

# Water Resources Data Texas Water Year 2004

## Volume 3. San Jacinto River Basin, Brazos River Basin, San Bernard River Basin, and Intervening Coastal Basins

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

Water-Data Report TX-04-3



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

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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:

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

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

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## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

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

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

Station name	Station number	Drainage area (mi <sup>2</sup> )	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 <sup>2</sup> )	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, 1979-82
“ “ “ “ (e)			
Redmon Branch near Hallesville (e)	08022010	0.46	1966-74

Station name	Station number	Drainage area (mi <sup>2</sup> )	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 <sup>2</sup> )	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 Scylene 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 <sup>2</sup> )	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 <sup>2</sup> )	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 <sup>2</sup> )	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	08079530	5,578	1952-54,
Buffalo Springs nr Lubbock (e)			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 <sup>2</sup> )	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 <sup>2</sup> )	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 <sup>2</sup> )	Period of record (water years)
Colorado River near Cuthbert (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 <sup>2</sup> )	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, 1979-83, 1992-95
“ “ “ (d)			
Bear Creek at Farm-Market Road 1626 near Manchaca (e)	08158820	24.0	1979-83
Little Bear Creek at Farm-Market Road 1626 near Manchaca (d)	08158825	21.0	1979
Slaughter Creek at FM 2304 near Austin (e)	08158860	23.1	1978-83
Boggy Creek (South) at Circle S Road, Austin (e)	08158880	3.58	1976-88
Fox Branch near Oak Hill (e)	08158900	0.12	1965-73
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 <sup>2</sup> )	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
Coletto Creek Reservoir inflow (Guadalupe diversion) near Schroeder (d)	08176990	357	1980-94
Coletto Creek near Schroeder (d)	08177000	369	1930-34, 1953-79
Olmos Creek Tributary at FM 1535 at Savano Park (e)	08177600	0.33	1969-81
Olmos Reservoir at San Antonio (e)	08177800	32.4	1968-71, 1976-89, 1992-95
San Antonio River at Woodlawn Avenue, San Antonio (e)	08177860	36.4	1989-95
San Antonio River at Dolorosa, San Antonio (d)	08177920	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 <sup>2</sup> )	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
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 <sup>2</sup> )	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 <sup>2</sup> )	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

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS

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

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

Station name	Station number	Drainage area (mi <sup>2</sup> )	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,
			T	1954
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 <sup>2</sup> )	Type of record	Period of record (water years)
South Sulphur River near Cooper	07342500	527	SC, T, pH, Cl	1959-66, 1968-72,
Sulphur River near Talco	07343200	1,365	SC, T SC, T, pH, Cl	1973-89 1966-72, 1973-91
White Oak Creek near Talco	07343500	494	SC, T, pH, Cl SC, T	1966-72, 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 SC, T	1968-72, 1973-89
Little Cypress Creek near Jefferson	07346070	675	SC, T, pH, Cl SC, T	1968-72, 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 SC, T	1968-72, 1973-92
Lake Fork Creek near Quitman	08019000	585	SC, T, pH, Cl SC, T	1968-72, 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 C	1969-86, 1969-75
Sabine River near Bon Wier	08028500	8,229	SC, T, C	1969-84
Sabine River near Ruliff	08030500	9,329	SC T pH, DO C Cl	1945, 1947-98 1947-98 1968-75, 1970-76, 1968
Cow Bayou near Mauriceville	08031000	83.3	SC, T, pH, Cl SC, T	1952-54, 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 SC, T	1955-78, 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 SC, T	1968-72, 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 T	1949-52, 1948-62
Village Creek at Everman	08048970	84.5	SC, pH, T, DO	1990
Lake Arlington at Arlington	08049200	143	SC, pH, T, DO	1989-2002
Elm Fork Trinity River SWS # 6-0 near Muenster	08050200	0.77	S	1957-66
Elm Fork Trinity River near Muenster	08050300	46.0	SC T	1967-68, 1957-58, 1966-68,
Clear Creek near Sanger	08051500	295	S SC, T, S	1957-68 1968-77

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

Station name	Station number	Drainage area (mi <sup>2</sup> )	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
Whiteoak Bayou at Main Street, Houston	08074598	127	CI	1969-81
Buffalo Bayou at Main Street, Houston	08074600	339	SC, T, DO	1992-97
Buffalo Bayou at McKee Street, Houston	08074610	454	SC, T, DO	1986-92
Sims Bayou at Houston	08075500	63.0	pH	1992-2000
Chocolate Bayou near Alvin	08078000	87.70	SC, T, DO	1994-97
North Fork Double Mountain Fork Brazos River near Post	08079575	438	SC, T	1978-81
Double Mountain Fork Brazos River near Rotan	08080000	8,536	SC, T	1984-93
Double Mountain Fork Brazos River near Aspermont	08080500	8,796	SC, T, S	1950-51
			SC, T	1949-51
				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
Clear Fork Brazos River at Hawley	08083240	1,416	SC, T	1996-2002
				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 <sup>2</sup> )	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, 1976-81
Brazos River near Richmond	08114000	45,107	S SC T	1966-86, 1942-95, 1951-95
Brazos River near Rosharon	08116650	45,399	SC, T	1969-80
Brazos River at Harris Reservoir near Angleton	08116700	44,000	SC T	1962-77, 1967-77
Brazos River at Brazoria Reservoir near Brazoria	08117200	44,000	SC T	1962-77, 1967-77
San Bernard River near Boling	08117500	727	SC, T	1978-81
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, 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 S	1948-51, 1949-51
Colorado River at Ballinger	08126500	16,413	SC, T S	1961-79, 1978-79
Pecan Bayou at Brownwood	08143500	1,660	SC, T	1948-49
Pecan Bayou near Mullin	08143600	2,073	SC, T	1968-91
San Saba River at San Saba	08146000	3,046	SC T	1962-69, 1963-70

Station name	Station number	Drainage area (mi <sup>2</sup> )	Type of record	Period of record (water years)
Colorado River near San Saba	08147000	31,217	SC, T	1947-92, 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	CI	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 C, T	1977-86 1994-2001
Colorado River at Austin	08158000	39,009	SC, T	1948-91
Colorado River above Columbus	08160700	41,403	SC, T	1983-86
Colorado River at Columbus	08161000	41,640	SC T	1967-73, 1957-59, 1961-68 S 1957-73
Colorado River at Wharton	08162000	42,003	SC T	1945-92, 1946-48,
Lavaca River near Edna	08164000	817	SC, T	1978-81
Navidad River near Speaks	08164350	437	SC, T, pH, CI	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 CI	1966 1962-99
Guadalupe River at Victoria	08176500	5,198	SC T	1946-81, 1951-81
Coletto Creek Reservoir (Condenser No. 1) near Fannin	08177360	414	T	1980-94
Coletto Creek Reservoir (outflow) near Victoria	08177410	494	T	1980-94
Olmos Creek at Dresden Drive, San Antonio	08177700	21.2	SC, pH, T, DO S	1969-99 1973
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, CI	1998-2000
Medina River at San Antonio	08181500	1,317	SC, pH, T, DO CI	1987-2000 1965-2000
San Antonio River near Falls City	08183500	2,113	SC, pH, T, DO	1987-96
Cibolo Creek near Falls City	08186000	827	SC, T	1969-91
Escondido Creek SWS #1 near Kenedy	08187000	3.29	S	1955-65
Guadalupe River at Tivoli	08188800	10,128	SC, T	1966-82
Mission River at Refugio	08189500	690	SC, T	1961-81
Nueces River at Cotulla	08194000	5,171	SC	1942
Frio River at Calliham	08207000	5,491	SC, T	1968-81
Nueces River at Bluntzer	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.

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS--Continued

Station name	Station number	Drainage area (mi <sup>2</sup> )	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,
			CI	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 3

### SAN JACINTO RIVER BASIN, BRAZOS RIVER BASIN, SAN BERNARD 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 3 contains records for water discharge at 92 gaging stations; stage only at 6 gaging stations; elevation at 27 lakes and reservoirs; content at 6 lakes and reservoirs; and water quality at 33 gaging stations. Also included are data for 33 partial-record stations comprised of 15 flood-hydrograph, 8 low-flow, and 10 crest-stage stations. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating Federal, State, and City agencies in Texas.

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

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

Publications similar to this report are published annually by the U.S. Geological Survey for all States. These official U.S. Geological Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water Data Report TX-03-3." 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 2002 are:

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

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

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

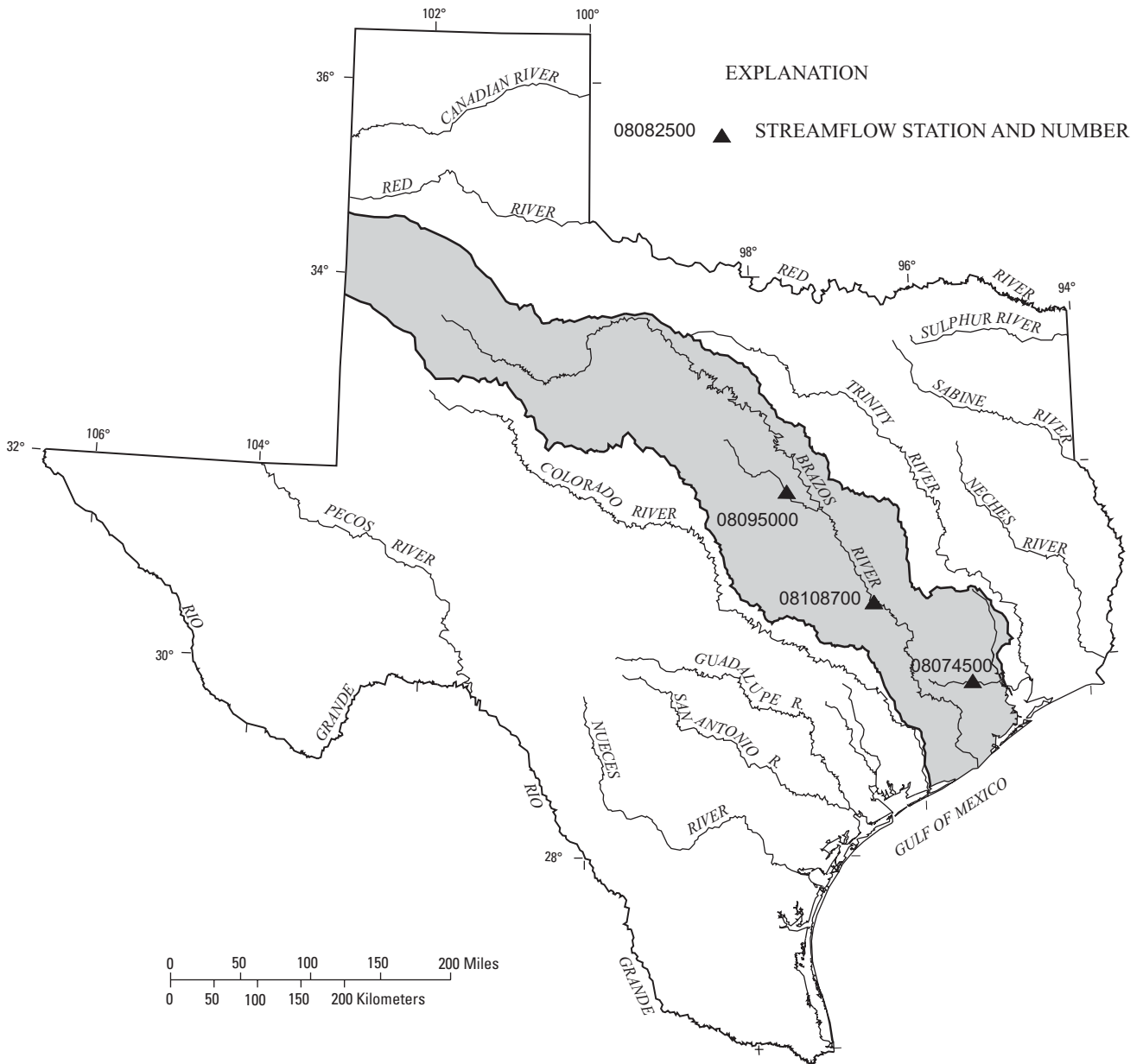
Conservation storage in 77 selected reservoirs throughout the State, with a combined conservation capacity of 34,485,000 acre-feet, increased from 77 percent at the end of September 2003 to 84 percent at the end of September 2004. Records from these reservoirs indicate that storage increased in 54, decreased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

The area for which water resources data are presented in volume 3 includes the San Jacinto River Basin, Brazos River Basin, San Bernard River Basin, and Intervening Costal Basins. The area described in volume 3 and the location of selected streamflow in the area are shown in figure 1.

### Streamflow

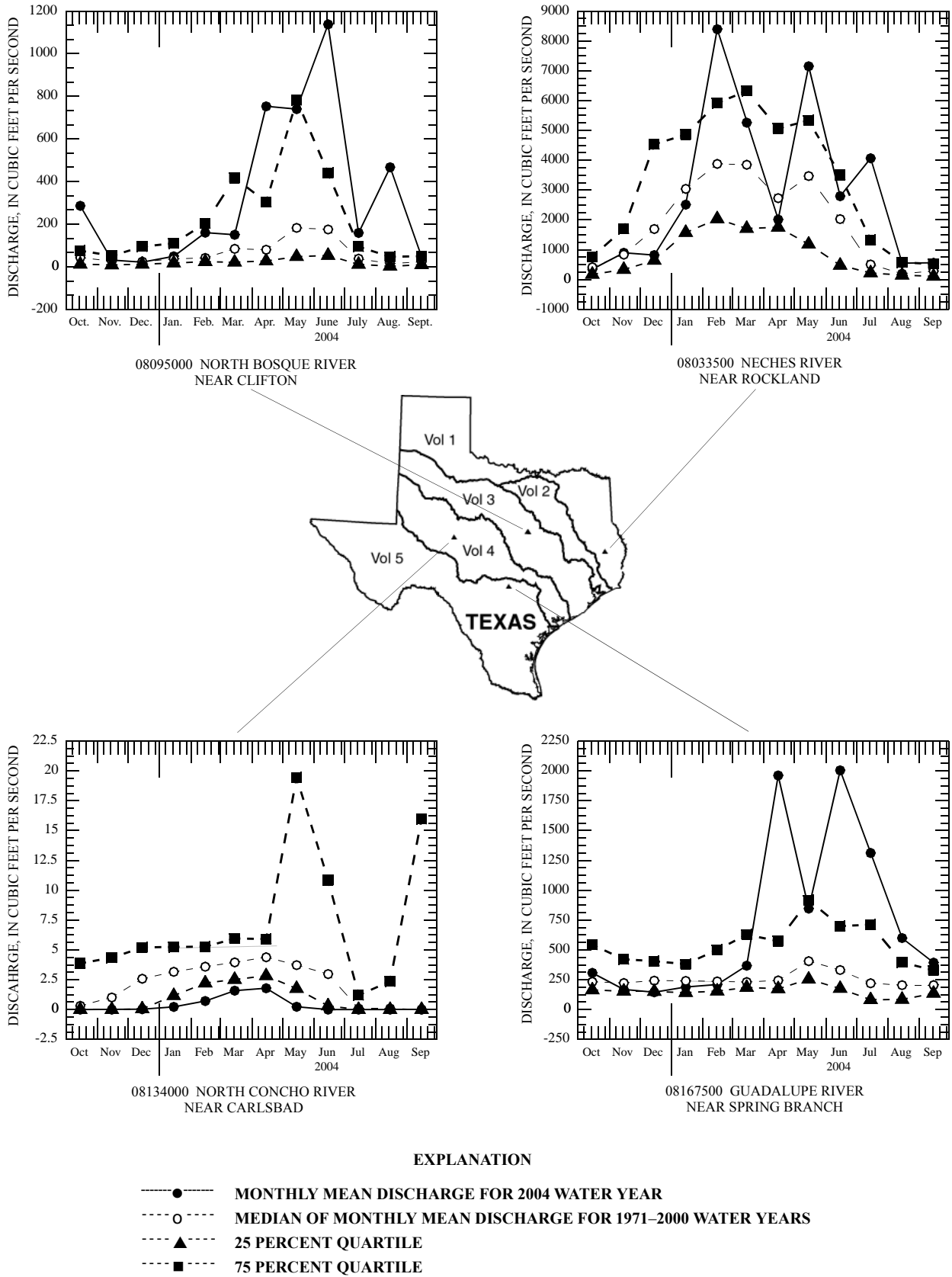
Monthly mean streamflow was normal in most streams in Texas during the 2004 water year. Comparisons of monthly mean and annual mean discharges in the 2004 water year, with median values for the period 1971-2000, were made for the following four representative index stations in Texas: the Neches River 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 ( $\text{ft}^3/\text{s}$ ) for the 2004 water year, or 162 percent of 1,811  $\text{ft}^3/\text{s}$  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 3 (shaded) and location of selected streamflow stations in volume 3.

# WATER RESOURCES DATA—TEXAS, 2004



**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<sup>3</sup>/s for the 2004 water year, or 550 percent of 60.6 ft<sup>3</sup>/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<sup>3</sup>/s for the 2004 water year, or 18 percent of 2.05 ft<sup>3</sup>/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<sup>3</sup>/s for the 2004 water year or 265 percent of 267 ft<sup>3</sup>/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 21 selected reservoirs in this area of the State, with a total combined conservation capacity of 3,805,000 acre-feet, increased from 82 percent of capacity at the end of September 2003 to 87 percent at the end of September 2004. Records from these reservoirs indicate that storage increased in 15 reservoirs, decreased in 5, 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 six 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
<u>San Jacinto River Basin</u>						
08074500	Whiteoak Bayou at Houston, TX	18,100	32	252	28,100	0.20 109 (1936-2004)
<u>Brazos River Basin</u>						
08080500	Double Mountain Fork Brazos River nr Aspermont, TX	2,610	0	76.6	23,000	0 57 (1994-2004)
08082500	Brazos River at Seymour, TX	21,800	0	269	42,700	0 269 (1964-2004)
08095000	North Bosque River near Clifton, TX <sup>1/</sup>	38,900	6.8	333	200,000	0 212 (1968-2004)
08108700	Brazos River at State Hwy. 21 near Bryan, TX	61,200	210	5,989	78,600	125 4,797 (1993-2004)
08114000	Brazos River at Richmond, TX	68,300	660	10,010	119,000	55 7,569 (1941-2004)

<sup>1/</sup> 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 indentation in that list of stations in the front of this report. Each indentation represents one rank. This downstream order and system of indentation indicates which stations are on tributaries between any two stations and the rank of the tributary on which each station is located.

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

### SPECIAL NETWORKS AND PROGRAMS

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

**National Stream-Quality Accounting Network (NASQAN)** is a network of sites used to monitor the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande River basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia Rivers so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide

range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment (NAWQA) Program; (3) to characterize processes unique to large-river systems such as storage and remobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program may be accessed from <http://water.usgs.gov/nasqan/>.

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

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

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

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

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

## EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS

### Data Collection and Computation

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and volume of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that is either downloaded electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with a current meter or acoustic Doppler current profiler, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply Paper 2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRIs), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2, 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 CF5M); or in inches (line headed IN); or in acre-feet (line headed AC-FT). Values for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if extensive regulation or diversion is in effect or if the drainage area includes large noncontributing areas. At some stations, monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir volumes are given. These values are identified by a symbol and a corresponding footnote.

