(1957)	(2000)	(1981)	(1981)	(1963)	(1955)	(1951)	(1956)

08041000 Neches River at Evadale, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1951 - 2004z	
ANNUAL TOTAL	2,655,220		2,887,020			
ANNUAL MEAN	7,275		7,888		5,967	
HIGHEST ANNUAL MEAN					13,480	1995
LOWEST ANNUAL MEAN					1,128	1971
HIGHEST DAILY MEAN	25,900	Mar 7	21,800	Feb 15	80,000	May 24, 1953
LOWEST DAILY MEAN	1,790	Nov 14	1,790	Nov 14	63	Nov 26, 1956
ANNUAL SEVEN-DAY MINIMUM	1,900	Nov 9	1,900	Nov 9	66	Nov 23, 1956
MAXIMUM PEAK FLOW			22,100	Feb 15	47,900	Jul 6, 1989
MAXIMUM PEAK STAGE			16.93	Feb 15	20.79	Jul 6, 1989
ANNUAL RUNOFF (AC-FT)	5,267,000		5,726,000		4,323,000	
10 PERCENT EXCEEDS	21,500		16,200		16,600	
50 PERCENT EXCEEDS	3,940		6,420		3,280	
90 PERCENT EXCEEDS	2,210		2,170		740	

z Period of regulated streamflow.



08041000 Neches River at Evadale, TX—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Sept. 1939 to current year.
BIOCHEMICAL DATA: Sept. 1939 to Aug. 1994.
PESTICIDE DATA: Feb. 1968 to July 1981.
SEDIMENT DATA: Oct. 1960 to Aug. 1994.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct. 1947 to Sept. 1997.
WATER TEMPERATURE: Oct. 1947 to Sept. 1997.

INSTRUMENTATION.--Graphic recorder with thermograph Oct. 1954 to Sept. 1963.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous water years using the daily (or continuous) records of specific conductance and regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 670 microsiemens/cm, Mar. 21, 25, 31, 1994; minimum daily, 23 microsiemens/cm, Sept. 19, 1963.
WATER TEMPERATURE: Maximum daily, 36.0°C, many days in Aug. 1997; minimum daily, 3.0°C, Jan. 30, 31, 1948, Jan. 31, 1949, and Jan. 24, 1963.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Altitude of land surface feet (72000)	Instantaneous discharge, cfs (00061)	Drainage area, mi2 (81024)	Sampling method, code (82398)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)
NOV													
13...	1415	1028	80020	8.25	1,850	7,951	30	767	--	6.1	7.8	136	131
APR													
01...	1346	1028	80020	8.25	8,910	7,951	30	765	--	6.3	7.8	152	142
JUN													
10...	0845	1028	80020	8.25	8,640	7,951	30	770	5.8	6.9	7.8	131	132

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Purpose site visit, code (50280)	Sample purpose code (71999)
NOV													
13...	--	22.0	7.07	2.83	2.98	14.5	22	16.0	<.2	10.8	15.0	1,001	10.00
APR													
01...	--	19.4	8.29	3.46	2.96	15.8	25	17.0	<.2	9.1	20.2	1,001	10.00
JUN													
10...	33.0	27.0	7.18c	2.77c	2.59c	13.3c	24	12.2	<.2	8.1	16.7	1,001	10.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sample treatment, code (00115)	Sampler type, code (84164)	Type of sample related QA data, code (99111)
NOV			
13...	1	3070	1
APR			
01...	1	3060	1
JUN			
10...	1	3060	1

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

Value qualifier codes used in this table:
c -- See laboratory comment

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08041500 Village Creek near Kountze, TX

LOCATION.--Lat 30°23'52", long 94°15'48", Hardin County, Hydrologic Unit 12020006, on left bank of 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 mi^2.

PERIOD OF RECORD.--June 1924 to Oct. 1929 (discharge measurements only), Apr. 1939 to current year. Water-quality records: Chemical data: Nov. 1967 to Sept. 1985. Water temperature: Nov. 1967 to Sept. 1970.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 25.12 ft above NGVD 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. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation. There are small diversions above station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1884, about 34 ft in Aug. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	138	797	1,020	3,320	2,140	1,110	869	386	3,900	233	179
2	119	128	683	829	3,100	1,970	1,020	1,730	368	4,300	214	166
3	111	122	612	672	2,720	2,080	784	2,950	348	4,110	192	157
4	105	122	548	597	2,240	2,380	612	4,590	368	3,770	190	148
5	101	119	488	557	2,450	2,550	538	6,550	401	3,270	199	159
6	100	109	436	513	5,310	2,680	500	4,770	370	2,500	184	220
7	103	107	393	465	7,560	2,520	606	2,910	326	1,450	154	210
8	100	106	365	454	6,670	2,130	910	1,550	306	808	138	203
9	107	106	363	593	5,440	1,720	1,010	880	312	619	126	178
10	551	105	452	745	4,210	1,370	843	709	505	549	117	167
11	1,110	107	611	789	4,400	1,090	1,120	653	885	831	111	159
12	1,230	107	715	694	7,830	935	2,640	1,080	954	690	111	153
13	1,080	107	957	574	10,700	852	4,010	1,810	761	635	109	141
14	651	105	1,460	502	10,800	795	4,110	3,260	684	563	106	132
15	368	105	1,600	468	9,300	840	3,890	4,670	606	453	100	128
16	274	221	1,460	452	6,900	1,290	3,370	5,300	814	372	94	125
17	232	e684	1,110	837	5,530	1,850	2,320	6,130	1,250	322	90	121
18	207	e1,840	809	1,930	4,610	1,750	1,330	4,870	1,460	290	87	124
19	184	e5,950	638	2,490	3,740	1,230	840	3,370	1,530	265	87	125
20	170	8,920	542	2,670	2,760	974	687	2,390	1,380	246	95	118
21	160	8,140	484	2,750	1,990	856	603	1,790	1,020	229	114	112
22	153	6,040	449	2,460	1,530	788	549	1,500	778	215	220	107
23	146	4,270	437	1,710	1,410	833	513	1,160	921	204	333	103
24	140	3,180	462	995	1,880	935	485	822	1,500	194	366	119
25	133	2,780	513	1,290	2,490	826	487	659	2,710	185	346	194
26	132	2,550	497	2,240	2,960	726	650	569	4,000	183	313	165
27	143	1,890	451	2,780	3,080	777	934	508	4,420	179	308	265
28	172	1,310	418	4,660	2,890	794	1,330	462	4,250	219	264	348
29	176	1,160	669	5,260	2,440	750	1,690	434	3,770	246	230	266
30	165	964	978	4,710	---	716	1,360	412	3,580	220	208	206
31	153	---	1,060	3,820	---	885	---	399	---	216	196	---
TOTAL	8,705	51,592	21,457	50,526	130,260	42,032	40,851	69,756	40,963	32,233	5,635	4,998
MEAN	281	1,720	692	1,630	4,492	1,356	1,362	2,250	1,365	1,040	182	167
MAX	1,230	8,920	1,600	5,260	10,800	2,680	4,110	6,550	4,420	4,300	366	348
MIN	100	105	363	452	1,410	716	485	399	306	179	87	103
AC-FT	17,270	102,300	42,560	100,200	258,400	83,370	81,030	138,400	81,250	63,930	11,180	9,910
CFSM	0.33	2.00	0.80	1.90	5.22	1.58	1.58	2.62	1.59	1.21	0.21	0.19
IN.	0.38	2.23	0.93	2.19	5.63	1.82	1.77	3.02	1.77	1.39	0.24	0.22

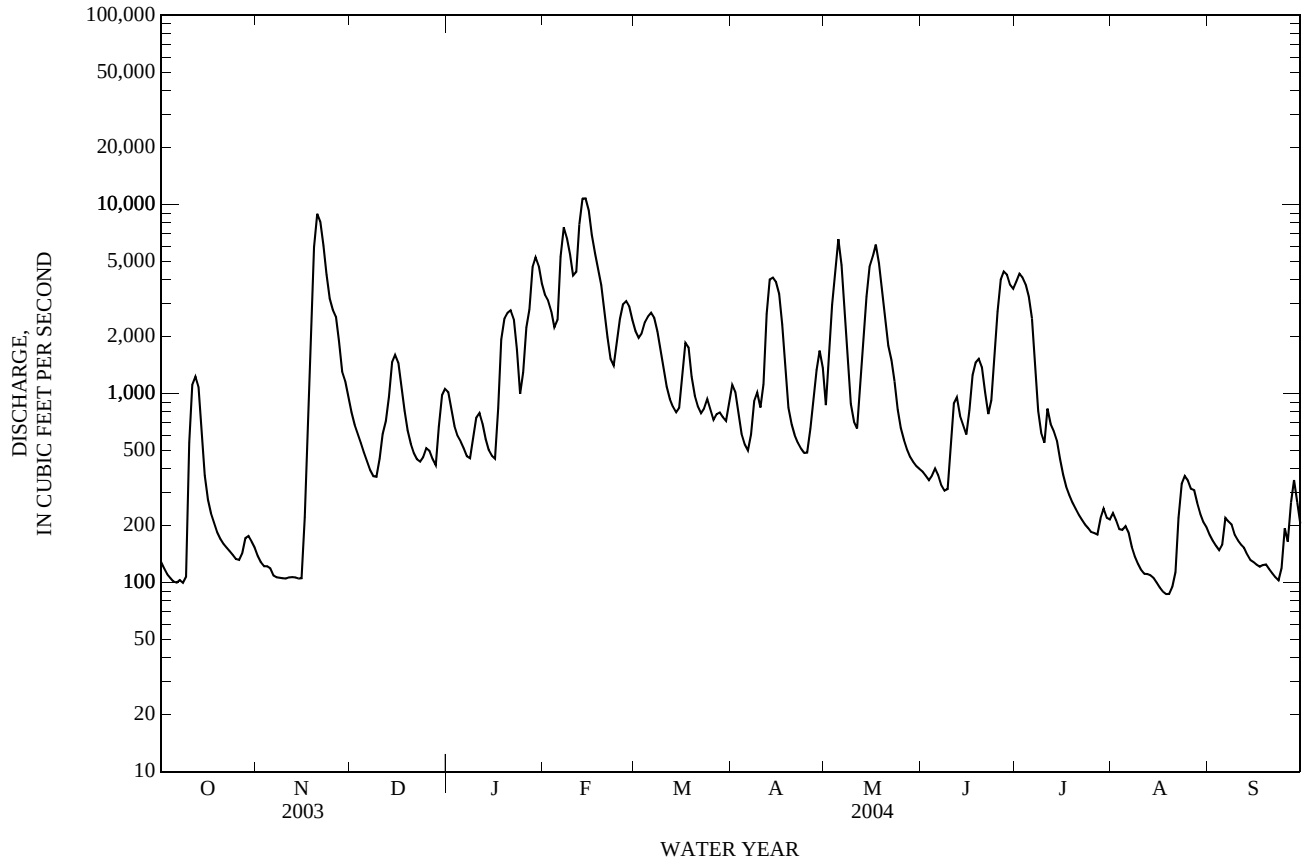
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004, BY WATER YEAR (WY)

MEAN	424	800	1,150	1,477	1,492	1,210	1,132	1,140	861	491	250	328
MAX	4,743	6,430	5,835	5,693	4,492	3,311	6,733	6,932	6,668	4,963	1,580	2,111
(WY)	(1995)	(1941)	(1941)	(1974)	(2004)	(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)

08041500 Village Creek near Kountze, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004	
ANNUAL TOTAL	267,318		499,008			
ANNUAL MEAN	732		1,363		896	
HIGHEST ANNUAL MEAN					2,248	1950
LOWEST ANNUAL MEAN					190	1971
HIGHEST DAILY MEAN	8,920	Nov 20	10,800	Feb 14	62,200	Nov 26, 1940
LOWEST DAILY MEAN	65	Aug 10	87	Aug 18	16	Oct 1, 1956
ANNUAL SEVEN-DAY MINIMUM	70	Aug 6	94	Aug 14	18	Sep 28, 1956
MAXIMUM PEAK FLOW			11,200	Feb 13	67,200	Nov 26, 1940
MAXIMUM PEAK STAGE			18.38	Feb 13	27.60	Nov 26, 1940
ANNUAL RUNOFF (AC-FT)	530,200		989,800		649,400	
ANNUAL RUNOFF (CFSM)	0.852		1.59		1.04	
ANNUAL RUNOFF (INCHES)	11.56		21.58		14.16	
10 PERCENT EXCEEDS	1,490		3,890		2,160	
50 PERCENT EXCEEDS	347		656		341	
90 PERCENT EXCEEDS	105		120		82	

e Estimated



08041700 Pine Island Bayou near Sour Lake, TX

LOCATION.--Lat 30°06'21", long 94°20'04", Jefferson County, Hydrologic Unit 12020007, on right bank on downstream side of bridge on county road and 5.1 mi southeast of Sour Lake.

DRAINAGE AREA.--336 mi^2.

PERIOD OF RECORD.--Oct. 1967 to current year. Water-quality records: Chemical data: Feb. 1968 to June 1989. Specific conductance: Feb. 1968 to Sept. 1989. Water temperature: Feb. 1968 to Sept. 1989.

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

REMARKS.--No estimated daily discharges. Records good. No known regulation. Low flow for period Mar. through Sept. is affected by small diversions and return flow from irrigated fields. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

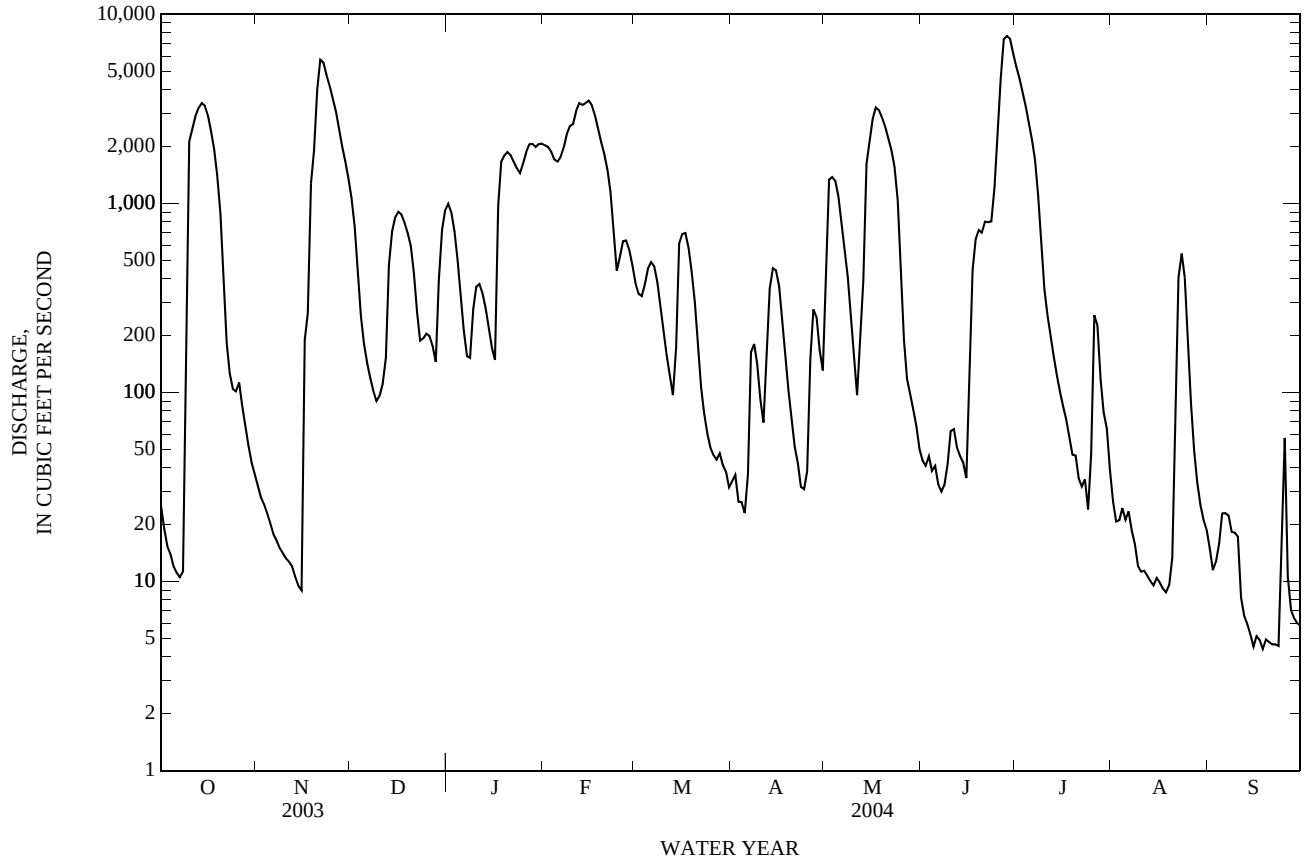
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	32	1,070	996	2,030	379	34	525	44	5,300	26	15
2	19	28	755	898	1,990	332	37	1,330	41	4,590	21	11
3	15	26	438	709	1,870	323	26	1,380	46	3,910	21	13
4	14	23	253	503	1,710	374	26	1,320	39	3,260	24	16
5	12	20	181	320	1,670	451	23	1,090	41	2,680	21	23
6	11	18	143	212	1,760	489	37	810	33	2,170	23	23
7	11	16	120	156	1,980	466	163	589	30	1,710	19	22
8	11	15	102	152	2,330	381	180	407	32	1,090	16	18
9	317	14	90	276	2,570	279	141	267	42	628	12	18
10	2,130	13	96	362	2,630	205	91	156	62	350	11	17
11	2,480	13	111	374	3,100	157	69	97	64	256	11	8.2
12	2,890	12	152	335	3,390	124	161	186	51	200	11	6.6
13	3,190	11	472	278	3,320	97	354	390	46	155	10	6.0
14	3,390	9.5	713	218	3,390	173	454	1,620	43	123	9.6	5.3
15	3,300	9.0	842	172	3,500	612	443	2,150	35	101	10	4.5
16	2,920	190	903	149	3,310	689	364	2,810	147	84	9.9	5.1
17	2,420	262	876	973	2,920	697	250	3,220	443	72	9.2	4.9
18	1,930	1,280	791	1,660	2,480	581	157	3,110	645	57	8.8	4.4
19	1,400	1,910	699	1,790	2,110	436	103	2,850	722	47	9.6	4.9
20	882	4,010	595	1,870	1,820	301	71	2,540	700	46	13	4.8
21	419	5,750	430	1,800	1,500	172	52	2,200	800	35	102	4.7
22	184	5,560	266	1,660	1,140	107	42	1,910	796	32	406	4.7
23	127	4,780	188	1,540	739	78	32	1,560	803	35	542	4.6
24	104	4,180	193	1,450	441	61	31	1,040	1,220	24	406	19
25	101	3,610	205	1,630	523	51	38	490	2,370	47	190	57
26	113	3,060	199	1,880	632	47	151	190	4,610	256	87	11
27	85	2,480	176	2,060	637	44	275	119	7,390	228	49	7.1
28	66	2,000	145	2,060	569	48	250	97	7,690	118	33	6.4
29	52	1,680	393	1,990	470	41	167	81	7,420	79	25	6.0
30	43	1,350	723	2,060	---	38	131	66	6,200	64	21	5.8
31	37	---	916	2,070	---	31	---	50	---	39	19	---
TOTAL	28,698	42,361.5	13,236	32,603	56,531	8,264	4,353	34,650	42,605	27,786	2,176.1	357.0
MEAN	926	1,412	427	1,052	1,949	267	145	1,118	1,420	896	70.2	11.9
MAX	3,390	5,750	1,070	2,070	3,500	697	454	3,220	7,690	5,300	542	57
MIN	11	9.0	90	149	441	31	23	50	30	24	8.8	4.4
AC-FT	56,920	84,020	26,250	64,670	112,100	16,390	8,630	68,730	84,510	55,110	4,320	708