### Statistics of Monthly Mean Data

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

### Summary Statistics

A table titled SUMMARY STATISTICS follows the statistics of monthly mean data tabulation. This table consists of four columns with the first column containing the line

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

### Identifying Estimated Daily Discharge

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

### Accuracy of Field Data and Computed Results

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

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

Values of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft<sup>3</sup>/s; to the nearest tenths between 1.0 and 10 ft<sup>3</sup>/s; to whole numbers between 10 and 1,000 ft<sup>3</sup>/s; and to 3 significant figures above 1,000 ft<sup>3</sup>/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 TWRI, 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 multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection. (See also "Substrate")

**Ash mass** is the mass or amount of residue present after the residue from a dry-mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter ( $\text{g}/\text{m}^3$ ), and periphyton and benthic organisms in grams per square meter ( $\text{g}/\text{m}^2$ ). (See also "Bio-mass" 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 ( $\text{cells}/\text{mL}$ ) or biovolume in cubic micrometers per milliliter ( $\mu\text{m}^3/\text{mL}$ ). The abundance of blue-green algae in periphyton samples is given in cells per square centimeter ( $\text{cells}/\text{cm}^2$ ) or biovolume per square centimeter ( $\mu\text{m}^3/\text{cm}^2$ ). (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 ( $\mu\text{m}^3$ ) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

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

pi ( $\pi$ ) is the ratio of the circumference to the diameter of a circle;  $\pi = 3.14159\dots$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Cubic foot per second-day** (CFS-DAY, Cfs-day,  $[(\text{ft}^3/\text{s})/\text{d}]$ ) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables numerically are equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

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

**Daily mean suspended-sediment concentration** is the time-weighted mean concentration of suspended sediment 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 ( $\mu\text{m}^3/\text{mL}$ ). The abundance of diatoms in periphyton samples is given in cells per square centimeter (cells/ $\text{cm}^2$ ) or biovolume per square centimeter ( $\mu\text{m}^3/\text{cm}^2$ ). (See also “Phytoplankton” and “Periphyton”)

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

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

**Dissolved** refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determi-

nations 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  $\text{CaCO}_3$ ) 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 faecalis*, *Streptococcus faecium*, *Streptococcus avium*, and their variants. (See also “Bacteria”)

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

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

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

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

**Extractable organic halides** (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by micro-coulometric 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 ( $\mu\text{m}^3/\text{mL}$ ). The abundance of green algae in periphyton samples is given in cells per square centimeter (cells/cm<sup>2</sup>) or biovolume per square centimeter ( $\mu\text{m}^3/\text{cm}^2$ ). (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 ( $\text{CaCO}_3$ ).

**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:

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

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

**Horizontal datum** (See “Datum”)

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

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

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

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

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

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

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

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

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

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

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

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

**Low tide** is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of

the two low tides, respectively, of each tidal day. See NOAA Web site:

<http://www.co-ops.nos.noaa.gov/tideglos.html>

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

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

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

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

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

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

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

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

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

**Method 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,  $\mu\text{g/g}$ )** 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,  $\mu\text{g/kg}$ )** 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,  $\mu\text{g/L}$ )** is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

**Microsiemens per centimeter (US/CM,  $\mu\text{S/cm}$ )** 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,  $\text{mg/L}$ )** 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,  $\text{ng/L}$ )** 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<sup>2</sup>), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

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

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

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

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

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

**Particle-size classification**, as used in this report, agrees with the recommendation made by the American Geophysical

Union Subcommittee on Sediment Terminology. The classification is as follows:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(oxygen method) or the amount of carbon assimilated (carbon method) by the plants.

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

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

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

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

**Recoverable** 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 proce-

dures 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<sup>3</sup>/s) x 0.0027. (See also “Sediment,” “Suspended sediment,” and “Suspended-sediment concentration”)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Total coliform bacteria** are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of 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,  $30 \pm 15$  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,  $30 \pm 15$  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](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”)





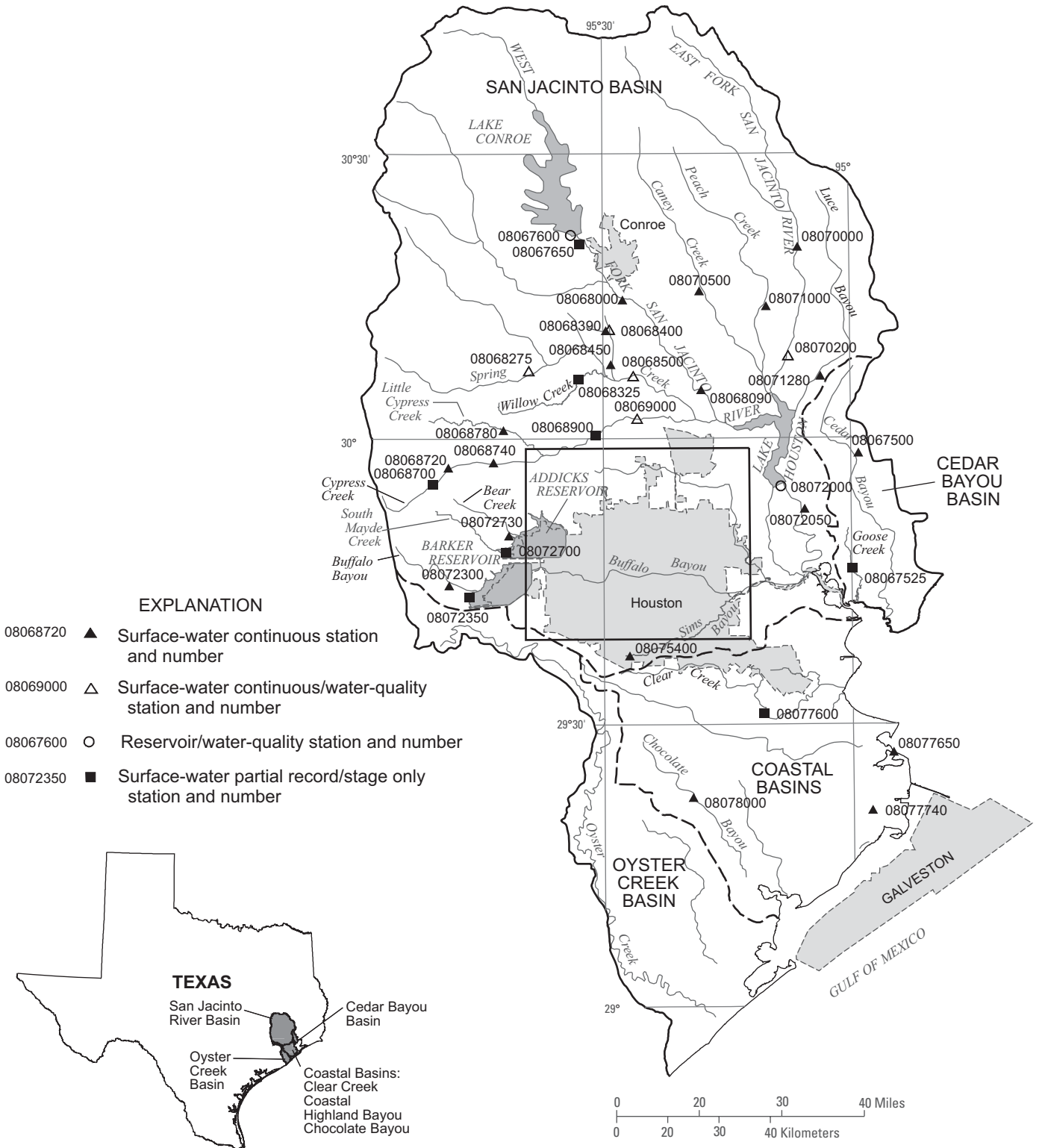
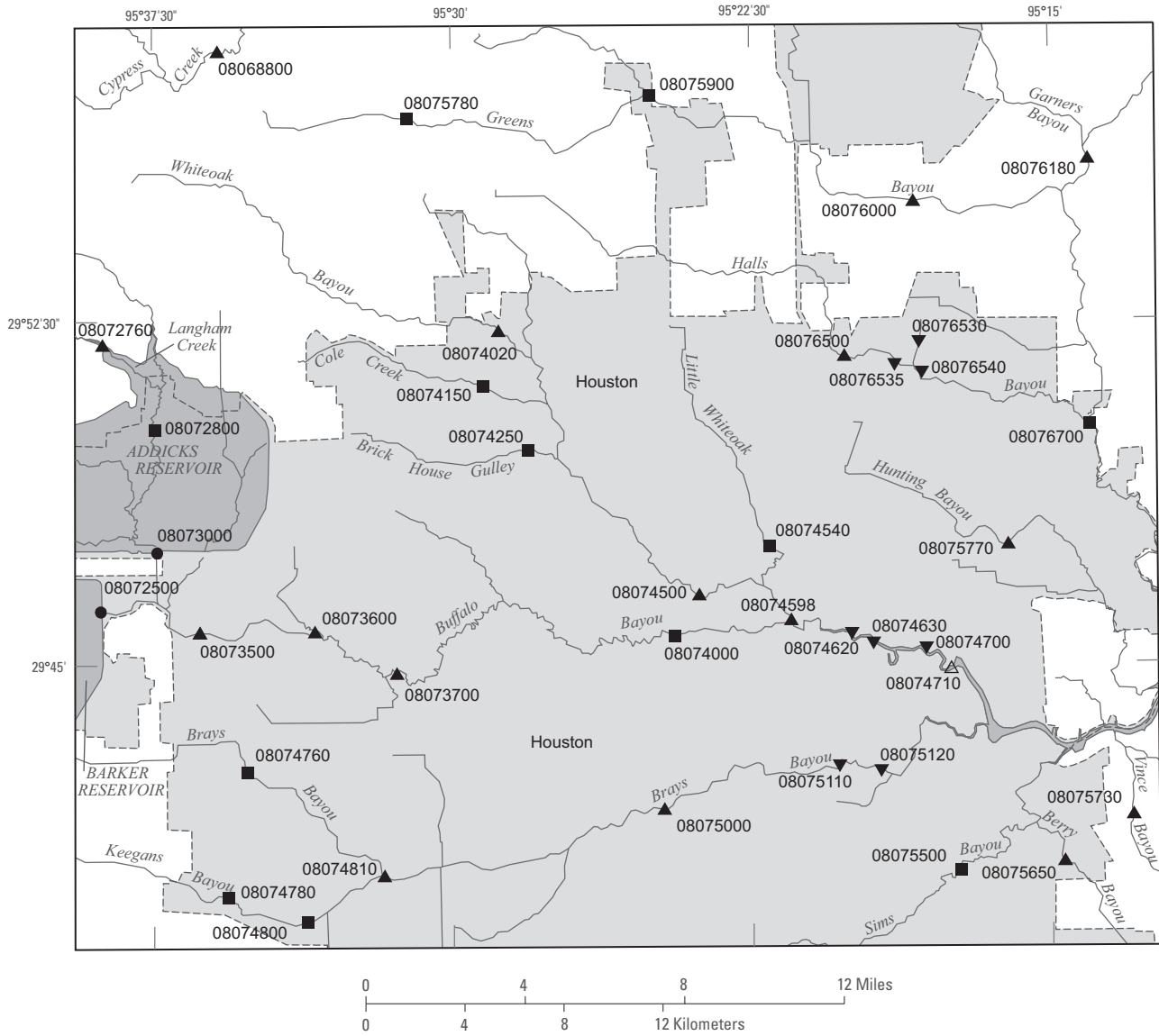


Figure 3.--Map showing location of gaging stations in the San Jacinto and Coastal River Basins



**EXPLANATION**

- 08073500 ▲ Surface-water continuous station and number
- 08073000 ● Reservoir station and number
- 08074780 ■ Surface-water partial record/stage only station and number
- 08074710 △ Surface-water continuous/water-quality station and number

Figure 4.--Map showing location of gaging stations in the Houston inset of the San Jacinto River Basin

08067500	Cedar Bayou near Crosby, TX . . . . .	34
08067525	Goose Creek at Baytown, TX . . . . .	532
08067600	Lake Conroe near Conroe, TX . . . . .	36
08067650	West Fork San Jacinto River below Lake Conroe near Conroe, TX . . . . .	46
08068000	West Fork San Jacinto River near Conroe, TX . . . . .	48
08068090	West Fork San Jacinto River above Lake Houston near Porter, TX . . . . .	50
08068275	Spring Creek near Tomball, TX . . . . .	52
08068325	Willow Creek near Tomball, TX . . . . .	532
08068390	Bear Branch at Research Forest Blvd., The Woodlands, TX . . . . .	62
08068400	Panther Branch at Gosling Road, The Woodlands, TX . . . . .	64
08068450	Panther Branch near Spring, TX . . . . .	74
08068500	Spring Creek near Spring, TX . . . . .	76
08068700	Cypress Creek at Sharp Road near Hockley, TX . . . . .	532
08068720	Cypress Creek at Katy-Hockley Road near Hockley, TX . . . . .	86
08068740	Cypress Creek at House and Hahl Road near Cypress, TX . . . . .	88
08068780	Little Cypress Creek near Cypress, TX . . . . .	90
08068800	Cypress Creek at Grant Road near Cypress, TX . . . . .	92
08068900	Cypress Creek at Steubner-Airline Road near Westfield, TX . . . . .	94
08069000	Cypress Creek near Westfield, TX . . . . .	96
08070000	East Fork San Jacinto River near Cleveland, TX . . . . .	104
08070200	East Fork San Jacinto River near New Caney, TX . . . . .	106
08070500	Caney Creek near Splendora, TX . . . . .	114
08071000	Peach Creek at Splendora, TX . . . . .	116
08071280	Luce Bayou above Lake Houston near Huffman, TX . . . . .	118
08072000	Lake Houston near Sheldon, TX . . . . .	120
08072050	San Jacinto River near Sheldon, TX . . . . .	152
08072300	Buffalo Bayou near Katy, TX . . . . .	154
08072350	Buffalo Bayou near Fulshear, TX . . . . .	532
08072500	Barker Reservoir near Addicks, TX . . . . .	156
08072700	South Mayde Creek near Addicks, TX . . . . .	532
08072730	Bear Creek near Barker, TX . . . . .	158
08072760	Langham Creek at West Little York Road near Addicks, TX . . . . .	160
08072800	Langham Creek near Addicks, TX . . . . .	532
08073000	Addicks Reservoir near Addicks, TX . . . . .	162
08073500	Buffalo Bayou near Addicks, TX . . . . .	164
08073600	Buffalo Bayou at West Belt Drive, Houston, TX . . . . .	166
08073700	Buffalo Bayou at Piney Point, TX . . . . .	168
08074000	Buffalo Bayou at Houston, TX . . . . .	170
08074020	Whiteoak Bayou at Alabonson Road, Houston, TX . . . . .	172
08074150	Cole Creek at Deihl Road, Houston, TX . . . . .	174
08074250	Brickhouse Gulley at Costa Rica Street, Houston, TX . . . . .	176
08074500	Whiteoak Bayou at Houston, TX . . . . .	178
08074540	Little Whiteoak Bayou at Trimble Street at Houston, TX . . . . .	532
08074598	Whiteoak Bayou at Main Street, Houston, TX . . . . .	180
08074620	Buffalo Bayou at Hirsch Street, Houston, TX . . . . .	182
08074630	Buffalo Bayou at Lockwood Drive, Houston, TX . . . . .	184
08074700	Buffalo Bayou at 69th Street, Houston, TX . . . . .	186
08074710	Buffalo Bayou at Turning Basin, Houston, TX . . . . .	188
08074760	Brays Bayou at Alief, TX . . . . .	532
08074780	Keegans Bayou at Keegan Road near Houston, TX . . . . .	532
08074800	Keegans Bayou at Roark Road near Houston, TX . . . . .	200
08074810	Brays Bayou at Gessner Drive, Houston, TX . . . . .	202

08075000	Brays Bayou at Houston, TX . . . . .	204
08075110	Brays Bayou at Calhoun Street, Houston, TX . . . . .	206
08075120	Brays Bayou at Lidstone Avenue, Houston, TX . . . . .	210
08075400	Sims Bayou at Hiram Clarke Street, Houston, TX . . . . .	214
08075500	Sims Bayou at Houston, TX . . . . .	210
08075650	Berry Bayou at Forest Oaks Street, Houston, TX . . . . .	218
08075730	Vince Bayou at Pasadena, TX . . . . .	220
08075770	Hunting Bayou at Interstate Highway 610, Houston, TX . . . . .	222
08075780	Greens Bayou at Cutten Road near Houston, TX . . . . .	532
08075900	Greens Bayou near U.S. Highway 75 near Houston, TX . . . . .	224
08076000	Greens Bayou near Houston, TX . . . . .	226
08076180	Garners Bayou near Humble, TX . . . . .	228
08076500	Halls Bayou at Houston, TX . . . . .	230
08076530	Halls Bayou at Parker Road, Houston, TX . . . . .	232
08076535	Halls Bayou, Allwood Street Tributary, Houston, TX . . . . .	234
08076540	Halls Bayou at Homestead Boulevard, Houston, TX . . . . .	236
08076700	Greens Bayou at Ley Road, Houston, TX . . . . .	238
08077600	Clear Creek near Friendswood, TX . . . . .	240
08077650	Moses Lake-Galveston Bay near Texas City, TX . . . . .	242
08077740	LaMarque Levee Pump Station near LaMarque, TX . . . . .	246
08078000	Chocolate Bayou near Alvin, TX . . . . .	250

## CEDAR BAYOU BASIN

08067500 Cedar Bayou near Crosby, TX

LOCATION.--Lat 29°58'21", long 94°59'08", Liberty County, Hydrologic Unit 12040203, on right bank at downstream side of bridge on U.S. Highway 90 and 6.6 mi northeast of Crosby.

DRAINAGE AREA.--64.9 mi<sup>2</sup>.

PERIOD OF RECORD.--Mar. to Aug. 1946, Mar. 1963 to Feb. 1964, May to Aug. 1971 (discharge measurements only), Oct. 1971 to Sept. 1991, Oct. 1991 to Sept. 2001 (peak discharges greater than base discharge), Oct. 2001 to current year. Water-quality records: Chemical data: May 1971 to Sept. 1979. Biochemical data: May 1971 to Sept. 1979. Pesticide data: May 1971 to Sept. 1979.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 31.31 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Stage-discharge relation is affected by seasonal vegetation during most years. No known regulation. Low flow is sustained by drainage from irrigated lands. There are diversions upstream from station for irrigation. 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	6.1	3.3	6.4	24	67	35	9.9	545	4.0	367	7.7	2.2
2	5.6	2.8	5.5	19	263	35	9.1	1,210	3.2	207	11	2.6
3	5.0	2.6	5.4	14	182	26	8.8	336	2.9	99	9.4	3.8
4	6.7	2.6	5.4	11	88	19	8.4	113	17	42	12	52
5	5.5	2.2	4.9	8.5	1,230	19	8.0	65	63	25	8.8	46
6	6.5	2.2	4.5	6.7	880	26	18	36	21	25	20	13
7	24	2.3	4.2	5.5	237	19	32	24	8.1	18	28	2.4
8	15	2.4	4.1	39	96	13	19	15	185	15	12	2.2
9	735	2.2	18	98	47	12	14	11	853	23	8.2	2.2
10	2,730	2.2	28	44	282	9.8	22	9.0	195	19	7.3	1.9
11	2,350	2.0	13	23	1,440	9.1	804	65	56	12	9.1	2.3
12	1,380	2.2	14	15	785	8.6	472	697	23	15	8.2	2.5
13	373	3.8	499	12	204	8.1	180	680	7.8	11	5.9	2.2
14	136	3.3	163	9.8	285	25	76	2,070	15	13	5.6	2.1
15	45	2.4	60	8.8	171	44	46	1,120	334	8.3	5.3	3.5
16	17	251	33	8.8	53	37	30	291	747	6.8	5.2	3.4
17	13	1,080	20	942	28	34	22	114	734	7.1	6.0	2.8
18	10	2,650	15	488	20	29	16	62	355	7.6	5.3	1.8
19	7.0	2,320	11	124	14	23	13	32	102	10	6.5	1.4
20	5.1	1,060	8.3	53	10	20	11	16	36	8.9	5.9	2.0
21	3.9	301	7.1	34	7.3	24	12	11	86	7.0	5.2	2.2
22	3.7	111	6.9	27	12	26	11	8.4	60	7.2	5.7	2.5
23	3.4	53	13	16	42	19	9.6	6.2	620	16	13	2.9
24	4.6	56	13	19	35	17	12	5.3	1,610	16	11	2.8
25	4.3	35	9.6	1,400	38	15	111	4.8	2,200	18	12	5.0
26	5.0	24	8.3	620	46	15	436	6.2	1,740	51	14	5.2
27	4.8	18	8.6	152	27	15	144	5.4	974	36	7.3	4.0
28	4.0	11	9.2	49	13	13	68	5.2	382	19	5.7	3.7
29	6.7	8.7	155	33	17	12	37	5.8	252	13	6.4	3.5
30	5.6	7.3	80	213	---	12	17	8.6	171	9.7	5.7	3.1
31	4.0	---	37	139	---	12	---	3.5	---	7.3	3.0	---
TOTAL	7,925.5	8,024.5	1,270.4	4,656.1	6,619.3	631.6	2,676.8	7,581.4	11,857.0	1,139.9	276.4	187.2
MEAN	256	267	41.0	150	228	20.4	89.2	245	395	36.8	8.92	6.24
MAX	2,730	2,650	499	1,400	1,440	44	804	2,070	2,200	367	28	52
MIN	3.4	2.0	4.1	5.5	7.3	8.1	8.0	3.5	2.9	6.8	3.0	1.4
AC-FT	15,720	15,920	2,520	9,240	13,130	1,250	5,310	15,040	23,520	2,260	548	371

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004h, BY WATER YEAR (WY)

	91.5	97.5	88.8	89.1	87.2	44.0	79.1	94.5	166	64.2	33.5	90.4
MAX	511	346	272	405	228	187	455	599	697	384	299	567
(WY)	(2003)	(1983)	(1987)	(1991)	(2004)	(1985)	(1979)	(1989)	(1987)	(1979)	(1983)	(2002)
MIN	1.74	0.36	0.41	1.67	4.19	3.29	0.69	0.83	0.92	1.19	0.84	2.38
(WY)	(1979)	(1989)	(1989)	(1989)	(1976)	(1989)	(1989)	(2003)	(1990)	(1988)	(1990)	(1989)

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

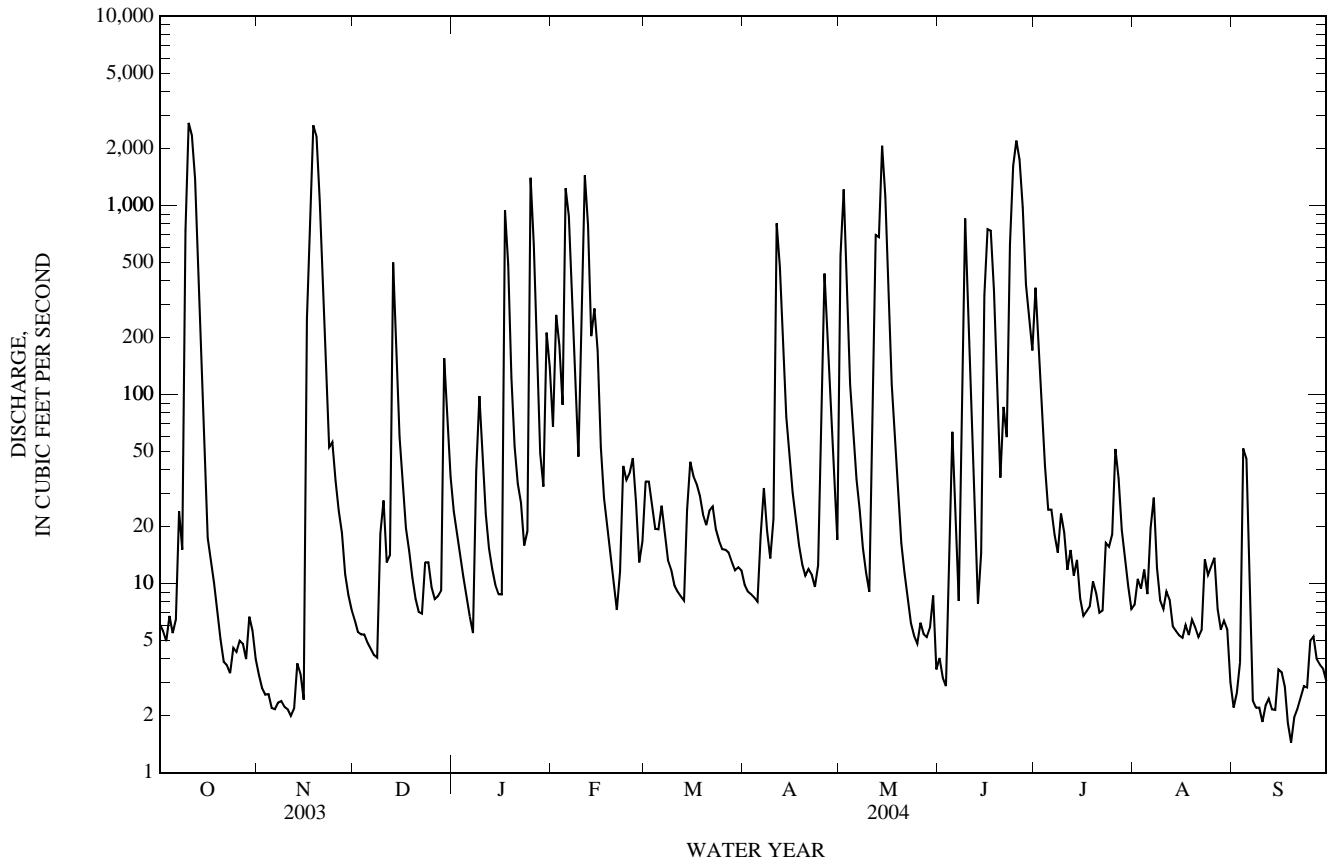
## FOR 2004 WATER YEAR

## WATER YEARS 1972 - 2004h

ANNUAL TOTAL	30,952.32		52,846.1		85.2	
ANNUAL MEAN	84.8		144		158	
HIGHEST ANNUAL MEAN					1979	
LOWEST ANNUAL MEAN					15.9	
HIGHEST DAILY MEAN	2,730	Oct 10	2,730	Oct 10	4,030	May 19, 1989
LOWEST DAILY MEAN	0.02	Jun 3	1.4	Sep 19	0.00	Mar 8, 1979
ANNUAL SEVEN-DAY MINIMUM	0.05	May 17	2.2	Sep 8	0.00	Jul 13, 1988
MAXIMUM PEAK FLOW			2,820	Oct 10	4,760	Jun 5, 1981
MAXIMUM PEAK STAGE			23.15	Oct 10	23.92	Jun 5, 1981
ANNUAL RUNOFF (AC-FT)	61,390		104,800		61,720	
10 PERCENT EXCEEDS	133		369		161	
50 PERCENT EXCEEDS	8.2		14		10	
90 PERCENT EXCEEDS	2.0		3.4		1.1	

h See Period of Record paragraph.

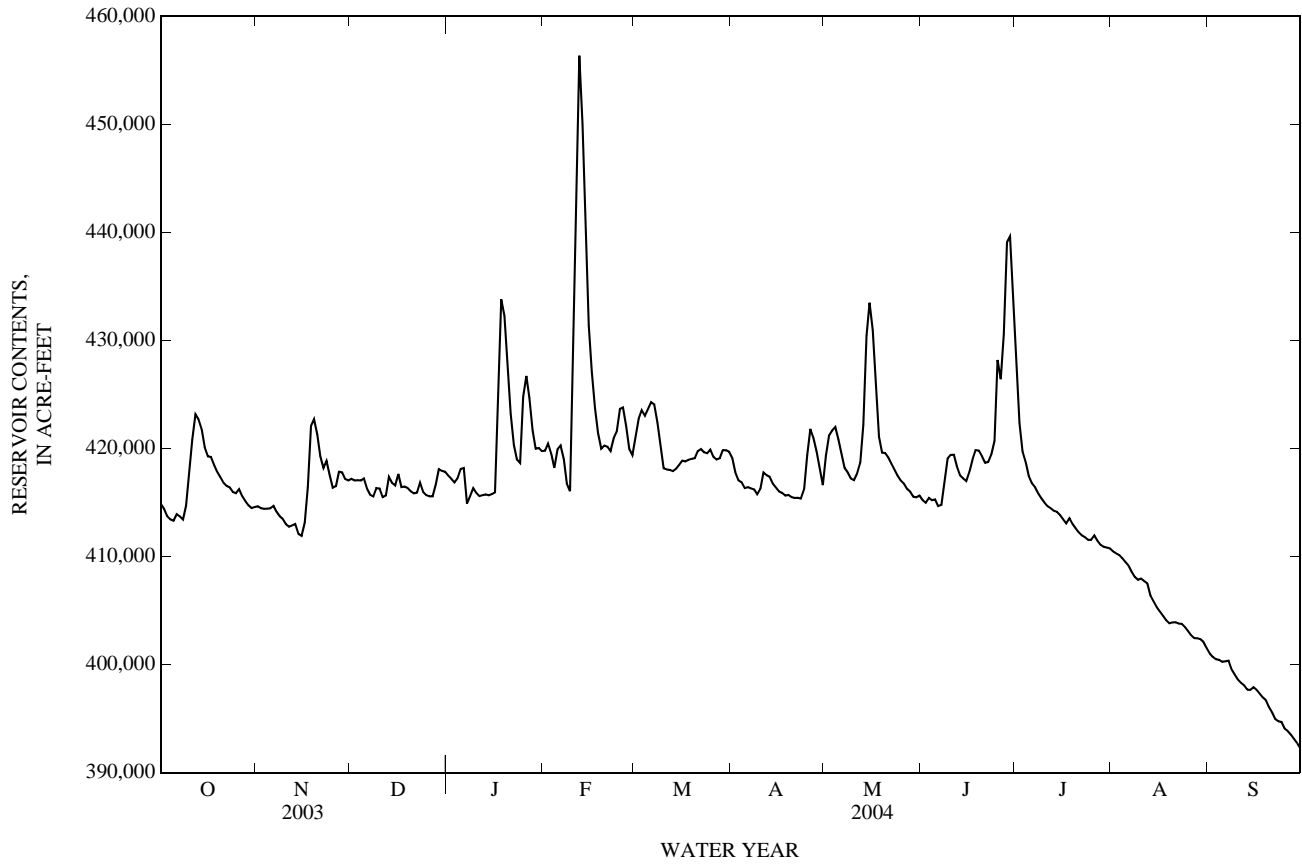
08067500 Cedar Bayou near Crosby, TX—Continued







08067600 Lake Conroe near Conroe, TX—Continued



## WATER-QUALITY RECORDS

## PERIOD OF RECORD.--

CHEMICAL DATA: Sept. 1973 to current year.

BIOCHEMICAL DATA: Sept. 1973 to current year.

302127095335501 -- LK CONROE SITE AC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Reser- voir storage acre-ft (00054)	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 unfl- trd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
MAR													
09...	0958	420,000	1.00	765	13.4	135	8.5	180	16.0	7	62	21.8	1.85
09...	1001	--	10.0	765	12.9	130	8.4	180	16.0	--	--	--	--
09...	1004	--	20.0	765	12.0	121	7.9	180	16.0	--	--	--	--
09...	1007	--	30.0	765	9.8	97	7.4	190	15.0	--	--	--	--
09...	1010	--	40.0	765	8.8	87	7.3	190	15.0	--	--	--	--
09...	1013	--	48.0	765	6.7	65	7.1	195	14.5	7	66	23.1	1.92
JUN													
18...	1005	420,000	1.00	770	6.3	80	8.0	190	27.6	7	63	22.1	1.80
18...	1008	--	10.0	770	6.3	80	8.0	190	27.6	--	--	--	--
18...	1011	--	20.0	770	3.1	40	7.1	190	27.5	--	--	--	--
18...	1014	--	30.0	770	.5	7	6.8	195	27.2	--	--	--	--
18...	1017	--	40.0	770	.2	2	6.9	205	25.6	--	--	--	--
18...	1020	--	46.0	770	.2	2	6.9	220	24.5	--	68	23.9	1.92
AUG													
24...	1220	404,000	1.00	768	4.9	63	7.6	187	29.1	6	63	22.2	1.74
24...	1223	--	10.0	768	2.8	36	7.2	187	29.1	--	--	--	--
24...	1226	--	20.0	768	2.5	32	7.1	188	28.9	--	--	--	--
24...	1229	--	30.0	768	.2	3	7.0	194	28.4	--	--	--	--
24...	1232	--	40.0	768	.2	2	6.8	233	26.7	--	--	--	--
24...	1235	--	45.0	768	.2	2	6.8	254	25.8	--	71	25.1	1.94

302127095335501 -- LK CONROE SITE AC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	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)	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)
MAR													
09...	3.11	.6	11.1	27	55	16.7	<.2	6.2	6.2	100	.41	E.02n	--
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	.49	.05	.06
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	3.19	.6	11.5	26	59	17.5	<.2	8.3	6.3	108	.55	.17	.07
JUN													
18...	2.98	.6	10.7	26	56	16.9	<.2	6.9	5.6	100	.36	<.04	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	.43	E.03n	--
18...	--	--	--	--	--	--	--	--	--	--	.44	.07	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	3.22	.6	10.7	24	71	17.2	<.2	10.7c	4.1	120	1.3	.95	--
AUG													
24...	3.04	.6	10.6	26	57	16.4	<.2	9.0	3.8	101	.54	.10	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	.57	.18	--
24...	--	--	--	--	--	--	--	--	--	--	.81	.43	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	3.52	.5	10.6	23	88	16.3	<.2	14.5	.6	139	3.8	3.07d	--

08067600 Lake Conroe near Conroe, TX—Continued

302127095335501 -- LK CONROE SITE AC  
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 nitrogen, water, fltrd, mg/L (00607)	Ortho-phosphate, water, fltrd, mg/L (00660)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
MAR								
09...	<.06	<.008	--	--	<.02	<.04	7	E.5n
09...	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--
09...	.07	.015	.44	--	<.02	<.04	E6n	E.5n
09...	--	--	--	--	--	--	--	--
09...	.09	.015	.38	--	<.02	<.04	E6n	138
JUN								
18...	<.06	<.008	--	--	<.02	<.04	<6	<.8
18...	--	--	--	--	--	--	--	--
18...	<.06	<.008	--	--	<.02	<.04	<6	E.4n
18...	<.06	<.008	.37	--	<.02	<.04	7	438
18...	--	--	--	--	--	--	--	--
18...	<.06	<.008	.32	.803	.26	.27	1,180	2,760
AUG								
24...	<.06	<.008	.44	--	<.02	<.04	10	10.6
24...	--	--	--	--	--	--	--	--
24...	<.06	<.008	.39	--	<.02	<.04	<6	3.1
24...	<.06	<.008	.38	--	<.02	E.02n	65	949
24...	--	--	--	--	--	--	--	--
24...	<.06	<.008	.69	1.99	.65	.65	3,520	4,580

302132095333701 -- LK CONROE SITE AL  
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)	Specific conductance, wat unf 25 degC (00095)	Temperature, water, deg C (00010)
MAR								
09...	0945	1.00	765	13.1	135	8.6	180	17.0
09...	0948	10.0	765	12.9	133	8.5	180	17.0
09...	0951	20.0	765	11.8	120	8.0	180	16.5
09...	0954	30.0	765	9.2	92	7.4	190	15.5
09...	0957	40.0	765	8.2	81	7.3	190	15.0
09...	1000	50.0	765	6.7	66	7.2	190	15.0
JUN								
18...	1002	1.00	769	6.7	86	8.4	190	28.7
18...	1005	10.0	769	6.7	85	8.2	190	28.1
18...	1008	20.0	769	2.6	33	7.0	190	27.5
18...	1011	30.0	769	.4	5	6.9	195	26.9
18...	1014	40.0	769	.2	3	6.9	205	25.2
18...	1017	50.0	769	.2	2	6.9	230	24.6
AUG								
24...	1323	1.00	768	5.2	68	7.5	185	29.4
24...	1326	10.0	768	4.7	61	7.4	185	29.1
24...	1329	20.0	768	.4	6	6.9	190	28.6
24...	1332	30.0	768	.2	3	7.0	195	28.4
24...	1335	40.0	768	.2	2	6.8	230	26.6
24...	1338	50.0	768	.2	2	6.7	265	25.7

## SAN JACINTO RIVER BASIN

08067600 Lake Conroe near Conroe, TX—Continued

302245095365301 -- LK CONROE SITE BC  
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 unfl- uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
MAR								
09...	0825	1.00	764	12.5	126	8.0	190	16.0
09...	0828	10.0	764	12.2	123	8.0	190	16.0
09...	0831	20.0	764	10.2	102	7.4	190	15.5
09...	0834	25.0	764	9.2	91	7.1	190	15.0
JUN								
18...	0847	1.00	770	7.5	95	7.1	195	28.7
18...	0850	10.0	770	5.2	66	7.6	195	28.2
18...	0853	20.0	770	1.8	23	6.8	195	27.7
18...	0856	24.0	770	.6	8	6.9	195	27.5
AUG								
24...	1153	1.00	768	6.4	83	8.0	190	29.4
24...	1156	10.0	768	5.7	74	7.8	190	29.2
24...	1159	20.0	768	2.5	32	7.1	190	28.9
24...	1202	24.0	768	1.3	17	7.0	190	28.8

302323095341201 -- LK CONROE 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 unfl- uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
MAR								
09...	1030	1.00	765	13.6	140	8.7	180	17.0
09...	1033	10.0	765	13.2	136	8.5	180	17.0
09...	1036	20.0	765	11.5	116	7.9	185	16.0
09...	1039	30.0	765	9.7	98	7.5	190	16.0
09...	1042	40.0	765	7.3	72	7.2	190	15.0
09...	1045	50.0	765	7.3	72	7.2	190	15.0
JUN								
18...	1045	1.00	769	7.6	99	8.7	190	29.6
18...	1048	10.0	769	6.2	79	8.1	190	28.4
18...	1051	20.0	769	5.9	74	8.0	190	28.0
18...	1054	30.0	769	.6	7	6.9	195	26.9
18...	1057	40.0	769	.2	3	7.0	210	25.7
18...	1100	47.0	769	.1	2	7.0	220	25.1
AUG								
24...	1417	1.00	767	6.3	82	8.0	185	29.6
24...	1420	10.0	767	5.5	71	7.8	185	29.2
24...	1423	20.0	767	5.2	67	7.6	185	29.1
24...	1426	30.0	767	2.5	32	7.2	185	28.8
24...	1429	40.0	767	.3	4	6.8	230	27.2
24...	1432	47.0	767	.2	3	6.7	255	26.7