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2004, BY WATER YEAR (WY)

MEAN	531	493	637	708	633	554	540	485	671	357	162	258
MAX	8,080	3,186	2,417	2,245	1,949	1,838	4,972	3,589	3,640	3,291	1,660	1,715
(WY)	(1995)	(2003)	(2002)	(1998)	(2004)	(1993)	(1979)	(1989)	(2001)	(1989)	(1983)	(1998)
MIN	2.90	2.48	12.4	4.75	5.87	7.09	11.7	9.67	25.1	15.8	4.54	1.00
(WY)	(1970)	(1989)	(1990)	(1971)	(2000)	(2000)	(2003)	(2003)	(1998)	(2000)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1968 - 2004	
ANNUAL TOTAL	168,184.8		293,620.6			
ANNUAL MEAN	461		802		502	
HIGHEST ANNUAL MEAN					1,167	1979
LOWEST ANNUAL MEAN					69.2	2000
HIGHEST DAILY MEAN	5,750	Nov 21	7,690	Jun 28	47,400	Oct 20, 1994
LOWEST DAILY MEAN	3.4	May 9	4.4	Sep 18	0.00	Oct 21, 1979
ANNUAL SEVEN-DAY MINIMUM	5.2	May 6	4.7	Sep 17	0.56	Sep 1, 2000
MAXIMUM PEAK FLOW			8,220	Jun 28	48,800	Oct 20, 1994
MAXIMUM PEAK STAGE			29.49	Jun 28	37.50	Oct 20, 1994
ANNUAL RUNOFF (AC-FT)	333,600		582,400		363,400	
10 PERCENT EXCEEDS	1,470		2,500		1,420	
50 PERCENT EXCEEDS	71		187		80	
90 PERCENT EXCEEDS	10		12		8.7	

08041700 Pine Island Bayou near Sour Lake, TX—Continued



08041749 Pine Island Bayou above BI Pump Plant, Beaumont, TX

LOCATION.--Lat 30°10'43", long 94°11'19", Jefferson County, Hydrologic Unit 12020003, right bank, at the Lower Neches Valley Authority BI Pump Plant approximately 1,500 ft upstream of State Highway 69, and 1 mi northwest of Beaumont.

DRAINAGE AREA.--633 mi^2.

PERIOD OF RECORD.--August 2003 to current year.

GAGE.--Water-stage and water-velocity recorder. Datum of gage is unknown. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Daily discharge above 500 ft^3/s determined after applying Godin Filter to remove tidal effects from unit values.

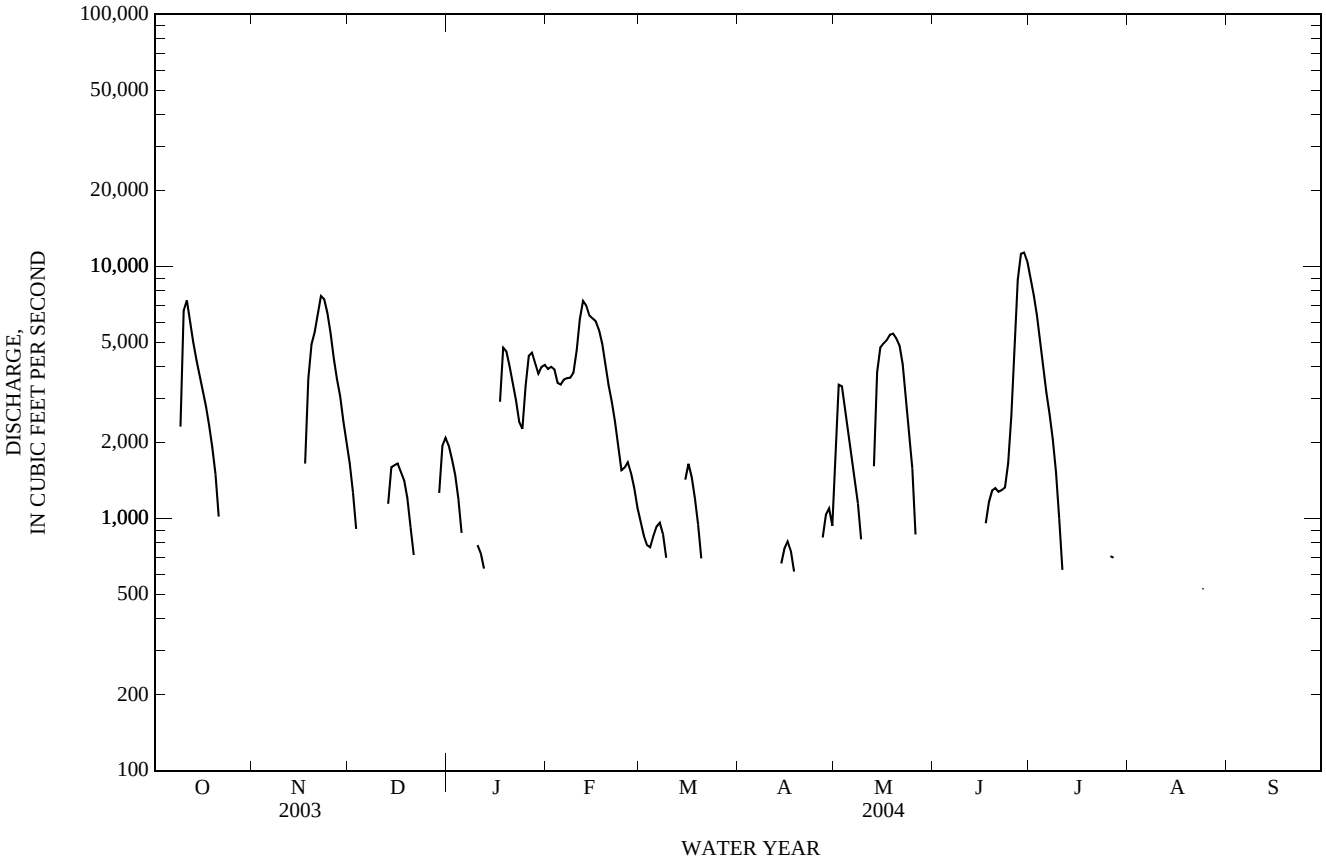
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft^3/s, June 29, 2004; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,400 ft^3/s, June 29, gage height, 2.46 ft; minimum discharge, -1,050 ft^3/s, June 8, gage height, -0.32 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	1,650	1,950	3,930	976	---	1,910	---	9,010	---	---
2	---	---	1,270	1,720	4,000	856	---	3,400	---	7,700	---	---
3	---	---	910	1,490	3,910	785	---	3,350	---	6,380	---	---
4	---	---	---	1,190	3,460	769	---	2,700	---	5,070	---	---
5	---	---	---	877	3,400	852	---	2,200	---	4,000	---	---
6	---	---	---	---	3,560	930	---	1,790	---	3,160	---	---
7	---	---	---	---	3,600	962	---	1,420	---	2,590	---	---
8	---	---	---	---	3,620	866	---	1,150	---	2,060	---	---
9	2,320	---	---	---	3,790	698	---	827	---	1,530	---	---
10	6,670	---	---	785	4,630	---	---	---	---	1,000	---	---
11	7,320	---	---	728	6,180	---	---	---	---	626	---	---
12	6,080	---	---	633	7,300	---	---	---	---	---	---	---
13	4,990	---	1,140	---	7,000	---	---	1,610	---	---	---	---
14	4,250	---	1,600	---	6,400	---	663	3,800	---	---	---	---
15	3,710	---	1,630	---	6,220	1,430	761	4,770	---	---	---	---
16	3,240	---	1,650	---	6,060	1,650	811	4,950	---	---	---	---
17	2,800	1,650	1,530	2,910	5,590	1,460	743	5,100	958	---	---	---
18	2,340	3,590	1,420	4,760	4,930	1,200	616	5,360	1,160	---	---	---
19	1,910	4,920	1,200	4,600	4,090	950	---	5,410	1,290	---	---	---
20	1,490	5,500	925	4,020	3,370	695	---	5,180	1,320	---	---	---
21	1,020	6,490	717	3,440	2,900	---	---	4,870	1,280	---	---	---
22	---	7,640	---	2,940	2,410	---	---	4,090	1,300	---	---	---
23	---	7,420	---	2,420	1,960	---	---	3,090	1,330	---	---	---
24	---	6,560	---	2,270	1,550	---	---	2,260	1,660	---	526	---
25	---	5,440	---	3,360	1,590	---	---	1,580	2,560	---	---	---
26	---	4,320	---	4,420	1,670	---	---	864	4,710	708	---	---
27	---	3,570	---	4,560	1,520	---	841	---	8,840	699	---	---
28	---	3,060	---	4,120	1,320	---	1,040	---	11,200	---	---	---
29	---	2,430	1,260	3,760	1,100	---	1,090	---	11,400	---	---	---
30	---	2,000	1,940	4,000	---	---	937	---	10,500	---	---	---
31	---	---	2,090	4,070	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	111,060	---	---	---	---	---	---	---
MEAN	---	---	---	---	3,830	---	---	---	---	---	---	---
MAX	7,300	---										
MIN	1,100	---										
MED	3,620	---										