## 08067600 Lake Conroe near Conroe, TX—Continued

302320095334001 -- LK CONROE SITE CL  
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 unfl- trd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
MAR								
09...	1010	1.00	765	13.6	140	8.8	185	17.0
09...	1013	10.0	765	13.4	138	8.7	185	17.0
09...	1016	20.0	765	11.7	118	8.0	185	16.0
09...	1019	30.0	765	9.6	97	7.5	190	16.0
09...	1022	40.0	765	7.8	77	7.3	190	15.0
JUN								
18...	1026	1.00	769	7.3	94	8.7	190	28.8
18...	1029	10.0	769	7.0	90	8.5	190	28.3
18...	1032	20.0	769	2.2	28	7.0	190	27.8
18...	1035	30.0	769	.6	7	6.9	195	27.5
18...	1038	40.0	769	.2	3	7.0	210	25.7
AUG								
24...	1355	1.00	768	6.3	82	8.0	185	29.5
24...	1358	10.0	768	6.2	80	8.0	185	29.3
24...	1401	20.0	768	5.5	72	7.8	185	29.1
24...	1404	30.0	768	1.1	14	7.0	190	28.6
24...	1407	40.0	768	.3	4	6.8	230	27.2

302448095374101 -- LK CONROE 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 unfl- trd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
MAR								
09...	1120	1.00	764	12.1	128	8.2	180	18.0
09...	1123	10.0	764	11.9	124	8.1	180	17.5
09...	1126	20.0	764	10.3	106	7.5	180	17.0
09...	1129	24.0	764	6.9	70	7.2	180	16.0
JUN								
18...	1117	1.00	769	7.5	98	8.7	190	29.8
18...	1120	10.0	769	4.3	56	7.5	190	28.6
18...	1123	20.0	769	2.1	27	7.1	190	28.2
18...	1126	23.0	769	.8	10	7.0	190	28.0
AUG								
24...	1502	1.00	767	6.9	92	8.6	185	30.4
24...	1505	10.0	767	6.1	80	8.3	185	29.6
24...	1508	20.0	767	3.5	45	7.5	185	29.4

302607095360901 -- LK CONROE SITE EC  
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 unfl- trd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)
MAR													
09...	1210	1.00	764	11.4	118	7.8	165	17.0	8	55	19.1	1.73	2.92
09...	1213	10.0	764	10.6	109	7.6	170	17.0	--	--	--	--	--
09...	1216	20.0	764	9.9	100	7.5	180	16.0	--	--	--	--	--
09...	1219	30.0	764	8.4	84	7.3	185	15.5	--	--	--	--	--
09...	1222	35.0	764	7.5	74	7.3	185	15.0	9	60	21.2	1.79	3.03
JUN													
18...	1150	1.00	769	7.3	95	8.5	190	29.5	20	63	22.2	1.82	3.06
18...	1153	10.0	770	6.0	77	8.1	190	28.5	--	--	--	--	--
18...	1156	20.0	770	5.1	66	7.6	190	28.7	--	--	--	--	--
18...	1159	30.0	770	.9	12	7.0	190	27.7	--	--	--	--	--
18...	1202	34.0	770	.4	5	7.0	205	26.9	8	64	22.7	1.84	3.04
AUG													
24...	1530	1.00	768	6.1	79	8.2	186	29.6	8	63	22.3	1.75	2.98
24...	1533	10.0	768	5.5	72	7.9	186	29.3	--	--	--	--	--
24...	1536	20.0	768	3.7	48	7.5	186	29.1	--	--	--	--	--
24...	1539	30.0	768	3.8	49	7.5	186	29.1	--	--	--	--	--
24...	1542	34.0	768	3.7	48	7.5	186	29.1	9	64	22.6	1.78	3.10

## SAN JACINTO RIVER BASIN

08067600 Lake Conroe near Conroe, TX—Continued

302607095360901 -- LK CONROE SITE EC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, water fltrd, 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 (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)
MAR													
09...	.6	10.2	27	47	16.2	<.2	7.5	6.2	92	.42	<.04	--	E.04n
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	.6	10.9	27	51	17.0	<.2	7.6	6.3	99	.48	.11	.07	.09
JUN													
18...	.6	10.8	26	43	17.2	<.2	7.6	5.6	94	.37	<.04	--	<.06
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	.40	<.04	--	<.06
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	.6	10.7	25	57	17.2	<.2	7.9	5.5	104	.48	.11	--	<.06
AUG													
24...	.6	10.5	26	55	16.4	<.2	9.1	3.8	100	.44	E.02n	--	<.06
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	.43	<.04	--	<.06
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	.6	10.6	25	55	16.4	<.2	9.2	3.8	101	.50	.10	--	<.06

302607095360901 -- LK CONROE SITE EC  
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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
MAR						
09...	.008	--	<.02	<.04	29	1.5
09...	--	--	--	--	--	--
09...	--	--	--	--	--	--
09...	--	--	--	--	--	--
09...	.016	.37	<.02	<.04	9	12.8
JUN						
18...	<.008	--	<.02	<.04	<6	1.0
18...	--	--	--	--	--	--
18...	<.008	--	<.02	<.04	<6	1.7
18...	--	--	--	--	--	--
18...	E.004n	.37	<.02	<.04	40	687
AUG						
24...	<.008	--	<.02	E.02n	E3n	1.3
24...	--	--	--	--	--	--
24...	<.008	--	<.02	<.04	E4n	1.2
24...	--	--	--	--	--	--
24...	<.008	.40	<.02	<.04	9	36.1

302714095372201 -- LK CONROE SITE FC  
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, std units (00400)	Specific conductance, wat unfltrd, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
MAR								
09...	1303	1.00	764	11.3	122	7.8	165	19.0
09...	1306	10.0	764	11.2	120	7.8	165	19.0
09...	1309	18.0	764	6.2	64	7.1	180	17.0
JUN								
18...	1232	1.00	770	7.1	94	8.4	185	30.7
18...	1235	10.0	770	3.7	48	7.3	190	29.2
18...	1238	17.0	770	2.1	27	7.1	190	28.8
AUG								
24...	1610	1.00	766	8.4	111	9.0	185	30.4
24...	1613	10.0	766	5.3	69	8.1	185	29.8
24...	1616	15.0	766	4.8	62	7.8	185	29.4

08067600 Lake Conroe near Conroe, TX—Continued

303129095360501 -- LK CONROE SITE GC  
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)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)
MAR													
09...	1430	1.00	764	7.8	85	7.1	150	19.5	11	50	17.2	1.63	2.80
09...	1433	10.0	764	6.9	73	7.1	160	18.0	--	--	--	--	--
09...	1436	20.0	764	6.3	65	7.1	160	17.0	--	--	--	--	--
09...	1439	24.0	764	6.2	64	7.1	160	17.0	8	51	17.5	1.73	2.86
JUN													
18...	1315	1.00	770	7.8	106	8.6	170	31.7	--	53	18.6	1.68	3.11
18...	1318	10.0	770	2.3	30	6.9	175	29.5	--	--	--	--	--
18...	1321	20.0	770	1.5	20	6.8	175	29.0	--	--	--	--	--
18...	1324	23.0	770	1.4	18	6.8	175	29.0	10	53	18.5	1.71	3.25
AUG													
24...	1700	1.00	766	7.6	100	8.6	182	30.2	8	60	21.2	1.75	3.01
24...	1703	10.0	766	4.3	56	7.3	183	29.5	--	--	--	--	--
24...	1706	20.0	766	3.4	44	7.1	183	29.3	--	--	--	--	--
24...	1709	22.0	766	3.1	41	7.1	183	29.3	10	58	20.3	1.76	3.15

303129095360501 -- LK CONROE SITE GC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	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)	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)
MAR													
09...	.6	9.24	27	39	15.6	<.2	8.8	6.4	86	.53	.09	.08	.10
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	.6	9.14	27	43	14.2	<.2	11.8	6.3	91	.66	E.03n	.20	.21
JUN													
18...	.6	10.6	29	55	17.6	<.2	12.0	6.2	103	.44	<.04	--	<.06
18...	--	--	--	--	--	--	--	--	--	.59	.08	.07	.08
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	.6	10.7	29	44	18.2	<.2	16.0	6.7	102	.58	.11	.08	.09
AUG													
24...	.6	10.7	27	52	17.4	<.2	11.7	3.9	101	.46	<.04	--	<.06
24...	--	--	--	--	--	--	--	--	--	.47	.06	--	<.06
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	.7	11.4	29	48	18.4	<.2	13.8	4.3	102	.51	.11	--	<.06

## SAN JACINTO RIVER BASIN

08067600 Lake Conroe near Conroe, TX—Continued

303129095360501 -- LK CONROE SITE GC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro- gen, water, fltrd, mg/L (00607)	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)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
MAR							
09...	.011	.44	--	E.01n	<.04	52	9.8
09...	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--
09...	.008	--	.086	.03	.04	89	11.9
JUN							
18...	<.008	--	--	E.01n	E.03n	16	1.7
18...	.008	.51	.147	.05	.05	30	83.0
18...	--	--	--	--	--	--	--
18...	.009	.47	.190	.06	.08	47	177
AUG							
24...	<.008	--	--	<.02	<.04	6	.8
24...	<.008	.41	--	<.02	E.02n	8	3.1
24...	--	--	--	--	--	--	--
24...	E.004n	.40	--	E.01n	E.02n	9	12.7

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



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08067650 West Fork San Jacinto River below Lake Conroe near Conroe, TX

LOCATION.--Lat 30°20'31", long 95°32'34", Montgomery County, Hydrologic Unit 12040101, on right bank at downstream side of bridge on State Highway 105, 3.0 mi downstream from Lake Conroe Dam, and 5.9 mi west of Conroe.

DRAINAGE AREA.--451 mi<sup>2</sup>.

PERIOD OF RECORD.--Aug. 1972 to Sept. 1989 (daily mean discharges for periods of outflow from Lake Conroe only), Oct. 1989 to Sept. 1993 (daily mean discharges 10 ft<sup>3</sup>/s or greater), Oct. 1993 to Sept. 1994 (daily mean discharges 100 ft<sup>3</sup>/s or greater), Oct. 1994 to Sept. 1997 (daily mean discharges 20 ft<sup>3</sup>/s or greater), Oct. 1997 to Sept. 2000 (daily mean discharges), Oct. 2000 to current year (daily mean discharges 10 ft<sup>3</sup>/s or greater). Water-quality records: Chemical data: Oct. 1972 to Sept. 1986, Oct. 1987 to Aug. 1989. Biochemical data: Oct. 1972 to Sept. 1986, Oct. 1987 to Aug. 1989. Pesticide data: Oct. 1972 to Sept. 1986, Oct. 1987 to Aug. 1989.

REVISED RECORDS.--WDR TX-96-2.

GAGE.--Water-stage recorder. Datum of gage is 116.06 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good. Since Jan. 9, 1973, at least 10% of contributing drainage area has been regulated. No known diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,000 ft<sup>3</sup>/s, Oct. 17, 1994, gage height, 42.68 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Nov. 1940 reached a stage of 41.94 ft, from information by the Texas Department of Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,570 ft<sup>3</sup>/s, Feb. 13, gage height, 34.11 ft; minimum not determined.

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	---	---	---	219	176	1,000	392	757	---	6,290	---	---
2	---	---	---	217	198	1,270	664	792	---	4,360	---	---
3	---	---	---	216	453	1,270	222	746	---	1,570	---	---
4	---	---	---	125	727	1,270	102	741	---	705	---	---
5	---	---	10	15	802	1,270	101	737	137	640	---	---
6	---	---	---	---	742	1,260	103	734	106	171	---	---
7	---	---	---	---	1,060	1,250	102	461	---	152	---	---
8	---	---	---	---	1,130	1,240	106	185	219	151	---	---
9	27	---	---	---	406	1,230	74	182	675	157	---	---
10	42	---	14	---	1,360	660	43	184	660	145	---	---
11	181	---	---	---	3,600	111	549	210	662	89	---	---
12	393	---	---	---	6,580	109	493	203	658	---	11	---
13	732	---	14	---	8,500	108	181	832	499	---	---	---
14	757	---	---	---	8,420	111	173	2,730	680	---	---	---
15	210	---	---	---	5,680	110	172	3,080	704	---	---	---
16	189	---	13	---	3,010	113	97	3,780	530	---	---	---
17	189	24	---	903	2,350	113	---	3,940	158	---	---	---
18	187	826	---	2,590	1,380	112	---	3,410	151	---	---	---
19	186	865	---	3,490	840	111	---	776	153	---	---	---
20	186	1,150	---	3,460	181	112	---	201	153	---	---	---
21	174	951	---	2,890	263	116	---	e188	147	---	---	---
22	14	438	---	1,420	270	109	---	e166	149	---	---	---
23	---	269	---	770	822	104	---	e140	481	---	---	---
24	---	254	---	808	854	105	39	e115	818	---	---	---
25	---	25	---	2,530	877	592	591	e92	1,650	---	---	---
26	98	---	---	2,640	1,160	373	1,380	e73	3,240	---	---	---
27	---	10	---	2,320	1,440	105	1,780	69	4,230	---	---	---
28	---	29	11	1,580	1,340	104	1,440	56	6,230	---	---	---
29	---	---	224	1,140	719	108	1,270	---	6,380	---	---	---
30	---	---	225	644	---	106	705	---	6,390	---	---	---
31	---	---	222	193	---	104	---	---	---	---	---	---

e Estimated

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## SAN JACINTO RIVER BASIN

08068000 West Fork San Jacinto River near Conroe, TX

LOCATION.--Lat 30°14'40", long 95°27'25". Montgomery County, Hydrologic Unit 12040101, near center of bridge on downstream side of Interstate Highway 45 northbound feeder road, 300 ft upstream from Missouri Pacific Railroad Co. bridge, 3.5 mi downstream from Lake Creek, 4.2 mi south of Conroe, and at mile 79.

DRAINAGE AREA.--828 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1924 to Sept. 1927, July 1939 to current year. Water-quality records: Chemical data: Mar. 1959 to Sept. 1994. Biochemical data: Mar. 1959 to Sept. 1994. Pesticide data: May 1975 to June 1982. Sediment data: Feb. 1966 to Sept. 1967, Oct. 1974 to Sept. 1994. Specific conductance: Oct. 1961 to Sept. 1990. Water temperature: Oct. 1961 to Sept. 1990. Dissolved oxygen: Aug. 1979 to May 1981.

REVISED RECORDS.--WSP 1058: 1926. WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 95.03 ft above NGVD of 1929. May 7, 1924, to Sept. 30, 1927, nonrecording gage at railroad bridge 300 ft downstream at datum 30.10 ft higher. July 13, 1939, to Sept. 30, 1963, water-stage recorder at datum 5.0 ft higher. Satellite telemeter at station.

REMARKS.--Records fair. Since water year 1973, at least 10% of contributing drainage area has been regulated. There are no large diversions above station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--36 years (water years 1925-27, 1940-72), prior to regulation by Lake Conroe, (station 08067600) 477 ft<sup>3</sup>/s (345,600 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Dec. 1913 reached a stage of 30.2 ft, present site and datum, from information by Missouri Pacific Railroad Co., discharge 101,000 ft<sup>3</sup>/s, from rating curve as explained below.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS, 1925-1927, 1940-1972: Maximum discharge, 110,000 ft<sup>3</sup>/s Nov. 25, 1940 (gage height, 30.85 ft), present datum, from rating curve extended above 43,000 ft<sup>3</sup>/s on basis of velocity-area studies; no flow June 14, 1956, and Sept. 19 to Oct. 1, 1965, result of temporary dams. Maximum stage since at least Dec. 1913, that of Nov. 25, 1940.

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	56	77	150	517	592	1,110	347	2,090	71	7,920	79	47
2	60	72	139	444	721	1,580	652	2,300	67	5,830	79	41
3	55	72	133	409	751	1,690	447	1,340	69	2,920	67	41
4	52	71	124	372	931	1,900	217	1,020	70	1,440	73	41
5	53	70	119	191	1,340	1,560	200	1,050	127	1,170	86	39
6	71	68	120	161	1,260	1,380	207	878	217	679	73	65
7	66	65	116	145	1,240	1,600	201	690	87	510	61	68
8	61	64	117	147	1,510	1,530	196	339	316	465	54	40
9	161	62	154	147	853	1,230	192	302	879	431	49	40
10	624	64	140	142	1,390	947	148	296	789	394	49	36
11	379	63	131	138	4,740	355	771	472	819	368	56	33
12	719	61	127	135	8,310	302	848	716	805	202	62	32
13	1,360	59	443	133	15,900	284	564	1,590	800	153	58	31
14	985	57	262	131	12,800	301	416	5,140	814	142	46	46
15	453	56	215	132	8,600	315	342	4,660	1,410	124	41	49
16	262	141	209	147	3,960	322	279	6,140	1,390	113	39	34
17	239	669	196	2,670	2,790	407	135	5,560	592	102	38	33
18	227	1,680	163	3,540	1,780	379	101	4,100	446	94	37	32
19	217	1,860	144	5,050	1,240	300	88	1,620	366	85	53	31
20	210	2,140	133	4,960	777	271	79	906	302	81	72	30
21	207	2,090	127	3,470	660	288	74	789	277	79	185	29
22	130	916	123	1,900	622	276	71	533	283	82	94	29
23	70	607	130	1,090	912	323	68	415	883	81	72	29
24	65	505	131	1,230	1,140	364	85	358	1,320	73	55	35
25	110	313	120	3,850	1,360	599	391	322	1,510	103	48	31
26	153	183	115	3,900	1,640	677	2,710	207	2,780	121	44	29
27	169	161	117	4,710	1,860	385	2,050	172	3,440	101	41	28
28	177	162	122	3,600	1,620	290	1,650	158	5,210	93	39	30
29	141	153	330	1,720	1,030	277	1,320	113	7,390	113	e46	29
30	103	146	462	1,180	---	288	970	82	9,380	91	e71	28
31	84	---	579	732	---	324	---	76	---	81	65	---
TOTAL	7,719	12,707	5,691	47,093	82,329	21,854	15,819	44,434	42,909	24,241	1,932	1,106
MEAN	249	424	184	1,519	2,839	705	527	1,433	1,430	782	62.3	36.9
MAX	1,360	2,140	579	5,050	15,900	1,900	2,710	6,140	9,380	7,920	185	68
MIN	52	56	115	131	592	271	68	76	67	73	37	28
AC-FT	15,310	25,200	11,290	93,410	163,300	43,350	31,380	88,130	85,110	48,080	3,830	2,190

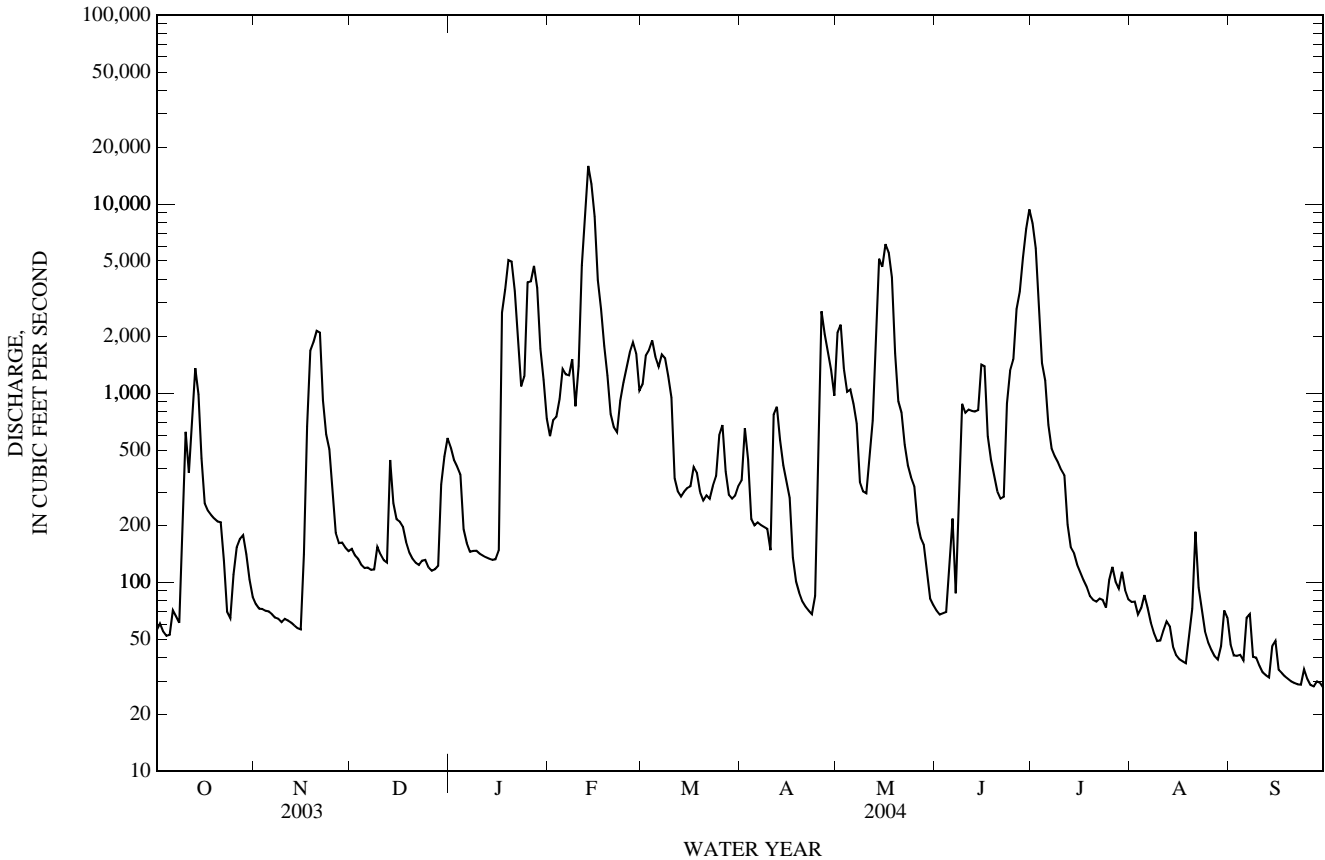
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2004z, BY WATER YEAR (WY)

MEAN	566	700	686	914	925	669	667	649	697	142	72.5	223
MAX	7,836	5,757	2,064	3,360	3,258	2,138	4,185	4,153	3,897	782	368	1,945
(WY)	(1995)	(1999)	(1977)	(1998)	(1992)	(2001)	(1979)	(1983)	(2001)	(2004)	(1983)	(1979)
MIN	18.7	25.7	31.4	33.0	30.8	31.3	34.5	35.8	26.1	19.0	14.7	20.0
(WY)	(2000)	(1991)	(1981)	(2000)	(2000)	(2000)	(1996)	(2003)	(1996)	(1996)	(2000)	(2000)

08068000 West Fork San Jacinto River near Conroe, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1973 - 2004z	
ANNUAL TOTAL	114,866		307,834			
ANNUAL MEAN	315		841		573	
HIGHEST ANNUAL MEAN					1,444	1995
LOWEST ANNUAL MEAN					39.3	2000
HIGHEST DAILY MEAN	6,680	Feb 24	15,900	Feb 13	97,200	Oct 18, 1994
LOWEST DAILY MEAN	23	Jun 1	28	Sep 27	8.9	Oct 3, 1998
ANNUAL SEVEN-DAY MINIMUM	25	May 27	30	Sep 21	11	Aug 18, 1981
MAXIMUM PEAK FLOW			18,200	Feb 13	115,000	Oct 18, 1994
MAXIMUM PEAK STAGE			20.44	Feb 13	32.30	Oct 18, 1994
ANNUAL RUNOFF (AC-FT)	227,800		610,600		415,300	
10 PERCENT EXCEEDS	610		1,900		1,470	
50 PERCENT EXCEEDS	116		207		94	
90 PERCENT EXCEEDS	42		48		24	

z Period of regulated streamflow.  
e Estimated



08068090 West Fork San Jacinto River above Lake Houston near Porter, TX

LOCATION.--Lat 30°05'09", long 95°17'59", Montgomery County, Hydrologic Unit 12040101, on left bank, 4.4 mi southwest of Porter, 5.0 mi upstream from Spring Creek and 6.2 mi northwest of Humble.

DRAINAGE AREA.--962 mi<sup>2</sup>.

PERIOD OF RECORD.--Feb. to Mar. 1984 (discharge measurements only), May 1984 to current year. During water years 1968-72 and 1974-75 occasional low flow measurements were made at site 1.7 mi downstream. Water-quality records: Chemical data: Feb. 1984 to Sept. 1999. Biochemical data: Feb. 1984 to Sept. 1999. Pesticide data: Feb. 1984 to Sept. 1990.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 33 ft above NGVD of 1929, from topographic map and levels. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since installation of gage in 1984, at least 10% of contributing drainage area has been regulated. There are no large diversions upstream from station. There is minor wastewater effluent being discharged by the city of Conroe and by other smaller communities into the river upstream from 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	66	89	158	515	761	1,730	341	3,380	160	11,200	105	117
2	61	83	149	421	862	2,280	615	8,420	151	8,770	107	93
3	66	76	141	368	1,030	2,270	704	3,270	148	5,040	101	91
4	60	73	131	346	1,090	2,550	329	1,660	149	2,180	92	87
5	61	70	120	259	1,410	2,340	262	1,470	172	1,510	98	81
6	90	68	115	162	1,900	1,900	254	1,280	281	1,070	102	74
7	98	63	121	141	1,370	1,980	306	1,040	273	588	91	194
8	77	61	106	146	1,770	2,110	262	599	341	454	83	124
9	356	61	119	162	1,320	1,680	251	422	1,510	397	77	84
10	1,620	58	223	148	1,260	1,430	234	413	1,140	366	103	73
11	745	59	153	137	6,210	655	1,590	497	1,080	331	88	66
12	602	57	133	131	8,970	426	1,600	1,500	1,070	301	89	62
13	1,270	54	635	130	13,900	388	1,170	1,730	966	203	86	58
14	1,230	51	491	128	17,000	400	712	9,170	1,270	176	81	59
15	776	58	289	127	13,300	495	536	7,670	3,650	161	69	96
16	363	106	234	134	7,340	445	444	7,900	4,420	147	64	76
17	322	2,580	206	4,000	4,340	452	318	7,880	2,480	135	61	67
18	290	8,100	183	4,540	3,060	512	210	6,080	1,160	126	62	58
19	265	3,080	156	5,230	1,980	417	179	2,940	836	117	69	53
20	247	2,370	136	5,830	1,230	362	165	1,310	590	109	100	49
21	235	2,480	128	4,410	710	367	151	1,100	491	92	315	46
22	218	1,330	121	2,620	706	416	147	778	493	110	351	44
23	120	794	127	1,410	1,060	364	138	542	801	123	171	43
24	88	685	127	1,370	1,580	426	158	460	1,760	109	125	43
25	82	471	126	5,570	2,090	509	286	423	2,120	104	102	49
26	284	276	114	5,410	2,330	893	2,640	359	2,870	176	88	46
27	231	223	110	5,200	2,570	601	2,880	283	4,400	128	79	42
28	224	185	114	4,870	2,290	405	2,320	263	6,650	123	85	40
29	182	181	246	2,440	1,670	358	1,610	244	9,070	120	844	41
30	141	160	404	1,780	---	375	1,380	195	11,700	134	256	40
31	107	---	503	1,220	---	387	---	175	---	119	156	---
TOTAL	10,577	24,002	6,119	59,355	105,109	29,923	22,192	73,453	62,202	34,719	4,300	2,096
MEAN	341	800	197	1,915	3,624	965	740	2,369	2,073	1,120	139	69.9
MAX	1,620	8,100	635	5,830	17,000	2,550	2,880	9,170	11,700	11,200	844	194
MIN	60	51	106	127	706	358	138	175	148	92	61	40
AC-FT	20,980	47,610	12,140	117,700	208,500	59,350	44,020	145,700	123,400	68,870	8,530	4,160

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2004, BY WATER YEAR (WY)

MEAN	951	1,024	894	1,166	1,167	946	619	621	885	187	84.0	125
MAX	10,910	8,244	1,881	3,199	3,763	2,688	2,229	2,369	4,261	1,120	223	443
(WY)	(1995)	(1999)	(1992)	(1998)	(1992)	(2001)	(1991)	(2004)	(2001)	(2004)	(1995)	(2003)
MIN	22.2	29.8	42.7	41.5	37.8	34.3	60.7	46.3	31.8	17.6	16.1	23.3
(WY)	(1991)	(1991)	(1990)	(2000)	(2000)	(2000)	(2000)	(2003)	(1998)	(2000)	(2000)	(2000)

## SUMMARY STATISTICS

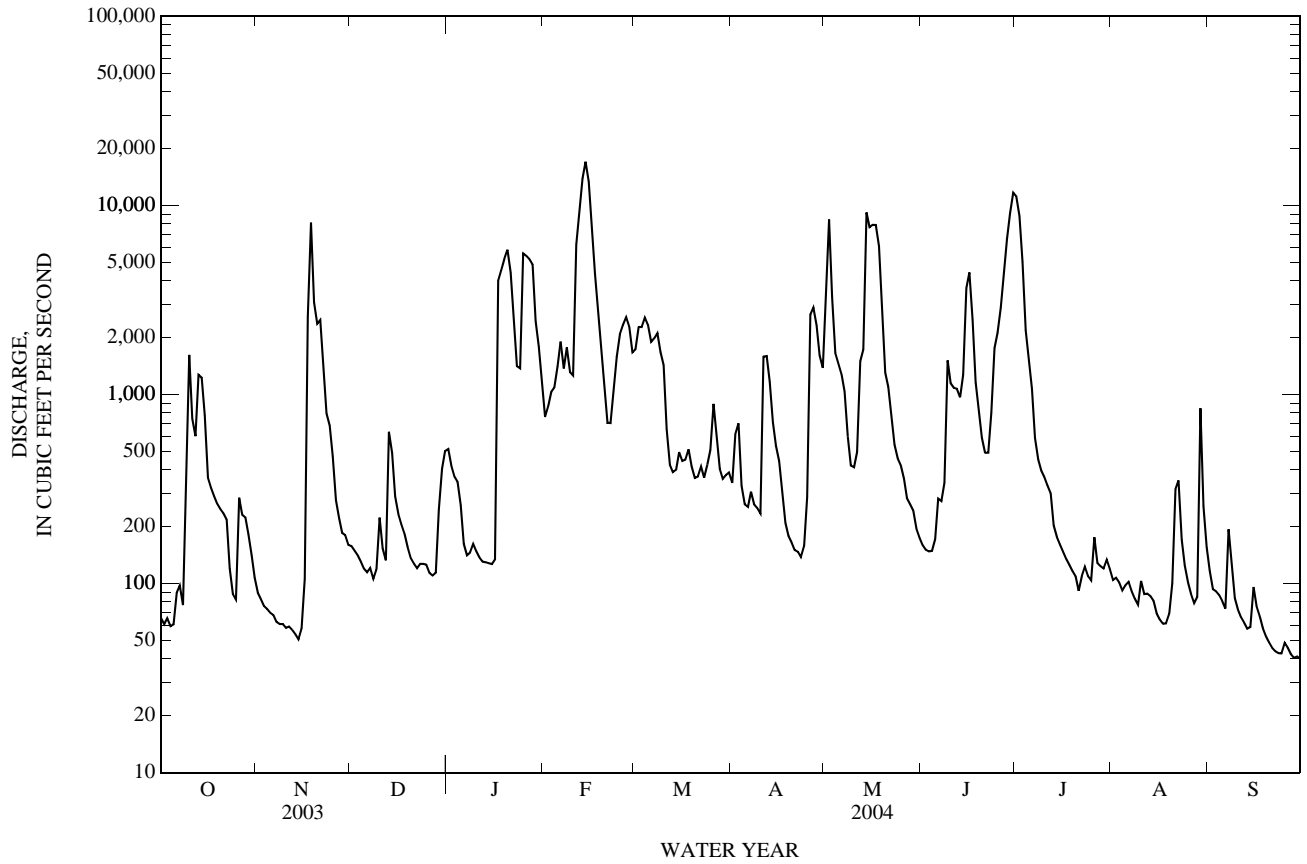
## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1984 - 2004

ANNUAL TOTAL	148,913	434,047	
ANNUAL MEAN	408	1,186	724
HIGHEST ANNUAL MEAN			1,694
LOWEST ANNUAL MEAN			51.6
HIGHEST DAILY MEAN	8,100	Nov 18	17,000
LOWEST DAILY MEAN	23	Aug 7	40
ANNUAL SEVEN-DAY MINIMUM	24	Aug 4	43
MAXIMUM PEAK FLOW			18,000
MAXIMUM PEAK STAGE			27.72
ANNUAL RUNOFF (AC-FT)	295,400	860,900	524,900
10 PERCENT EXCEEDS	778	2,980	1,930
50 PERCENT EXCEEDS	136	290	120
90 PERCENT EXCEEDS	38	69	32

08068090 West Fork San Jacinto River above Lake Houston near Porter, TX—Continued



08068275 Spring Creek near Tomball, TX

LOCATION.--Lat 30°07'11", long 95°38'45", Montgomery County, Hydrologic Unit 12040102, near the left bank at downstream side of Highway 249, 2.0 mi northwest of Tomball.

DRAINAGE AREA.--186 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1999 to current.

GAGE.--Water-stage recorder and. Datum of gage is NGVD of 1988. Oct. 1999 to Sept. 2002, water-stage recorder at present site and at datum 2.23 ft lower. Radio telemeter at station. 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	1.8	5.8	8.5	19	75	241	24	539	18	194	13	23
2	1.7	5.5	7.9	15	101	436	26	1,800	17	238	15	16
3	1.6	5.3	7.7	14	162	278	154	1,320	16	113	11	28
4	1.4	5.5	7.7	13	96	137	120	233	14	75	10	57
5	11	5.8	7.2	12	393	135	60	84	14	59	9.1	108
6	13	5.7	6.7	10	469	181	43	57	13	48	8.6	32
7	23	5.6	6.9	8.7	157	101	59	44	13	40	7.9	23
8	11	5.2	7.4	10	81	69	60	36	64	35	7.4	47
9	71	4.8	11	13	61	53	42	32	201	31	7.3	37
10	563	4.8	11	12	268	45	57	29	72	30	28	20
11	172	5.2	9.8	11	1,810	40	1,160	44	37	29	86	14
12	47	5.9	16	10	2,760	36	1,620	271	26	41	26	11
13	24	6.5	231	9.6	1,840	35	1,100	315	59	60	14	9.6
14	15	6.6	77	9.3	797	38	340	3,560	406	40	9.8	9.8
15	9.8	7.7	36	9.8	792	60	113	3,820	100	28	7.6	55
16	6.8	8.9	24	19	406	54	72	1,680	703	22	6.7	20
17	5.6	101	17	1,060	149	47	54	391	525	19	6.2	12
18	4.5	776	13	1,880	100	46	43	226	146	17	6.3	9.0
19	3.7	619	12	953	78	44	36	151	102	15	8.0	7.5
20	3.1	118	10	150	69	38	31	98	57	14	57	6.7
21	2.7	46	9.7	79	60	44	29	69	36	14	64	6.1
22	2.5	29	9.6	57	52	40	25	55	34	26	34	5.8
23	2.3	25	12	46	131	41	23	45	623	21	35	5.5
24	2.1	20	12	90	334	36	27	38	907	18	21	5.2
25	22	14	11	1,460	882	33	135	33	1,300	18	15	4.8
26	179	12	9.5	2,070	699	61	743	29	1,340	16	11	4.9
27	40	11	9.4	781	188	44	396	26	1,440	15	8.2	4.9
28	20	11	12	134	100	37	108	23	1,830	14	26	5.1
29	13	11	31	89	78	33	61	22	1,250	13	342	4.9
30	9.1	9.5	36	132	---	34	43	20	475	17	92	4.7
31	6.9	---	25	97	---	29	---	19	---	14	39	---
TOTAL	1,289.6	1,897.3	705.0	9,273.4	13,188	2,546	6,804	15,109	11,838	1,334	1,032.1	597.5
MEAN	41.6	63.2	22.7	299	455	82.1	227	487	395	43.0	33.3	19.9
MAX	563	776	231	2,070	2,760	436	1,620	3,820	1,830	238	342	108
MIN	1.4	4.8	6.7	8.7	52	29	23	19	13	13	6.2	4.7
AC-FT	2,560	3,760	1,400	18,390	26,160	5,050	13,500	29,970	23,480	2,650	2,050	1,190

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2004, BY WATER YEAR (WY)

	172	213	154	167	186	201	98.2	148	274	22.4	53.6	49.1
MEAN	172	213	154	167	186	201	98.2	148	274	22.4	53.6	49.1
MAX	572	662	402	299	455	745	227	487	946	54.2	225	137
(WY)	(2003)	(2003)	(2002)	(2004)	(2004)	(2001)	(2004)	(2004)	(2001)	(2002)	(2002)	(2001)
MIN	0.00	0.00	0.12	0.74	0.51	9.74	10.3	7.54	7.59	0.24	0.00	11.7
(WY)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)	(2003)	(2003)	(2000)	(2000)	(2000)