08041749 Pine Island Bayou above BI Pump Plant, Beaumont, TX—Continued



08041780 Neches River Saltwater Barrier at Beaumont, TX

LOCATION.--Lat 30°09'24", long 94°06'51", Orange County, Hydrologic Unit 12020003, near right bank, approximately 1,000 ft upstream of the Neches River Saltwater Barrier, approximately 2,000 ft downstream of the confluence with Pine Island Bayou, and 5 mi north of Beaumont.

DRAINAGE AREA.--9,789 mi^2.

PERIOD OF RECORD.--June 2003 to current year.

GAGE.--Water-stage and water-velocity recorder. Datum of gage is unknown. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in water year 2003, at least 10% of contributing drainage area has been regulated. There are some diversions upstream for municipal use. Daily discharge determined after applying Godin Filter to remove tidal effects from unit values.

EXTREMES FOR 2003 WATER YEAR.--Maximum discharge, 12,300 ft^3/s, Sept. 5, gage height, 1.42 ft; minimum discharge, -3,130 ft^3/s, July 15, gage height, -0.34 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39,400 ft^3/s, Feb. 16, gage height, 3.46 ft; minimum discharge, -1,830 ft^3/s, Oct. 29, gage height, -0.21 ft.

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

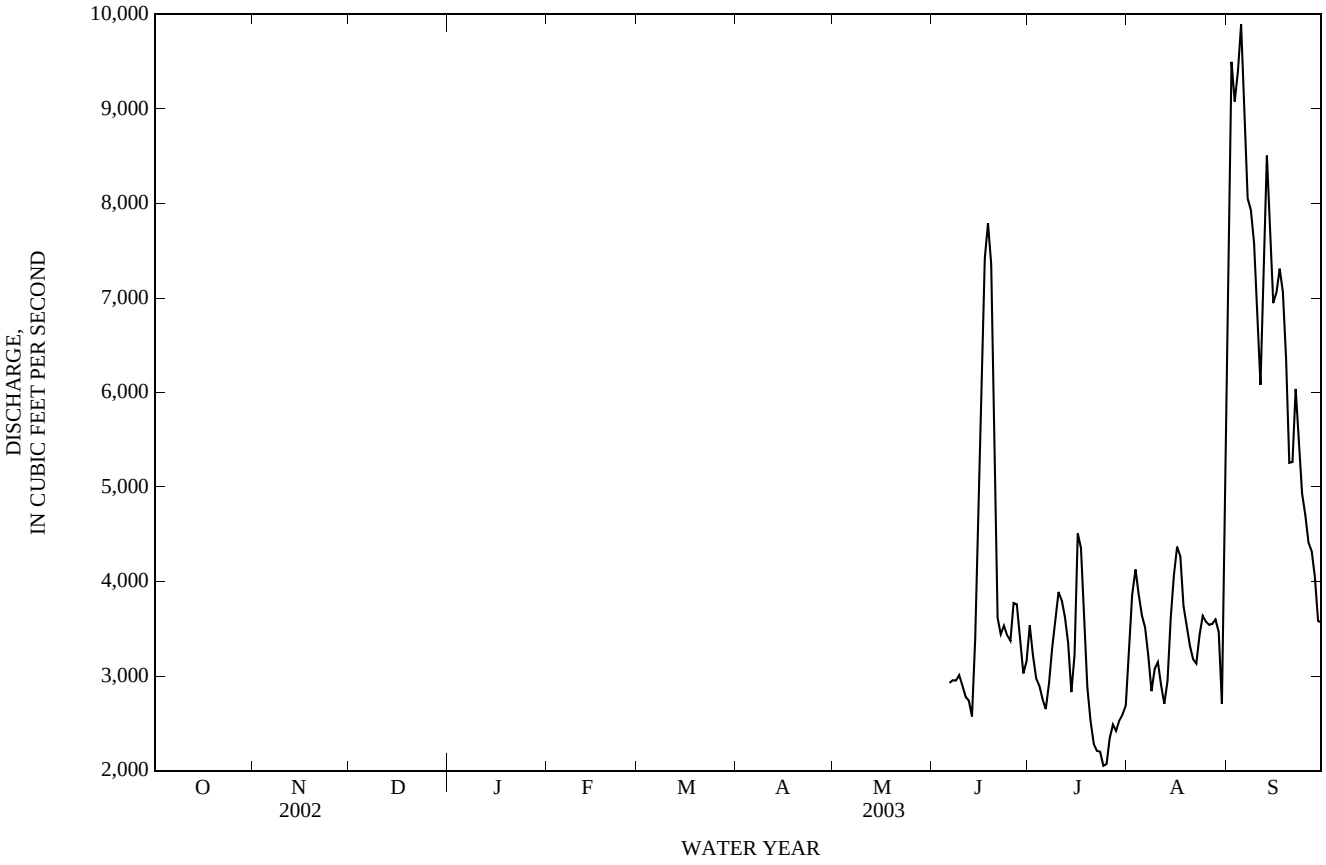
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	3,540	3,310	7,940
2	---	---	---	---	---	---	---	---	---	3,220	3,860	9,500
3	---	---	---	---	---	---	---	---	---	2,980	4,130	9,080
4	---	---	---	---	---	---	---	---	---	2,900	3,860	9,400
5	---	---	---	---	---	---	---	---	---	2,760	3,640	9,890
6	---	---	---	---	---	---	---	---	2,930	2,650	3,510	8,810
7	---	---	---	---	---	---	---	---	2,960	2,920	3,210	e8,050
8	---	---	---	---	---	---	---	---	2,950	3,300	2,840	e7,930
9	---	---	---	---	---	---	---	---	3,010	3,590	3,080	7,580
10	---	---	---	---	---	---	---	---	2,900	3,890	3,150	6,720
11	---	---	---	---	---	---	---	---	2,780	3,800	2,900	6,080
12	---	---	---	---	---	---	---	---	2,740	3,620	2,710	7,280
13	---	---	---	---	---	---	---	---	2,570	3,350	2,950	8,510
14	---	---	---	---	---	---	---	---	3,390	2,830	3,610	7,670
15	---	---	---	---	---	---	---	---	4,830	3,230	4,070	6,950
16	---	---	---	---	---	---	---	---	6,190	4,510	4,370	7,060
17	---	---	---	---	---	---	---	---	7,420	4,360	4,270	7,310
18	---	---	---	---	---	---	---	---	7,790	3,580	3,740	7,060
19	---	---	---	---	---	---	---	---	7,360	2,880	3,520	6,360
20	---	---	---	---	---	---	---	---	5,260	2,530	3,320	5,260
21	---	---	---	---	---	---	---	---	3,620	2,280	3,180	5,260
22	---	---	---	---	---	---	---	---	3,440	2,210	3,130	6,040
23	---	---	---	---	---	---	---	---	3,530	2,200	3,430	5,450
24	---	---	---	---	---	---	---	---	3,430	2,050	3,640	4,930
25	---	---	---	---	---	---	---	---	3,370	2,070	3,580	4,710
26	---	---	---	---	---	---	---	---	3,770	2,350	3,540	4,420
27	---	---	---	---	---	---	---	---	3,760	2,490	3,550	4,320
28	---	---	---	---	---	---	---	---	3,350	2,420	3,600	4,050
29	---	---	---	---	---	---	---	---	3,030	2,530	3,470	3,580
30	---	---	---	---	---	---	---	---	3,160	2,590	2,710	3,570
31	---	---	---	---	---	---	---	---	---	2,690	4,020	---
TOTAL	---	---	---	---	---	---	---	---	---	92,320	107,900	200,770
MEAN	---	---	---	---	---	---	---	---	---	2,978	3,481	6,692
MAX	---	---	---	---	---	---	---	---	4,510	4,370	9,890	
MIN	---	---	---	---	---	---	---	---	2,050	2,710	3,570	
MED	---	---	---	---	---	---	---	---	2,880	3,520	7,000	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEAR 2003.