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

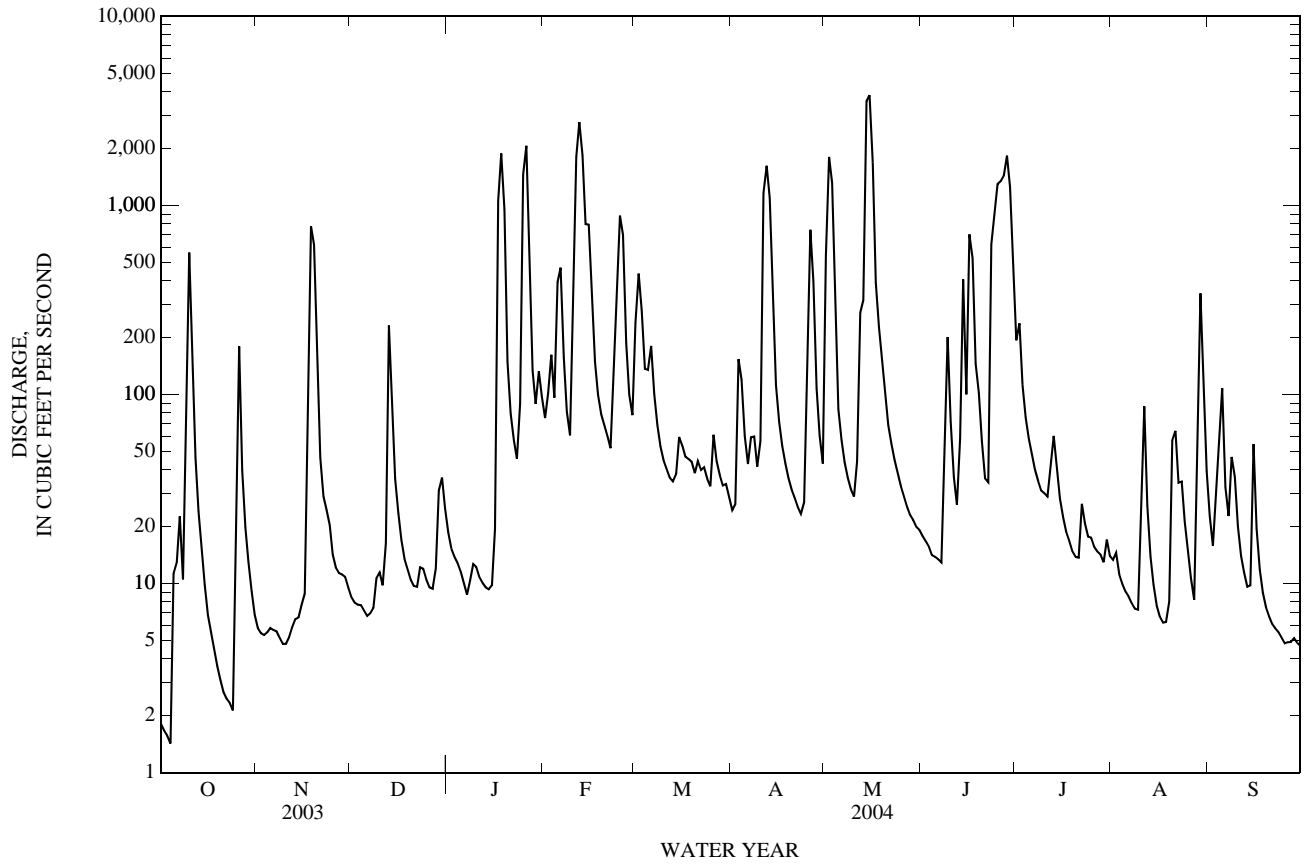
## FOR 2004 WATER YEAR

## WATER YEARS 2000 - 2004

ANNUAL TOTAL	28,156.38		65,613.9			
ANNUAL MEAN	77.1		179		144	
HIGHEST ANNUAL MEAN					214	
LOWEST ANNUAL MEAN					19.1	
HIGHEST DAILY MEAN	3,450		Feb 22		10,200	
LOWEST DAILY MEAN	0.98		Aug 8		0.00	
ANNUAL SEVEN-DAY MINIMUM	1.3		Aug 3		0.00	
MAXIMUM PEAK FLOW			4,870		May 14	
MAXIMUM PEAK STAGE			149.37		May 14	
ANNUAL RUNOFF (AC-FT)	55,850		130,100		104,600	
10 PERCENT EXCEEDS	111		471		226	
50 PERCENT EXCEEDS	11		32		16	
90 PERCENT EXCEEDS	3.1		6.4		0.00	



08068275 Spring Creek near Tomball, TX—Continued



08068275 Spring Creek near Tomball, TX—Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1999 to current year.

pH: Oct. 1999 to current year.

WATER TEMPERATURE: Oct. 1999 to current year.

DISSOLVED OXYGEN: Oct. 1999 to current year.

INSTRUMENTATION.--Water-quality monitor since Oct. 1999.

REMARKS.--Records for water temperature and pH are good; records for specific conductance and dissolved oxygen are fair. Interruptions in the record occurred when the instrument was out of the water.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 547 microsiemens/cm, Sept. 1, 2003; minimum, 17 microsiemens/cm, June 9, 2001.

pH: Maximum, 8.7 standard units, Apr. 2, 2000; minimum, 5.3 standard units, May 21, 2000, June 10, 11, 2001.

WATER TEMPERATURES: Maximum, 30.5°C, Oct. 5, 2000; minimum, 4.0°C, Jan. 4, 2001.

DISSOLVED OXYGEN: Maximum, 13.2 mg/L, Feb. 6, 2003; minimum, 0.2 mg/L, Feb. 21, 2000.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 344 microsiemens/cm, Aug. 11; minimum, 40 microsiemens/cm, Apr. 10.

pH: Maximum, 8.2 standard units, Jan. 16; minimum, 6.2 standard units, Nov. 18, 19, 20.

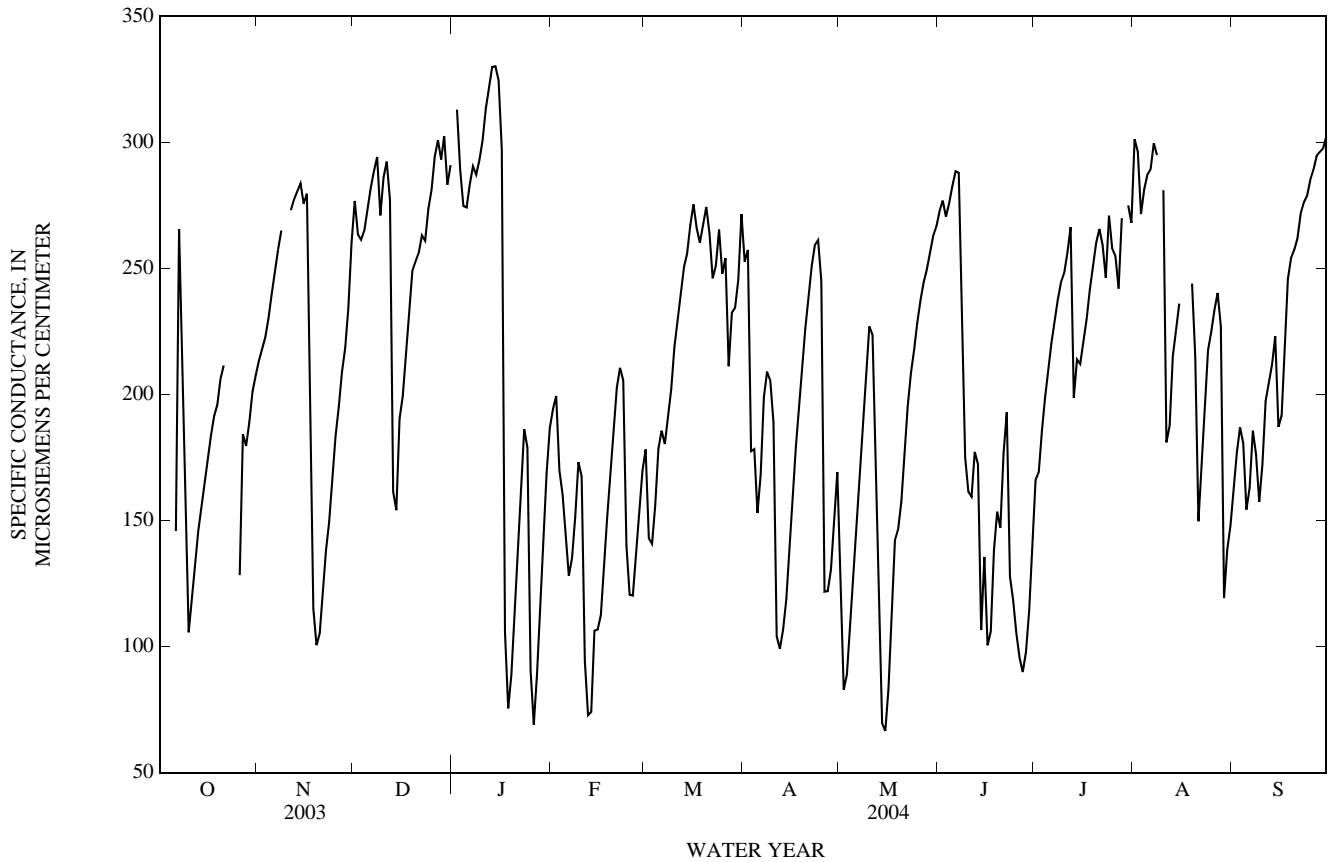
WATER TEMPERATURE: Maximum, 29.1°C, Aug. 5; minimum, 7.1°C, Feb. 15.

DISSOLVED OXYGEN: Maximum, 12.1 mg/L, Jan. 12, Feb. 15; minimum, 3.7 mg/L, July 2.

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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	217	209	213	282	268	277	---	---	---
2	---	---	---	220	217	218	268	261	263	321	303	313
3	---	---	---	226	220	223	264	260	261	303	280	289
4	---	---	---	234	226	230	267	264	265	280	272	275
5	---	---	---	244	234	240	278	267	274	278	271	274
6	204	78	146	253	244	248	286	278	282	289	278	283
7	317	204	266	263	253	258	293	284	289	294	289	291
8	271	220	232	266	263	265	297	292	294	298	239	287
9	254	55	193	---	---	---	298	72	271	295	291	293
10	130	100	106	---	---	---	296	251	286	310	295	301
11	124	107	120	275	271	273	296	288	292	321	310	313
12	141	122	133	280	274	277	311	50	277	327	320	322
13	151	141	146	282	280	281	242	118	161	332	327	330
14	158	151	156	286	282	284	163	150	154	333	327	330
15	169	158	164	290	68	276	202	163	190	333	315	325
16	178	169	174	299	64	280	208	195	199	329	44	297
17	189	178	184	298	50	211	225	208	218	197	68	106
18	193	189	191	141	105	115	242	225	233	85	72	75
19	201	193	196	124	95	101	252	242	249	107	75	89
20	210	201	206	113	99	105	254	252	253	135	107	122
21	215	210	212	128	113	121	258	254	256	158	135	147
22	---	---	---	147	128	138	267	258	263	178	158	167
23	---	---	---	158	108	149	275	199	261	193	178	186
24	---	---	---	175	158	165	278	269	274	199	129	179
25	---	---	---	192	175	184	291	276	281	151	70	90
26	177	96	128	198	192	195	299	291	294	74	65	69
27	212	164	184	215	197	209	307	299	301	106	74	89
28	187	168	180	225	213	218	312	205	293	136	106	121
29	196	185	189	248	225	234	337	285	302	153	136	145
30	205	196	201	270	248	260	312	262	283	190	152	169
31	224	205	208	---	---	---	298	269	291	191	183	187
MONTH							337	50	261			





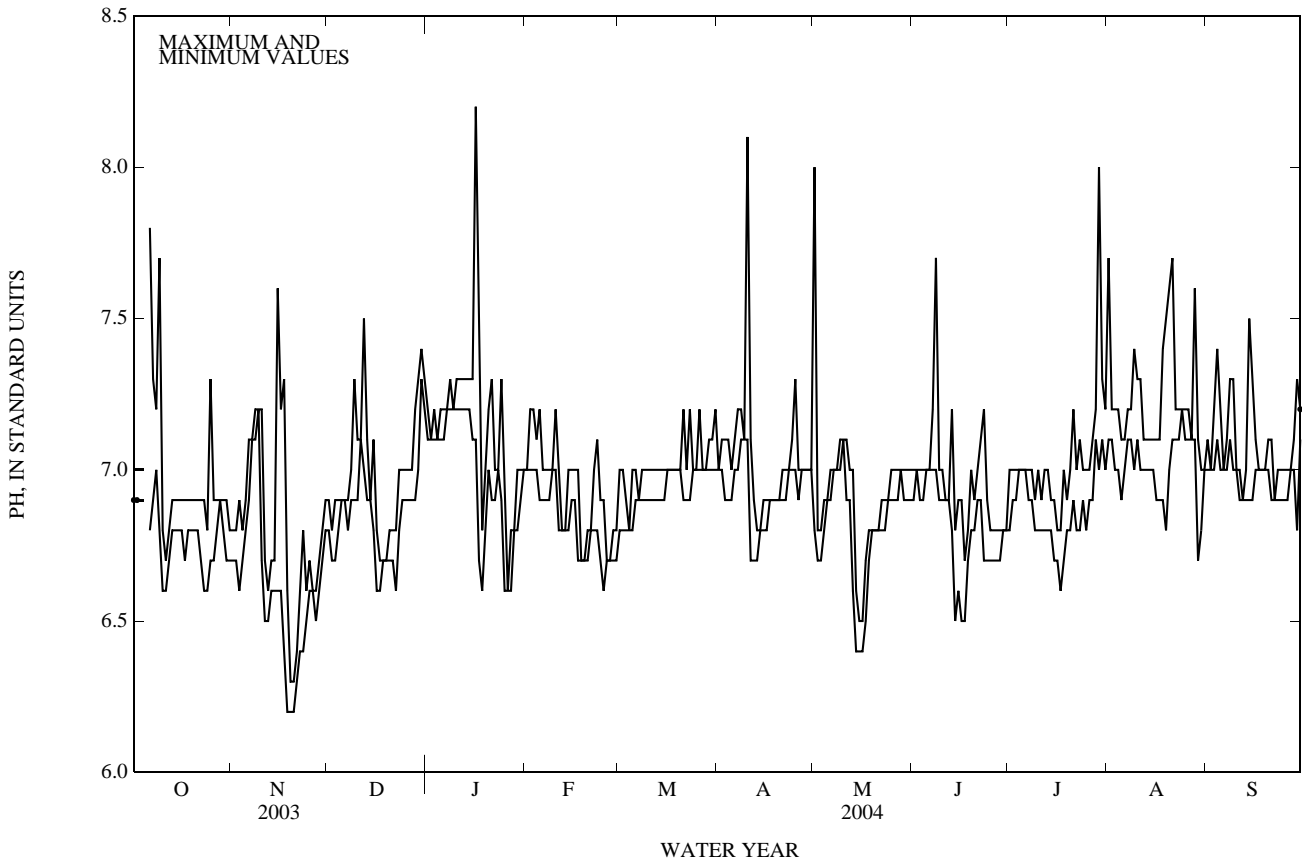
PH, WATER, UNFILTERED, FIELD, STANDARD UNITS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.0	6.9	6.8	6.7	6.9	6.8	7.2	7.1	7.0	7.0	7.0	6.8
2	7.0	6.9	6.8	6.7	6.8	6.7	7.1	7.1	7.2	7.0	7.0	6.8
3	7.0	6.9	6.9	6.6	6.9	6.7	7.2	7.1	7.2	7.0	6.9	6.8
4	7.0	6.9	6.8	6.7	6.9	6.8	7.1	7.1	7.1	7.0	6.8	6.8
5	---	---	6.9	6.8	6.9	6.9	7.2	7.1	7.2	6.9	7.0	6.8
6	7.8	6.8	7.1	6.9	6.9	6.9	7.2	7.1	7.0	6.9	7.0	6.9
7	7.3	6.9	7.1	7.1	6.9	6.8	7.2	7.2	7.0	6.9	6.9	6.9
8	7.2	7.0	7.2	7.1	7.0	6.9	7.3	7.2	7.0	6.9	7.0	6.9
9	7.7	6.8	7.2	7.2	7.3	6.9	7.2	7.2	7.0	7.0	7.0	6.9
10	6.8	6.6	7.2	6.7	7.1	6.9	7.3	7.2	7.2	7.0	7.0	6.9
11	6.7	6.6	6.7	6.5	7.1	7.1	7.3	7.2	7.0	6.8	7.0	6.9
12	6.8	6.7	6.6	6.5	7.5	7.0	7.3	7.2	6.8	6.8	7.0	6.9
13	6.9	6.8	6.7	6.6	7.1	6.9	7.3	7.2	6.8	6.8	7.0	6.9
14	6.9	6.8	6.7	6.6	6.9	6.9	7.3	7.2	7.0	6.8	7.0	6.9
15	6.9	6.8	7.6	6.6	7.1	6.8	7.3	7.1	7.0	6.9	7.0	6.9
16	6.9	6.8	7.2	6.6	6.8	6.6	8.2	7.1	7.0	6.9	7.0	7.0
17	6.9	6.7	7.3	6.4	6.7	6.6	7.2	6.7	7.0	6.7	7.0	7.0
18	6.9	6.8	6.6	6.2	6.7	6.7	6.8	6.6	6.7	6.7	7.0	7.0
19	6.9	6.8	6.3	6.2	6.7	6.7	7.0	6.8	6.7	6.7	7.0	7.0
20	6.9	6.8	6.3	6.2	6.8	6.7	7.2	7.0	6.8	6.7	7.0	7.0
21	6.9	6.8	6.4	6.3	6.8	6.7	7.3	6.9	6.8	6.8	7.2	6.9
22	6.9	6.7	6.6	6.4	6.8	6.6	7.0	6.9	7.0	6.8	7.0	6.9
23	6.9	6.6	6.8	6.4	7.0	6.8	7.0	7.0	7.1	6.8	7.2	6.9
24	6.8	6.6	6.6	6.5	7.0	6.9	7.3	6.9	6.9	6.7	7.0	7.0
25	7.3	6.7	6.7	6.6	7.0	6.9	7.0	6.6	6.9	6.6	7.0	7.0
26	6.9	6.7	6.6	6.6	7.0	6.9	6.6	6.6	6.7	6.7	7.2	7.0
27	6.9	6.8	6.6	6.5	7.0	6.9	6.8	6.6	6.7	6.7	7.0	7.0
28	6.9	6.9	6.7	6.6	7.2	6.9	6.8	6.8	6.8	6.7	7.0	7.0
29	6.9	6.8	6.8	6.7	7.3	7.0	7.0	6.8	6.8	6.7	7.1	7.0
30	6.9	6.7	6.9	6.8	7.4	7.3	7.0	6.9	---	---	7.1	7.0
31	6.8	6.7	---	---	7.3	7.2	7.0	7.0	---	---	7.2	7.0
MONTH			7.6	6.2	7.5	6.6	8.2	6.6	7.2	6.6	7.2	6.8