MEAN	---	---	---	---	---	---	---	---	---	2,978	3,481	6,692
MAX	---	---	---	---	---	---	---	---	---	2,978	3,481	6,692
(WY)	---	---	---	---	---	---	---	---	---	(2003)	(2003)	(2003)
MIN	---	---	---	---	---	---	---	---	---	2,978	3,481	6,692
(WY)	---	---	---	---	---	---	---	---	---	(2003)	(2003)	(2003)

e Estimated

08041780 Neches River Saltwater Barrier at Beaumont, TX—Continued



08041780 Neches River Saltwater Barrier at Beaumont, TX—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

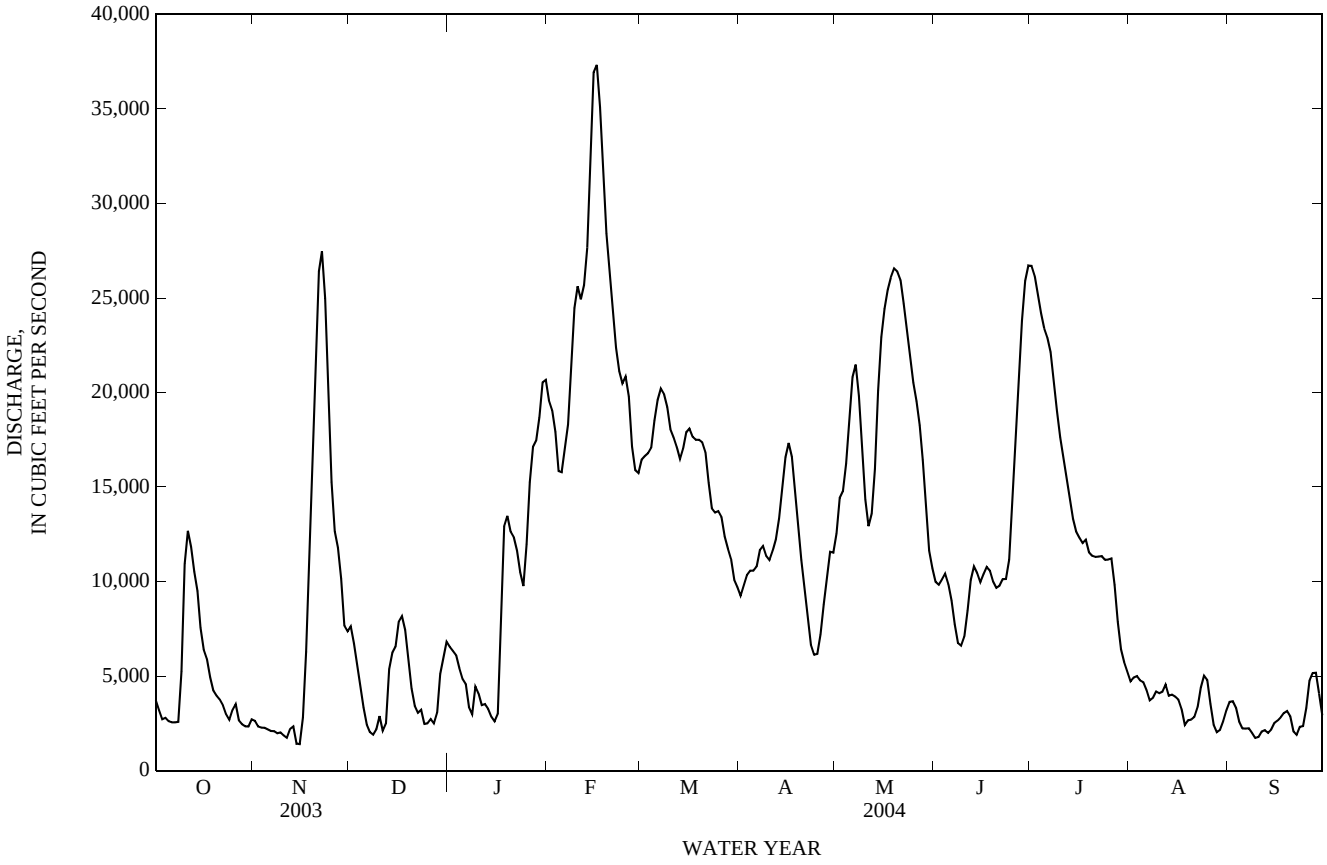
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,720	2,630	7,640	6,550	19,600	16,400	9,250	12,500	9,980	26,700	4,720	3,640
2	3,200	2,340	6,730	6,330	19,100	16,600	9,790	14,400	9,840	26,200	4,920	3,670
3	2,710	2,270	5,550	6,100	17,900	16,800	10,400	14,800	10,100	25,200	5,000	3,320
4	2,800	2,270	4,500	5,420	15,800	17,100	10,600	16,200	10,400	24,200	4,780	2,590
5	2,610	2,180	3,330	4,850	15,800	18,500	10,600	18,600	9,860	23,400	4,680	2,230
6	2,560	2,100	2,450	4,580	17,000	19,600	10,800	20,800	9,000	22,900	4,270	2,220
7	2,550	2,090	2,040	3,360	18,300	20,200	11,700	21,500	7,740	22,100	3,710	2,250
8	2,580	1,980	1,900	2,990	21,000	19,900	11,900	19,800	6,750	20,700	3,850	2,000
9	5,240	2,020	2,190	4,450	24,500	19,200	11,400	16,900	6,610	19,000	4,190	1,720
10	10,900	1,860	2,880	4,080	25,600	18,100	11,100	14,300	7,090	17,600	4,090	1,780
11	12,700	1,740	2,100	3,460	24,900	17,600	11,600	12,900	8,450	16,500	4,170	2,060
12	11,800	2,200	2,500	3,520	25,700	17,100	12,200	13,600	10,100	15,400	4,550	2,140
13	10,500	2,330	5,360	3,260	27,700	16,500	13,300	16,000	10,800	14,300	3,960	2,000
14	9,490	1,430	6,240	2,850	32,400	17,000	14,900	20,100	10,500	13,300	4,020	2,180
15	7,550	1,400	6,560	2,610	36,900	17,900	16,600	22,900	9,960	12,600	3,920	2,520
16	6,410	2,800	7,880	3,000	37,300	18,100	17,300	24,400	10,400	12,300	3,750	2,650
17	5,910	6,280	8,180	7,940	35,100	17,700	16,600	25,400	10,800	12,000	3,250	2,830
18	4,950	12,100	7,450	12,900	31,700	17,500	14,800	26,100	10,600	12,200	2,420	3,040
19	4,240	17,600	5,920	13,500	28,400	17,500	12,900	26,600	10,000	11,500	2,660	3,150
20	3,970	22,200	4,350	12,600	26,200	17,400	11,100	26,400	9,670	11,400	2,700	2,880
21	3,770	26,400	3,430	12,400	24,300	16,800	9,660	26,000	9,780	11,300	2,840	2,080
22	3,460	27,500	3,070	11,600	22,400	15,200	8,200	24,700	10,100	11,300	3,360	1,900
23	2,980	25,000	3,210	10,500	21,100	13,900	6,660	23,100	10,100	11,400	4,400	2,320
24	2,680	20,500	2,470	9,760	20,500	13,600	6,130	21,700	11,200	11,200	5,020	2,360
25	3,210	15,300	2,500	12,000	20,800	13,700	6,170	20,500	13,700	11,200	4,800	3,310
26	3,520	12,700	2,730	15,300	19,800	13,400	7,200	19,500	16,800	11,200	3,530	4,760
27	2,660	11,800	2,500	17,100	17,100	12,400	8,780	18,300	20,500	9,810	2,440	5,160
28	2,460	10,200	3,060	17,500	15,900	11,800	10,100	16,400	23,800	7,860	2,040	5,180
29	2,340	7,670	5,110	18,700	15,700	11,200	11,600	13,800	25,900	6,430	2,160	4,070
30	2,340	7,370	5,960	20,500	---	10,100	11,500	11,600	26,700	5,740	2,610	2,930
31	2,710	---	6,820	20,700	---	9,710	---	10,700	---	5,230	3,190	---
TOTAL	148,520	256,260	136,610	280,410	678,500	498,510	334,840	590,500	357,230	462,170	116,000	84,940
MEAN	4,791	8,542	4,407	9,045	23,400	16,080	11,160	19,050	11,910	14,910	3,742	2,831
MAX	12,700	27,500	8,180	20,700	37,300	20,200	17,300	26,600	26,700	26,700	5,020	5,180
MIN	2,340	1,400	1,900	2,610	15,700	9,710	6,130	10,700	6,610	5,230	2,040	1,720
MED	3,460	2,720	3,430	6,550	21,100	17,000	11,100	19,500	10,100	12,300	3,920	2,550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