08068275 Spring Creek near Tomball, TX—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	7.0	8.0	6.8	7.0	6.9	7.0	6.8	7.7	7.1	7.1	7.0
2	7.1	7.0	6.8	6.7	7.0	7.0	7.0	6.9	7.2	7.1	7.0	7.0
3	7.1	6.9	6.8	6.7	7.0	6.9	7.0	6.9	7.2	7.0	7.2	7.0
4	7.1	6.9	6.9	6.8	7.0	6.9	7.0	7.0	7.2	7.0	7.4	7.1
5	7.0	6.9	6.9	6.9	7.0	7.0	7.0	7.0	7.1	6.9	7.2	7.0
6	7.1	7.0	7.0	6.9	7.0	7.0	7.0	7.0	7.1	7.0	7.0	7.0
7	7.2	7.0	7.0	7.0	7.2	7.0	7.0	6.9	7.2	7.1	7.1	7.0
8	7.2	7.1	7.0	7.0	7.7	7.0	7.0	6.9	7.2	7.1	7.3	7.1
9	7.1	7.1	7.1	7.0	7.0	6.9	6.9	6.8	7.4	7.0	7.3	7.0
10	8.1	7.1	7.1	7.1	7.0	6.9	7.0	6.8	7.3	7.1	7.0	7.0
11	7.1	6.7	7.1	6.9	6.9	6.9	6.9	6.8	7.3	7.0	7.0	6.9
12	6.9	6.7	7.0	6.9	6.9	6.9	7.0	6.8	7.1	7.0	6.9	6.9
13	6.8	6.7	7.0	6.6	7.2	6.8	7.0	6.8	7.1	7.0	7.0	6.9
14	6.8	6.8	6.6	6.4	6.8	6.5	6.9	6.8	7.1	7.0	7.5	6.9
15	6.9	6.8	6.5	6.4	6.9	6.6	6.9	6.7	7.1	7.0	7.3	6.9
16	6.9	6.8	6.5	6.4	6.9	6.5	6.8	6.7	7.1	6.9	7.1	7.0
17	6.9	6.9	6.7	6.5	6.7	6.5	6.8	6.6	7.1	6.9	7.0	7.0
18	6.9	6.9	6.8	6.7	6.8	6.7	7.0	6.7	7.4	6.9	7.0	7.0
19	6.9	6.9	6.8	6.8	7.0	6.8	6.9	6.8	7.5	6.8	7.0	7.0
20	6.9	6.9	6.8	6.8	6.9	6.8	7.0	6.8	7.6	7.0	7.1	7.0
21	7.0	6.9	6.8	6.8	7.0	6.9	7.2	6.9	7.7	7.1	7.1	6.9
22	7.0	6.9	6.9	6.8	7.1	6.9	7.0	6.8	7.2	7.1	6.9	6.9
23	7.0	7.0	6.9	6.8	7.2	6.7	7.1	6.8	7.2	7.1	7.0	6.9
24	7.1	7.0	6.9	6.9	6.9	6.7	7.0	6.9	7.2	7.2	7.0	6.9
25	7.3	7.0	7.0	6.9	6.8	6.7	7.0	6.8	7.2	7.1	7.0	6.9
26	7.0	6.9	7.0	6.9	6.8	6.7	7.0	6.9	7.2	7.1	7.0	6.9
27	7.0	7.0	7.0	6.9	6.8	6.7	7.1	6.9	7.1	7.1	7.0	7.0
28	7.0	7.0	7.0	7.0	6.8	6.7	7.2	7.1	7.6	7.1	7.1	7.0
29	7.0	7.0	7.0	6.9	6.8	6.8	8.0	7.0	7.1	6.7	7.3	6.8
30	7.0	7.0	7.0	6.9	6.8	6.8	7.3	7.1	7.0	6.8	7.2	7.1
31	---	---	7.0	6.9	---	---	7.2	7.0	7.0	7.0	---	---
MONTH	8.1	6.7	8.0	6.4	7.7	6.5	8.0	6.6	7.7	6.7	7.5	6.8
YEAR												



## SAN JACINTO RIVER BASIN

08068275 Spring Creek near Tomball, TX—Continued

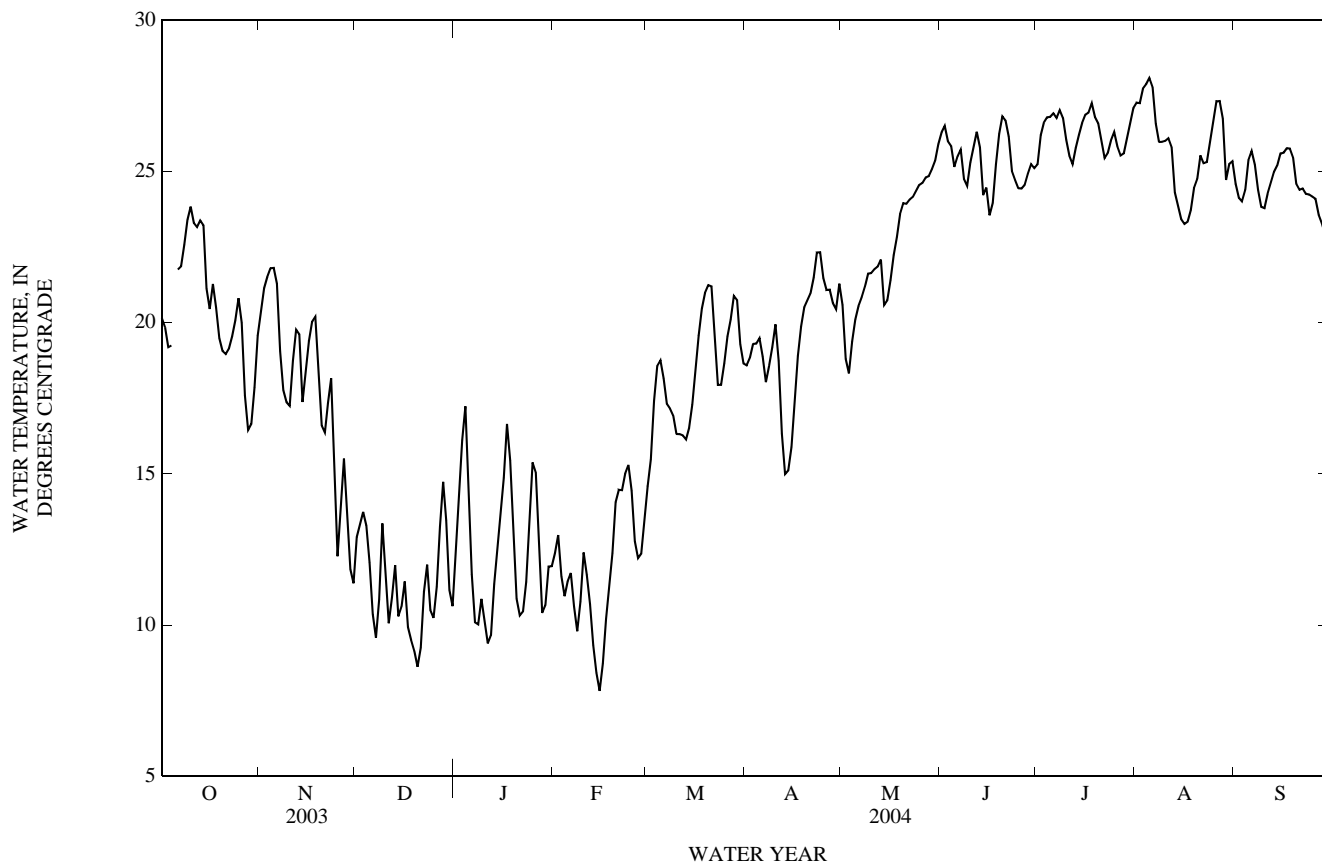
TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	20.6	19.5	20.2	21.1	19.8	20.4	13.9	12.1	12.9	13.5	11.5	12.4
2	20.3	19.5	19.8	21.7	20.7	21.1	13.9	12.7	13.3	15.2	13.5	14.4
3	19.7	18.4	19.2	22.0	21.1	21.5	14.4	13.1	13.7	16.9	15.2	16.1
4	20.6	18.1	19.2	22.3	21.4	21.8	14.1	12.7	13.3	17.7	16.7	17.2
5	---	---	---	22.1	21.5	21.8	13.3	11.4	12.1	16.9	13.2	15.0
6	25.7	20.9	21.8	21.9	20.2	21.3	11.4	9.9	10.4	13.2	10.8	11.7
7	22.4	21.3	21.9	20.2	18.3	19.1	10.1	9.0	9.6	10.8	9.7	10.1
8	23.3	22.0	22.6	18.3	17.5	17.8	12.1	10.1	10.8	10.6	9.6	10.0
9	25.2	22.9	23.4	17.6	17.1	17.4	18.7	12.1	13.4	11.6	10.4	10.9
10	23.9	23.6	23.8	17.7	16.8	17.3	13.3	11.0	11.7	10.7	9.6	10.2
11	23.7	23.0	23.3	19.5	17.7	18.7	11.0	9.3	10.1	10.2	8.6	9.4
12	23.4	22.8	23.2	20.3	19.2	19.8	14.1	10.2	10.9	10.8	8.7	9.7
13	23.8	23.1	23.4	20.1	18.7	19.6	12.3	11.3	12.0	12.6	10.3	11.4
14	23.6	22.4	23.2	18.7	17.0	17.4	11.3	9.8	10.3	13.5	11.7	12.6
15	22.4	20.4	21.1	23.6	17.2	18.4	11.6	9.7	10.6	14.6	13.0	13.6
16	21.1	19.8	20.4	22.3	18.7	19.4	11.9	10.8	11.4	18.2	14.0	14.9
17	22.1	20.6	21.3	22.0	19.5	20.0	10.8	9.3	9.9	17.1	15.6	16.7
18	21.5	19.9	20.5	20.4	19.5	20.2	10.1	9.0	9.5	16.5	14.2	15.4
19	20.4	18.8	19.5	19.5	17.6	18.5	9.8	8.5	9.1	14.2	12.0	12.9
20	19.5	18.6	19.1	17.6	16.2	16.6	9.3	7.8	8.6	12.0	10.4	10.9
21	19.4	18.6	19.0	16.9	15.8	16.4	10.6	8.1	9.2	10.9	9.8	10.3
22	19.8	18.7	19.1	18.0	16.7	17.3	12.6	10.0	11.1	11.1	9.9	10.4
23	20.1	19.1	19.5	20.5	16.6	18.2	13.7	11.5	12.0	12.2	10.8	11.4
24	20.6	19.5	20.1	16.6	13.0	14.7	11.6	9.7	10.5	15.1	12.2	13.4
25	23.2	20.4	20.8	13.0	11.6	12.3	10.9	9.6	10.2	15.9	14.9	15.4
26	21.2	18.5	20.0	14.7	12.7	13.7	12.3	10.5	11.3	15.5	14.2	15.0
27	18.5	16.8	17.6	16.3	14.7	15.5	14.6	12.3	13.2	14.2	11.4	12.6
28	17.0	15.9	16.4	15.1	12.7	13.8	15.7	14.2	14.7	11.4	9.9	10.4
29	17.4	15.9	16.6	12.7	11.4	11.8	14.4	12.3	13.5	11.5	10.1	10.7
30	18.9	17.0	17.9	12.5	10.4	11.4	12.3	10.5	11.2	12.1	11.4	11.9
31	20.4	18.9	19.6	---	---	---	11.5	9.8	10.6	12.1	11.9	11.9
MONTH				23.6	10.4	17.8	18.7	7.8	11.3	18.2	8.6	12.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	13.0	11.9	12.4	15.1	13.9	14.6	20.0	17.3	18.6	22.2	19.2	20.6
2	13.6	12.5	13.0	16.5	14.9	15.5	19.6	17.9	18.8	19.2	18.4	18.8
3	12.5	11.1	11.6	18.3	16.5	17.4	19.8	18.7	19.3	19.2	17.5	18.3
4	11.2	10.8	11.0	18.8	18.3	18.6	19.7	18.7	19.3	20.0	18.7	19.4
5	11.9	11.1	11.4	19.1	18.5	18.7	19.9	19.1	19.5	20.7	19.5	20.1
6	11.9	11.4	11.7	18.7	17.5	18.2	19.5	18.3	18.9	21.3	19.8	20.5
7	11.4	10.1	10.6	18.0	16.6	17.3	18.5	17.5	18.0	21.2	20.4	20.8
8	10.1	9.4	9.8	18.0	16.4	17.2	19.2	17.9	18.6	21.6	20.8	21.2
9	11.8	10.0	10.8	18.0	15.8	16.9	20.2	18.3	19.2	22.2	21.1	21.6
10	13.0	11.8	12.4	17.2	15.3	16.3	21.8	19.3	19.9	22.2	21.1	21.6
11	12.2	11.2	11.7	17.2	15.4	16.3	20.1	17.5	18.7	22.7	21.4	21.8
12	11.2	10.2	10.7	16.7	15.9	16.3	17.5	15.4	16.3	22.6	21.5	21.9
13	10.2	8.7	9.3	16.4	15.8	16.1	15.4	14.4	15.0	22.7	20.6	22.1
14	8.7	7.9	8.4	16.7	16.3	16.5	15.6	14.5	15.1	21.0	20.2	20.6
15	8.5	7.1	7.8	18.1	16.7	17.3	16.7	15.1	15.9	21.5	20.1	20.7
16	9.5	8.0	8.7	19.5	17.5	18.4	18.2	16.4	17.3	22.0	20.9	21.4
17	11.1	9.5	10.2	20.6	18.8	19.6	19.8	18.1	18.9	22.6	22.0	22.2
18	12.0	10.6	11.2	21.3	19.8	20.5	20.6	19.4	19.9	23.4	22.4	22.8
19	13.5	11.3	12.4	21.6	20.6	21.0	21.4	19.9	20.5	24.1	23.2	23.6
20	15.0	13.2	14.1	22.1	20.4	21.2	21.2	20.2	20.7	24.2	23.7	23.9
21	15.3	13.7	14.5	21.6	20.1	21.2	21.5	20.4	21.0	24.6	23.4	23.9
22	15.2	13.7	14.5	20.5	18.7	19.5	22.4	20.8	21.5	24.6	23.5	24.1
23	15.2	14.8	15.0	18.7	17.6	17.9	23.1	21.7	22.3	24.7	23.8	24.2
24	15.5	15.1	15.3	18.2	17.7	17.9	22.7	21.9	22.3	25.1	23.9	24.3
25	15.2	13.4	14.4	19.2	18.1	18.6	22.1	20.8	21.5	25.3	24.0	24.6
26	13.4	12.2	12.8	20.0	19.0	19.5	21.5	20.7	21.1	25.3	24.1	24.6
27	12.6	11.6	12.2	20.8	19.5	20.1	21.5	20.6	21.1	25.7	24.1	24.8
28	12.8	12.0	12.4	21.4	20.4	20.9	21.2	20.4	20.6	25.3	24.4	24.8
29	14.0	12.8	13.4	21.2	19.8	20.7	20.9	20.0	20.4	25.8	24.4	25.1
30	---	---	---	20.2	18.4	19.3	21.8	20.8	21.3	25.6	25.1	25.4
31	---	---	---	19.7	17.6	18.7	---	---	---	26.8	25.2	25.9
MONTH	15.5	7.1	11.9	22.1	13.9	18.3	23.1	14.4	19.4	26.8	17.5	22.4

08068275 Spring Creek near Tomball, 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
1	27.2	25.5	26.3	25.8	24.8	25.2	27.9	26.8	27.3	25.2	23.9	24.6
2	27.0	25.9	26.5	26.8	25.6	26.2	28.4	26.4	27.3	24.6	23.8	24.1
3	26.7	25.3	26.0	27.0	26.2	26.6	28.8	26.9	27.7	24.2	23.8	24.0
4	26.7	25.2	25.8	27.2	26.4	26.8	29.0	27.0	27.9	25.3	23.8	24.4
5	25.8	24.9	25.1	27.4	26.3	26.8	29.1	27.2	28.1	25.9	24.7	25.4
6	26.5	24.8	25.5	27.7	26.4	26.9	28.6	27.4	27.8	26.4	25.1	25.7
7	26.4	25.1	25.7	27.4	26.2	26.8	27.4	25.8	26.6	26.0	24.7	25.2
8	25.7	23.8	24.8	27.8	26.5	27.0	26.8	25.2	26.0	24.7	24.0	24.4
9	25.0	24.1	24.5	27.2	26.3	26.8	26.8	25.3	26.0	24.6	23.2	23.8
10	25.7	25.0	25.3	26.9	25.4	26.0	26.4	25.5	26.0	24.7	22.9	23.8
11	26.3	25.4	25.8	26.0	25.1	25.5	26.8	25.5	26.1	24.9	23.8	24.3
12	27.2	25.6	26.3	26.2	24.5	25.2	26.4	25.2	25.8	25.5	24.0	24.6
13	27.5	23.8	25.8	26.6	25.1	25.8	25.2	23.7	24.3	25.9	24.3	25.0
14	24.9	23.7	24.2	27.0	25.5	26.2	24.8	23.1	23.9	28.2	24.7	25.2
15	24.9	23.7	24.5	27.4	25.8	26.6	24.3	22.6	23.4	26.3	24.9	25.6
16	23.8	23.3	23.6	27.7	26.1	26.9	24.2	22.4	23.3	26.5	24.9	25.6
17	24.6	23.5	24.0	27.7	26.3	26.9	24.3	22.5	23.3	26.6	25.1	25.8
18	26.1	24.6	25.2	28.0	26.8	27.2	25.3	23.0	23.7	26.4	25.1	25.8
19	27.0	25.7	26.2	27.5	26.1	26.8	25.9	24.0	24.4	26.3	24.8	25.5
20	27.3	26.3	26.8	27.4	26.0	26.6	25.4	24.1	24.7	25.5	23.8	24.6
21	27.2	26.3	26.7	26.9	25.5	26.0	25.9	25.0	25.5	24.9	23.9	24.4
22	26.6	25.6	26.1	25.7	25.2	25.4	25.6	25.0	25.3	25.2	23.9	24.4
23	25.7	24.7	25.0	26.8	24.8	25.6	25.8	24.9	25.3	24.8	23.8	24.3
24	24.9	24.4	24.7	27.0	25.2	26.0	27.0	25.2	26.0	24.5	23.9	24.2
25	24.7	24.2	24.4	27.0	25.9	26.3	27.7	26.0	26.7	24.8	23.8	24.2
26	24.6	24.1	24.4	26.4	25.2	25.8	28.3	26.6	27.3	24.6	23.6	24.1
27	24.7	24.4	24.6	26.4	24.8	25.5	28.0	26.7	27.3	24.1	23.1	23.6
28	25.4	24.5	24.9	26.0	25.1	25.6	27.6	25.8	26.7	23.9	22.9	23.3
29	25.4	25.0	25.2	27.2	25.3	26.1	25.8	24.2	24.7	23.4	22.4	22.9
30	25.3	25.0	25.1	27.5	25.9	26.6	25.8	24.8	25.2	22.9	21.9	22.4
31	---	---	---	28.0	26.4	27.1	25.9	24.8	25.3	---	---	---
MONTH	27.5	23.3	25.3	28.0	24.5	26.3	29.1	22.4	25.8	28.2	21.9	24.5
YEAR	29.1	7.1	19.7									