MEAN	4,791	8,542	4,407	9,045	23,400	16,080	11,160	19,050	11,910	8,943	3,611	4,762
MAX	4,791	8,542	4,407	9,045	23,400	16,080	11,160	19,050	11,910	14,910	3,742	6,692
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)
MIN	4,791	8,542	4,407	9,045	23,400	16,080	11,160	19,050	11,910	2,978	3,481	2,831
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)	(2004)

SUMMARY STATISTICS	FOR 2004 WATER YEAR		WATER YEARS 2003 - 2004	
ANNUAL TOTAL	3,944,490			
ANNUAL MEAN	10,780		10,780	
HIGHEST ANNUAL MEAN			10,780	2004
LOWEST ANNUAL MEAN			10,780	2004
HIGHEST DAILY MEAN	37,300	Feb 16	37,300	Feb 16, 2004
LOWEST DAILY MEAN	1,400	Nov 15	1,400	Nov 15, 2003
ANNUAL SEVEN-DAY MINIMUM	1,850	Nov 9	1,850	Nov 9, 2003
MAXIMUM PEAK FLOW	39,400	Feb 16	39,400	Feb 16, 2004
10 PERCENT EXCEEDS	22,100		22,100	
50 PERCENT EXCEEDS	9,990		9,990	
90 PERCENT EXCEEDS	2,400		2,400	

08041780 Neches River Saltwater Barrier at Beaumont, TX—Continued



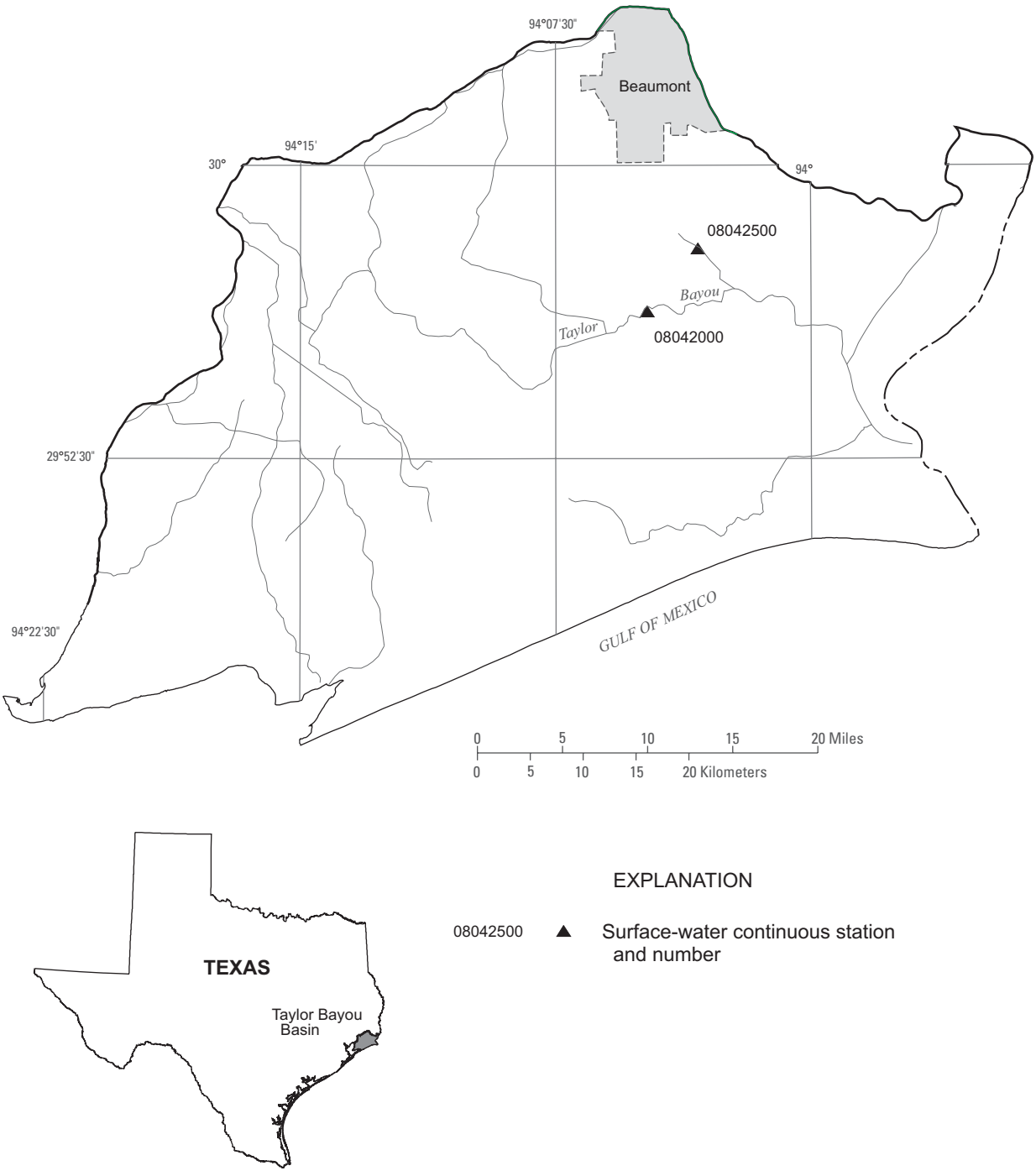


Figure 11.--Map showing location of gaging stations in the Taylor Bayou Basin

08042000 Taylor Bayou near LaBelle, TX

LOCATION.--Lat 29°52'30", long 94°09'34", Jefferson County, Hydrologic Unit 12040201, on right bank 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 mi^2.

PERIOD OF RECORD.--Apr. 1954 to Sept. 1984 (daily mean and peak discharge for storms of 1.0 inch or more runoff, except for period Sept. 10-22, 1961), Oct. 1984 to current year (daily maximum gage heights only).

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4.63 ft below NGVD 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 Oct. 1984, auxiliary water-stage recorder 7.2 mi downstream. Satellite telemeter at station.

REMARKS.--Records good. Prior to Oct. 1984, records were computed using fall as a factor. Low flow is regulated by drainage from rice fields and operation of saltwater gates and barge locks. An unknown amount of water is diverted above and below gage for irrigation of rice fields.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharges, 9,590 ft^3/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. Flood of Sept. 13, 1961 (Hurricane Carla), reached a stage of 11.51 ft.

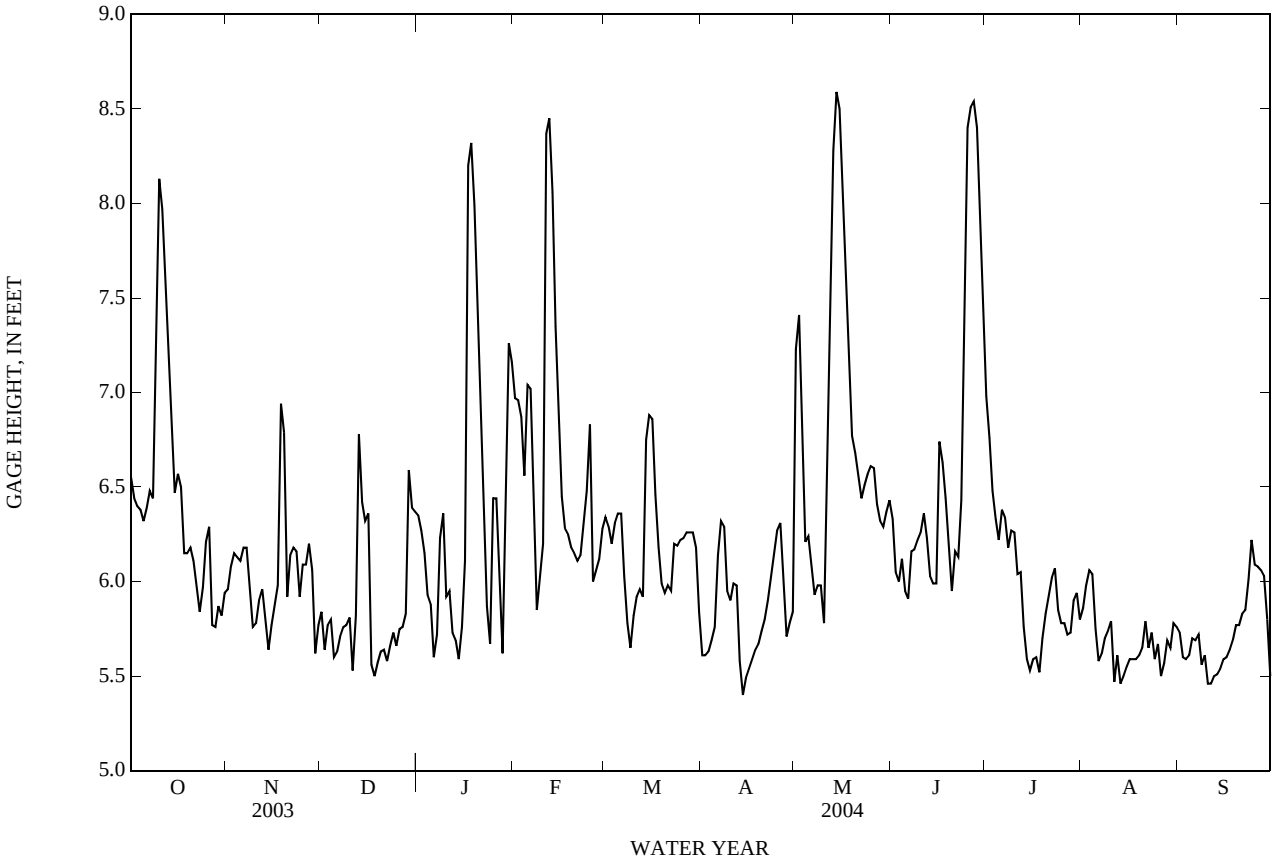
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1941 reached a stage of 11.3 ft, from information by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 8.59 ft, May 14; minimum gage height, 4.82 ft, Jan. 27.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.55	5.96	5.84	6.35	6.97	6.34	5.61	7.23	6.33	6.98	5.86	5.73
2	6.44	6.08	5.64	6.27	6.96	6.29	5.61	7.41	6.05	6.76	5.98	5.60
3	6.40	6.15	5.77	6.15	6.87	6.20	5.63	6.98	6.00	6.48	6.06	5.59
4	6.38	6.13	5.80	5.93	6.56	6.31	5.69	6.21	6.12	6.33	6.04	5.61
5	6.32	6.11	5.60	5.88	7.04	6.36	5.76	6.24	5.95	6.22	5.75	5.70
6	6.39	6.18	5.63	5.60	7.02	6.36	6.14	6.08	5.91	6.38	5.58	5.69
7	6.48	6.18	5.71	5.72	6.37	6.03	6.32	5.93	6.16	6.34	5.62	5.72
8	6.44	5.98	5.76	6.23	5.85	5.78	6.29	5.98	6.17	6.18	5.70	5.56
9	7.55	5.76	5.77	6.36	6.03	5.65	5.95	5.98	6.22	6.27	5.74	5.61
10	8.13	5.78	5.81	5.92	6.20	5.82	5.90	5.78	6.26	6.26	5.79	5.46
11	7.97	5.90	5.53	5.95	8.37	5.92	5.99	6.74	6.36	6.04	5.47	5.46
12	7.52	5.96	5.82	5.73	8.45	5.96	5.98	7.58	6.23	6.05	5.61	5.50
13	7.06	5.80	6.78	5.69	8.06	5.92	5.58	8.28	6.03	5.76	5.46	5.51
14	6.73	5.64	6.42	5.59	7.35	6.75	5.40	8.59	5.99	5.59	5.50	5.54
15	6.47	5.77	6.32	5.76	6.95	6.88	5.49	8.50	5.99	5.53	5.55	5.59
16	6.57	5.88	6.36	6.11	6.45	6.86	5.54	8.12	6.74	5.59	5.59	5.60
17	6.50	5.98	5.56	8.20	6.28	6.46	5.59	7.53	6.63	5.60	5.59	5.64
18	6.15	6.94	5.50	8.32	6.25	6.18	5.64	7.07	6.44	5.52	5.59	5.69
19	6.15	6.79	5.57	7.99	6.18	5.99	5.67	6.77	6.16	5.70	5.61	5.77
20	6.18	5.92	5.63	7.31	6.15	5.94	5.74	6.68	5.95	5.83	5.65	5.77
21	6.11	6.14	5.64	6.84	6.11	5.98	5.80	6.56	6.16	5.92	5.79	5.83
22	5.98	6.18	5.58	6.33	6.14	5.95	5.90	6.44	6.13	6.02	5.65	5.85
23	5.84	6.16	5.66	5.87	6.31	6.20	6.03	6.51	6.43	6.07	5.73	6.01
24	5.97	5.92	5.73	5.67	6.48	6.19	6.15	6.57	7.61	5.85	5.59	6.22
25	6.21	6.09	5.66	6.44	6.83	6.22	6.27	6.61	8.40	5.78	5.67	6.09
26	6.29	6.09	5.75	6.44	6.00	6.23	6.31	6.60	8.51	5.78	5.50	6.08
27	5.77	6.20	5.76	6.12	6.06	6.26	6.03	6.41	8.54	5.72	5.57	6.06
28	5.76	6.06	5.83	5.62	6.12	6.26	5.71	6.32	8.40	5.73	5.69	6.03
29	5.87	5.62	6.59	6.46	6.28	6.26	5.78	6.29	8.08	5.90	5.65	5.80
30	5.82	5.77	6.39	7.26	---	6.18	5.84	6.37	7.59	5.94	5.78	5.50
31	5.94	---	6.37	7.16	---	5.84	---	6.43	---	5.80	5.76	---
MAX	8.13	6.94	6.78	8.32	8.45	6.88	6.32	8.59	8.54	6.98	6.06	6.22

08042000 Taylor Bayou near LaBelle, TX—Continued



08042500 Hillebrandt Bayou near Lovell Lake, TX

LOCATION.--Lat 29°55'44", long 94°06'35", Jefferson County, Hydrologic Unit 12040201, on right downstream bank on county road, 1.3 mi southeast of Lovell Lake and 4.4 mi upstream (along rectified channel) from Taylor Bayou.

DRAINAGE AREA.--128 mi^2.

PERIOD OF RECORD.--Apr. 1954 to Sept. 1984 (daily mean and peak discharge for storms of 1.0 inch or more runoff, except for the period Sept. 11-18, 1961), Oct. 1984 to Aug. 1991 and Mar. 1992 to current year (daily maximum gage heights only).

GAGE.--Water-stage recorder. Datum of gage is 4.63 ft below NGVD 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 calm wind 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. Satellite telemeter at gage.

REMARKS.--Records good. Prior to Oct. 1984, records were computed using fall as a factor. Low flow is regulated by drainage from rice fields and operation of saltwater gates and barge locks. An unknown amount of water is diverted above and below gage for rice irrigation.

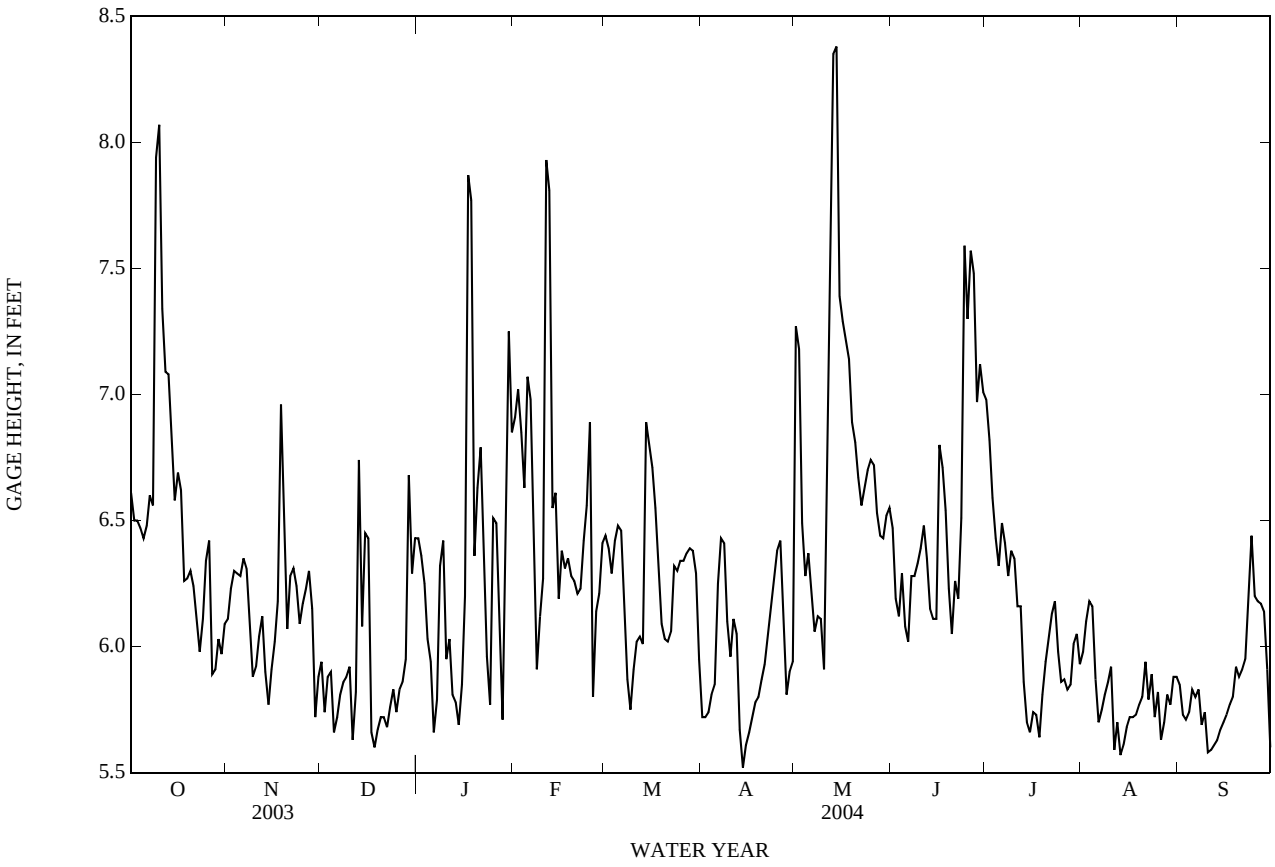
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft^3/s, Sept. 18, 1963; maximum gage height, 12.34 ft, Sept. 19, 1963; minimum discharge not determined (affected by tides and pumping); minimum gage height, 2.33 ft, July 17, 1954. Maximum stage since at least 1941, 12.34 ft, Sept. 19, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 8.38 ft, May 14; minimum gage height, 4.79 ft, Jan. 27.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.61	6.11	5.94	6.43	6.91	6.44	5.72	7.27	6.47	6.98	5.98	5.85
2	6.50	6.23	5.74	6.36	7.02	6.39	5.72	7.18	6.19	6.82	6.10	5.73
3	6.50	6.30	5.88	6.25	6.85	6.29	5.74	6.49	6.12	6.59	6.18	5.71
4	6.47	6.29	5.90	6.03	6.63	6.42	5.81	6.28	6.29	6.43	6.16	5.74
5	6.43	6.28	5.66	5.94	7.07	6.48	5.85	6.37	6.08	6.32	5.87	5.83
6	6.48	6.35	5.72	5.66	6.98	6.46	6.25	6.22	6.02	6.49	5.70	5.80
7	6.60	6.31	5.81	5.79	6.44	6.12	6.43	6.06	6.28	6.41	5.75	5.83
8	6.56	6.11	5.86	6.32	5.91	5.87	6.41	6.12	6.28	6.28	5.81	5.69
9	7.94	5.88	5.88	6.42	6.12	5.75	6.10	6.11	6.33	6.38	5.86	5.74
10	8.07	5.92	5.92	5.95	6.27	5.91	5.96	5.91	6.39	6.35	5.92	5.58
11	7.34	6.04	5.63	6.03	7.93	6.02	6.11	6.93	6.48	6.16	5.59	5.59
12	7.09	6.12	5.82	5.81	7.81	6.04	6.05	7.51	6.35	6.16	5.70	5.61
13	7.08	5.90	6.74	5.78	6.55	6.01	5.67	8.35	6.15	5.86	5.57	5.63
14	6.83	5.77	6.08	5.69	6.61	6.89	5.52	8.38	6.11	5.70	5.61	5.67
15	6.58	5.91	6.45	5.85	6.19	6.80	5.61	7.39	6.11	5.66	5.68	5.70
16	6.69	6.02	6.43	6.20	6.38	6.71	5.66	7.29	6.80	5.74	5.72	5.73
17	6.62	6.18	5.66	7.87	6.31	6.55	5.72	7.22	6.71	5.73	5.72	5.77
18	6.26	6.96	5.60	7.77	6.35	6.28	5.78	7.14	6.54	5.64	5.73	5.80
19	6.27	6.54	5.67	6.36	6.28	6.09	5.80	6.89	6.23	5.81	5.77	5.92
20	6.30	6.07	5.72	6.63	6.26	6.03	5.87	6.81	6.05	5.94	5.80	5.88
21	6.24	6.28	5.72	6.79	6.21	6.02	5.93	6.67	6.26	6.03	5.94	5.91
22	6.10	6.31	5.68	6.41	6.23	6.06	6.04	6.56	6.19	6.13	5.79	5.95
23	5.98	6.24	5.76	5.96	6.42	6.32	6.15	6.63	6.51	6.18	5.89	6.18
24	6.11	6.09	5.83	5.77	6.56	6.30	6.26	6.70	7.59	5.98	5.72	6.44
25	6.34	6.17	5.74	6.51	6.89	6.34	6.38	6.74	7.30	5.86	5.82	6.20
26	6.42	6.23	5.83	6.49	5.80	6.34	6.42	6.72	7.57	5.87	5.63	6.18
27	5.89	6.30	5.86	6.19	6.14	6.37	6.12	6.53	7.48	5.83	5.70	6.17
28	5.91	6.15	5.95	5.71	6.21	6.39	5.81	6.44	6.97	5.85	5.81	6.14
29	6.03	5.72	6.68	6.69	6.41	6.38	5.90	6.43	7.12	6.01	5.77	5.91
30	5.97	5.88	6.29	7.25	---	6.29	5.94	6.52	7.01	6.05	5.88	5.60
31	6.09	---	6.43	6.85	---	5.95	---	6.55	---	5.93	5.88	---
MAX	8.07	6.96	6.74	7.87	7.93	6.89	6.43	8.38	7.59	6.98	6.18	6.44

08042500 Hillebrandt Bayou near Lovell Lake, TX—Continued



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The U.S. Geological Survey collects limited streamflow data at sites other than continuous stream-gaging stations because the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage of those events. The data collected for special reasons are called measurements at miscellaneous sites.

Streamflow data collected at partial-record stations where water-quality data other than observations of water temperature are not obtained are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations; the second is a table of annual maximum stage and (or) discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low and high flows are given in a third table. Discharge measurements and water-quality data collected at partial-record stations are presented in downstream order in the section of this report entitled "Gaging-station records."

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 2004

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Neches River Basin				
08041550	Village Creek at State Highway. 327 near Silsbee, TX	Lat 30º20'48", long 94º16'44", Hardin County, at bridge on State Highway 327, about 1.6 mi upstream from Mill Creek, and 2.7 mi west of Silsbee.	1,043	1979-2004	11-05-03 09-22-04	139 107
08041720	Pine Island Bayou at State Highway 105 near Sour Lake, TX	Lat 30º08'08", long 94º16'44", Hardin-Jefferson County line, at bridge on State Highway 105, about 2.0 mi upstream from mouth of Little Pine Island Bayou, and 7.90 mi east of Sour Lake.	338	1979-2004	09-13-04	11.3

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Calendar for Water Year 2004

2003

October

S	M	T	W	T	F	S
			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	

November

S	M	T	W	T	F	S
						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

December

S	M	T	W	T	F	S
	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			

2004

January

S	M	T	W	T	F	S
				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

February

S	M	T	W	T	F	S
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						

March

S	M	T	W	T	F	S
	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			

April

S	M	T	W	T	F	S
				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	

May

S	M	T	W	T	F	S
						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

June

S	M	T	W	T	F	S
		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			

July

S	M	T	W	T	F	S
				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

August

S	M	T	W	T	F	S
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				

September

S	M	T	W	T	F	S
			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		

Conversion Factors

Multiply	By	To obtain
	Length	
inch (in.)	2.54×10^{1}	millimeter (mm)
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter (m)
mile (mi)	1.609×10^{0}	kilometer (km)
	Area	
acre	4.047×10^{3}	square meter (m^2)
	4.047×10^{-1}	square hectometer (hm^2)
	4.047×10^{-3}	square kilometer (km^2)
square mile (mi^2)	2.590×10^{0}	square kilometer (km^2)
	Volume	
gallon (gal)	3.785×10^{0}	liter (L)
	3.785×10^{-3}	cubic meter (m^3)
	3.785×10^{0}	cubic decimeter (dm^3)
million gallons (Mgal)	3.785×10^{3}	cubic meter (m^3)
	3.785×10^{-3}	cubic hectometer (hm^3)
cubic foot (ft^3)	2.832×10^{-2}	cubic meter (m^3)
	2.832×10^{1}	cubic decimeter (dm^3)
cubic-foot-per-second-per-day [(ft^3/s/d]	2.447×10^{3}	cubic meter (m^3)
	2.447×10^{-3}	cubic hectometer (hm^3)
acre-foot (acre-ft)	1.223×10^{3}	cubic meter (m^3)
	1.223×10^{-3}	cubic hectometer (hm^3)
	1.223×10^{-6}	cubic kilometer (km^3)
	Flow rate	
cubic foot per second (ft^3/s)	2.832×10^{1}	liter (L/s)
	2.832×10^{-2}	cubic meter per second (m^3/s)
	2.832×10^{1}	cubic decimeter per second (dm^3/s)
gallon per minute (gal/min)	6.309×10^{-2}	liter per second (L/s)
	6.309×10^{-5}	cubic meter per second (m^3/s)
	6.309×10^{-2}	cubic decimeter per second (dm^3/s)
million gallons per day (Mgal/d)	4.381×10^{-2}	cubic meter per second
	4.381×10^{1}	cubic decimeter per second (dm^3/s)
	Mass	
ton, short (2,000 lb)	9.072×10^{-1}	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$°F = (1.8 \times °C) + 32$$