## SAN JACINTO RIVER BASIN

08068275 Spring Creek near Tomball, TX—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

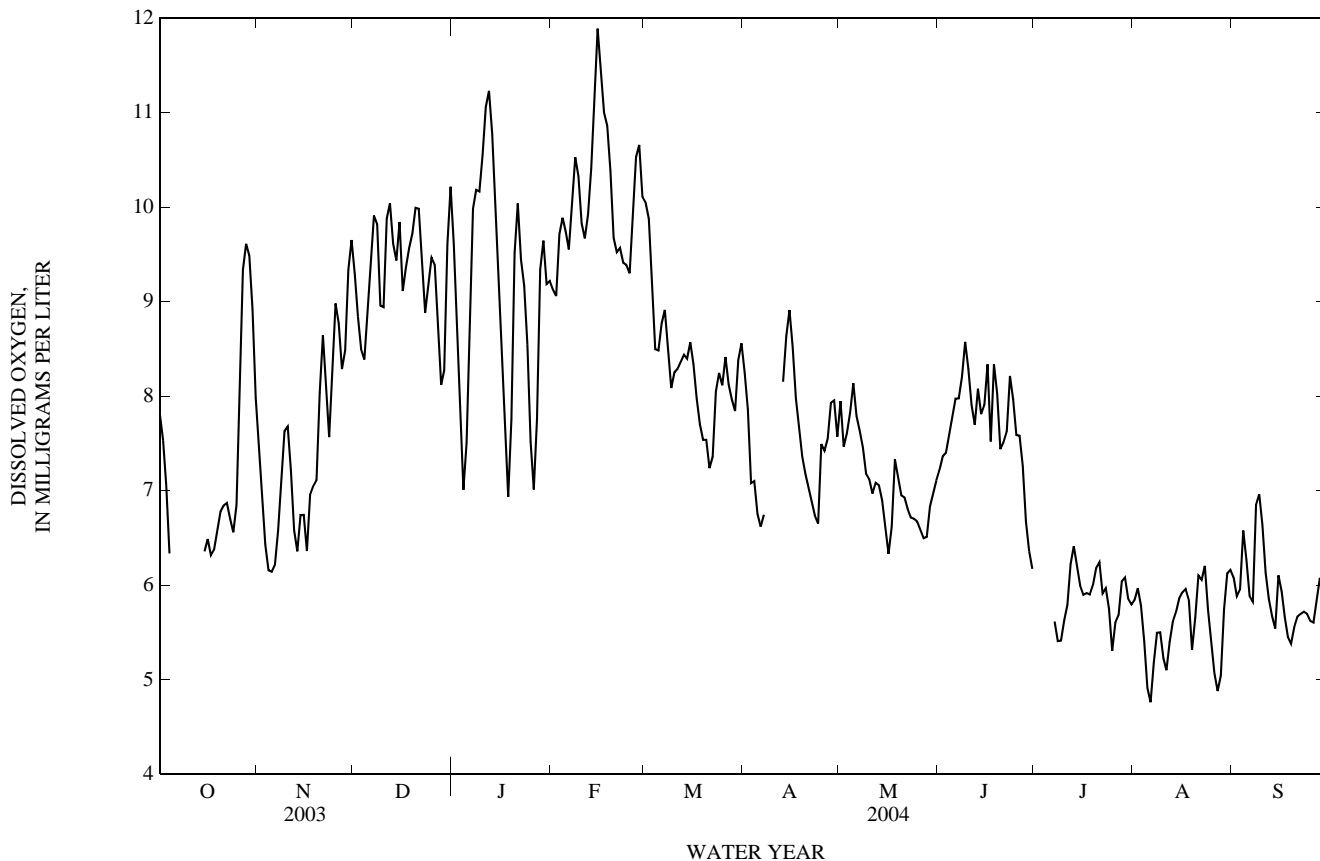
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8.2	7.5	7.8	7.5	7.0	7.4	9.5	8.8	9.3	10.0	9.0	9.6
2	8.1	7.2	7.5	7.1	6.6	6.9	9.1	8.4	8.8	9.0	8.2	8.7
3	7.5	6.7	7.1	6.7	6.1	6.4	8.7	8.1	8.5	8.3	7.4	7.9
4	6.7	5.9	6.3	6.4	6.0	6.2	8.8	8.0	8.4	7.4	6.8	7.0
5	---	---	---	6.4	5.9	6.1	9.4	8.4	8.9	8.2	6.8	7.5
6	---	---	---	6.6	5.9	6.2	9.9	8.9	9.4	9.9	8.1	9.0
7	---	---	---	7.0	6.3	6.6	10.4	9.6	9.9	10.7	9.4	10
8	---	---	---	7.7	6.8	7.2	10.1	9.5	9.8	10.5	9.9	10.2
9	---	---	---	8.0	7.4	7.6	10.2	7.9	9.0	10.8	9.6	10.2
10	---	---	---	7.9	7.5	7.7	9.6	8.0	8.9	11.3	10.1	10.6
11	---	---	---	7.5	7.0	7.2	10.3	9.4	9.9	11.8	10.5	11.1
12	---	---	---	7.0	6.3	6.6	11.8	9.6	10.0	12.1	10.7	11.2
13	---	---	---	6.8	6.0	6.4	10.6	8.9	9.6	11.5	10.3	10.8
14	---	---	---	7.0	6.4	6.7	10.0	8.9	9.4	11.0	9.5	10.1
15	6.5	6.1	6.4	8.6	6.4	6.7	10.1	9.3	9.8	9.9	8.8	9.3
16	6.6	6.4	6.5	9.0	5.8	6.4	9.4	9.0	9.1	9.8	8.2	8.6
17	6.4	6.2	6.3	9.5	5.4	7.0	9.6	9.1	9.4	9.2	6.9	7.7
18	6.6	6.0	6.4	7.8	6.7	7.0	9.8	9.4	9.6	7.2	6.8	6.9
19	6.9	6.3	6.6	7.3	6.9	7.1	9.9	9.5	9.7	8.6	7.2	7.8
20	7.1	6.3	6.8	8.6	7.3	8.0	10.4	9.7	10	10.1	8.6	9.5
21	7.1	6.6	6.8	8.8	8.5	8.6	10.2	9.5	10	10.4	9.5	10.0
22	7.1	6.7	6.9	8.5	7.8	8.2	9.6	8.7	9.4	9.5	9.3	9.4
23	6.9	6.5	6.7	8.5	7.3	7.6	9.5	8.7	8.9	9.3	8.8	9.2
24	6.7	6.4	6.6	8.6	7.6	8.2	9.7	8.7	9.2	8.9	8.2	8.5
25	10.0	6.1	6.8	9.2	8.6	9.0	9.9	9.2	9.5	8.4	7.0	7.5
26	8.8	7.6	8.1	9.0	8.6	8.8	9.8	9.0	9.4	7.2	7.0	7.0
27	9.6	8.8	9.3	8.7	8.0	8.3	9.2	8.3	8.8	8.6	7.2	7.8
28	9.7	9.5	9.6	8.9	8.0	8.5	9.6	7.5	8.1	9.8	8.6	9.3
29	9.7	9.2	9.5	9.6	8.9	9.3	9.1	7.6	8.3	9.8	9.3	9.6
30	9.2	8.4	8.9	9.8	9.4	9.7	10.1	9.0	9.6	9.4	9.1	9.2
31	8.5	7.5	8.0	---	---	---	10.5	10.0	10.2	9.3	9.1	9.2
MONTH				9.8	5.4	7.5	11.8	7.5	9.3	12.1	6.8	9.0
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	9.2	9.0	9.1	10.4	9.9	10.0	8.4	7.9	8.2	9.1	6.9	7.9
2	9.4	8.9	9.1	10.0	9.5	9.9	8.0	7.6	7.9	7.6	7.3	7.5
3	9.9	9.3	9.7	9.5	8.7	9.1	7.9	6.7	7.1	7.7	7.5	7.6
4	9.9	9.8	9.9	8.7	8.4	8.5	7.6	6.8	7.1	8.3	6.7	7.8
5	10.1	9.4	9.7	8.6	8.3	8.5	6.9	6.6	6.8	8.3	8.0	8.1
6	9.8	9.3	9.6	8.9	8.6	8.8	6.9	6.5	6.6	8.0	7.5	7.8
7	10.4	9.7	10.1	9.0	8.8	8.9	6.9	6.6	6.7	7.7	7.4	7.6
8	10.6	10.4	10.5	8.9	8.0	8.5	---	---	---	7.6	7.2	7.5
9	10.6	9.9	10.3	8.2	8.0	8.1	---	---	---	7.3	6.6	7.2
10	10.1	9.5	9.8	8.5	7.9	8.3	---	---	---	7.2	6.4	7.1
11	10.0	9.6	9.7	8.5	7.8	8.3	---	---	---	7.4	6.6	7.0
12	10.1	9.7	9.9	8.5	8.2	8.4	---	---	---	7.2	6.8	7.1
13	10.6	10.1	10.4	8.5	8.4	8.4	8.5	7.6	8.2	7.7	6.6	7.1
14	11.8	10.5	11.1	8.6	8.3	8.4	8.9	8.4	8.6	7.3	6.7	6.9
15	12.1	11.6	11.9	8.7	8.4	8.6	9.0	8.8	8.9	6.7	6.4	6.6
16	11.6	11.2	11.4	8.5	8.1	8.3	8.8	8.2	8.5	6.4	6.2	6.3
17	11.2	11.0	11.0	8.1	7.8	8.0	8.2	7.7	8.0	7.4	6.2	6.6
18	11.0	10.7	10.9	7.8	7.4	7.7	7.8	7.5	7.7	7.5	7.2	7.3
19	10.7	9.9	10.4	7.7	7.4	7.5	7.5	7.2	7.4	7.3	7.0	7.1
20	9.9	9.4	9.7	7.7	7.3	7.5	7.3	7.1	7.2	7.1	6.8	7.0
21	9.6	9.4	9.5	8.9	7.0	7.2	7.1	6.9	7.0	7.0	6.9	6.9
22	9.8	9.4	9.6	7.6	7.1	7.4	7.0	6.7	6.9	7.0	6.7	6.8
23	9.8	9.0	9.4	8.5	7.5	8.1	6.8	6.6	6.7	6.8	6.7	6.7
24	9.8	9.2	9.4	8.4	8.1	8.2	7.5	5.1	6.7	6.8	6.7	6.7
25	9.8	9.1	9.3	8.2	8.0	8.1	8.3	4.8	7.5	6.8	6.3	6.7
26	10.3	9.4	9.9	8.6	8.1	8.4	7.8	7.1	7.4	6.7	6.5	6.6
27	10.8	10.3	10.5	8.3	8.0	8.1	7.8	6.9	7.6	6.6	6.3	6.5
28	10.8	10.4	10.7	8.1	7.8	8.0	8.1	7.7	7.9	6.6	6.4	6.5
29	10.5	9.8	10.1	8.0	7.7	7.8	8.1	7.8	8.0	7.0	6.5	6.8
30	---	---	---	8.6	8.0	8.4	7.8	7.0	7.6	7.2	6.9	7.0
31	---	---	---	8.8	8.3	8.6	---	---	---	7.3	7.0	7.1
MONTH	12.1	8.9	10.1	10.4	7.0	8.3				9.1	6.2	7.1



08068275 Spring Creek near Tomball, TX—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER—CONTINUED  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	7.5	7.0	7.2	---	---	---	6.9	5.4	5.8	6.2	6.0	6.1
2	7.7	7.1	7.4	---	---	---	6.9	5.3	6.0	6.0	5.2	5.9
3	7.7	7.2	7.4	---	---	---	6.7	5.3	5.8	6.8	5.5	6.0
4	8.1	7.3	7.6	---	---	---	6.0	4.9	5.4	6.9	6.3	6.6
5	8.2	7.4	7.8	---	---	---	6.0	4.3	4.9	6.7	6.0	6.3
6	8.6	7.6	8.0	---	---	---	5.4	4.2	4.8	6.0	5.7	5.9
7	8.9	7.6	8.0	5.8	5.4	5.6	6.3	4.4	5.2	6.2	5.7	5.8
8	11.3	7.3	8.2	5.5	5.3	5.4	6.5	4.8	5.5	7.0	6.2	6.8
9	8.7	8.4	8.6	5.5	5.2	5.4	6.6	4.8	5.5	7.4	6.7	7.0
10	8.6	8.1	8.3	6.9	5.3	5.6	5.8	4.8	5.2	6.7	6.3	6.6
11	8.1	7.5	7.9	5.9	5.6	5.8	5.5	4.7	5.1	6.3	5.9	6.1
12	7.8	7.6	7.7	6.9	5.9	6.2	5.7	5.2	5.4	6.0	5.8	5.9
13	9.4	7.5	8.1	6.9	6.1	6.4	6.0	5.4	5.6	5.8	5.6	5.7
14	9.2	7.0	7.8	6.4	6.1	6.2	6.2	5.4	5.7	6.8	5.4	5.5
15	9.1	7.0	7.9	6.1	5.4	6.0	6.4	5.3	5.9	6.6	5.4	6.1
16	9.0	7.7	8.3	6.1	5.8	5.9	6.6	5.4	5.9	6.1	5.6	5.9
17	8.4	7.2	7.5	6.2	5.6	5.9	6.6	5.5	6.0	5.8	5.6	5.7
18	8.7	8.1	8.3	6.2	5.7	5.9	6.7	5.4	5.8	5.6	5.3	5.5
19	8.5	7.4	8.0	6.4	5.7	6.0	6.0	4.9	5.3	5.6	5.2	5.4
20	7.6	7.3	7.4	6.7	5.9	6.2	6.3	5.1	5.7	5.9	5.2	5.6
21	7.8	7.2	7.5	7.1	5.9	6.2	7.8	5.8	6.1	5.9	5.4	5.7
22	8.5	7.3	7.6	6.1	5.6	5.9	6.2	6.0	6.1	6.0	5.4	5.7
23	9.4	7.6	8.2	6.3	5.6	6.0	6.8	5.8	6.2	6.0	5.5	5.7
24	8.5	7.5	8.0	6.2	5.4	5.8	5.8	5.5	5.7	6.1	5.4	5.7
25	8.1	7.4	7.6	5.6	5.0	5.3	5.5	5.2	5.4	6.0	5.3	5.6
26	8.2	7.3	7.6	6.2	5.3	5.6	5.2	4.9	5.1	6.0	5.2	5.6
27	7.6	6.9	7.3	6.3	5.3	5.7	5.1	4.8	4.9	6.3	5.4	5.8
28	6.9	6.5	6.7	6.5	5.8	6.0	6.4	4.6	5.0	6.5	5.6	6.1
29	6.5	6.2	6.4	7.4	5.7	6.1	6.0	5.5	5.7	6.2	5.7	6.0
30	6.3	6.0	6.2	6.5	5.5	5.9	6.3	5.6	6.1	6.2	5.4	5.9
31	---	---	---	6.4	5.4	5.8	6.2	6.0	6.2	---	---	---
MONTH	11.3	6.0	7.7				7.8	4.2	5.6	7.4	5.2	5.9
YEAR												



08068390 Bear Branch at Research Forest Boulevard, The Woodlands, TX

LOCATION.--Lat 30°11'26", long 95°29'28", Montgomery County, Hydrologic Unit 12040102, on left bank at downstream side of bridge on Research Boulevard, 1.5 mi upstream from Panther Branch, and 8.4 mi southwest of Conroe.

DRAINAGE AREA.--15.4 mi<sup>2</sup>.

PERIOD OF RECORD.--Jan. 1999 to current year. Water-quality records: Chemical data: Mar. 1999 to Nov. 1999. Biochemical data: Mar. 1999 to Nov. 1999. Pesticide data: Mar. 1999 to Nov. 1999. Sediment data: Mar. 1999 to Nov. 1999.

GAGE.--Water-stage recorder. Datum of gage is 125.49 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversion. 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	2.2	3.5	0.75	5.5	14	27	5.0	487	0.39	60	22	3.6
2	1.3	5.4	0.72	4.6	37	18	3.9	421	0.35	49	13	3.2
3	1.2	2.5	1.7	3.8	27	15	3.0	231	0.34	26	6.7	5.7
4	1.1	2.4	4.5	3.3	23	12	2.4	92	0.32	15	5.1	8.4
5	16	1.9	4.4	2.8	59	22	2.3	29	0.94	11	4.1	6.3
6	94	1.5	1.0	1.9	61	16	6.5	13	0.36	8.1	3.5	3.7
7	11	1.3	0.71	1.5	38	11	4.2	7.7	0.31	5.3	3.1	2.1
8	6.5	1.1	0.74	7.7	20	7.5	3.2	6.1	85	4.1	2.9	1.3
9	229	1.1	30	4.5	12	5.4	2.5	5.1	119	3.4	2.8	1.2
10	227	1.1	18	4.1	97	4.2	30	18	40	2.9	4.7	1.1
11	122	1.1	11	3.8	254	3.3	175	60	19	3.1	3.7	0.90
12	47	1.2	29	3.1	234	2.7	167	89	11	3.0	3.4	0.62
13	20	1.1	122	2.6	117	3.0	100	147	153	2.6	3.0	0.62
14	11	0.91	66	2.1	95	16	42	497	172	2.5	2.5	9.8
15	7.5	3.4	34	2.4	59	9.5	19	340	64	2.3	2.0	4.7
16	5.2	15	17	40	35	12	9.9	161	113	2.2	1.6	2.6
17	3.6	287	9.9	534	20	8.8	6.4	62	45	2.0	1.0	2.0
18	2.8	329	7.0	203	13	6.5	4.7	28	27	2.0	1.6	1.6
19	2.1	193	5.5	87	9.5	5.2	3.5	16	17	1.9	12	1.3
20	1.7	85	4.5	33	7.8	4.2	2.7	11	11	1.9	18	1.2
21	2.0	31	3.8	17	6.4	4.2	2.2	7.6	8.3	2.3	227	1.1
22	1.4	15	3.3	10	8.6	3.9	1.9	4.8	16	17	138	1.1
23	1.2	38	6.7	7.5	42	3.5	1.8	3.2	47	7.0	88	0.77
24	1.1	24	3.4	104	21	3.5	17	2.1	103	6.3	31	0.51
25	38	15	2.5	310	47	9.6	20	1.4	128	7.0	11	0.96
26	9.0	9.0	1.7	195	30	6.1	17	0.99	109	4.6	6.0	0.63
27	12	6.3	2.0	80	20	5.7	11	0.77	181	3.0	3.9	0.15
28	5.8	1.3	25	30	12	4.8	6.9	0.65	254	3.1	35	0.45
29	4.2	0.88	33	35	16	27	5.0	0.56	169	3.2	23	0.72
30	3.1	0.77	9.8	34	---	9.4	3.6	0.55	87	4.2	4.7	0.78
31	3.1	---	6.8	23	---	6.7	---	0.53	---	3.1	4.1	---
TOTAL	893.1	1,079.76	466.42	1,796.2	1,435.3	293.7	679.6	2,744.05	1,981.31	269.1	688.4	69.11
MEAN	28.8	36.0	15.0	57.9	49.5	9.47	22.7	88.5	66.0	8.68	22.2	2.30
MAX	229	329	122	534	254	27	175	497	254	60	227	9.8
MIN	1.1	0.77	0.71	1.5	6.4	2.7	1.8	0.53	0.31	1.9	1.0	0.15
AC-FT	1,770	2,140	925	3,560	2,850	583	1,350	5,440	3,930	534	1,370	137

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2004, BY WATER YEAR (WY)

MEAN	38.5	36.1	23.8	21.5	17.7	22.9	14.0	33.0	60.0	13.2	6.33	16.8
MAX	121	84.5	51.3	57.9	49.5	88.5	23.9	88.5	243	23.6	22.2	40.4
(WY)	(2003)	(2003)	(2002)	(2004)	(2004)	(2001)	(2002)	(2004)	(2001)	(2002)	(2004)	(2003)
MIN	0.77	3.74	3.67	2.06	1.44	1.12	2.13	0.74	4.29	2.47	0.17	2.18
(WY)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)	(1999)	(2003)	(2000)	(2000)	(2000)	(1999)

SUMMARY STATISTICS

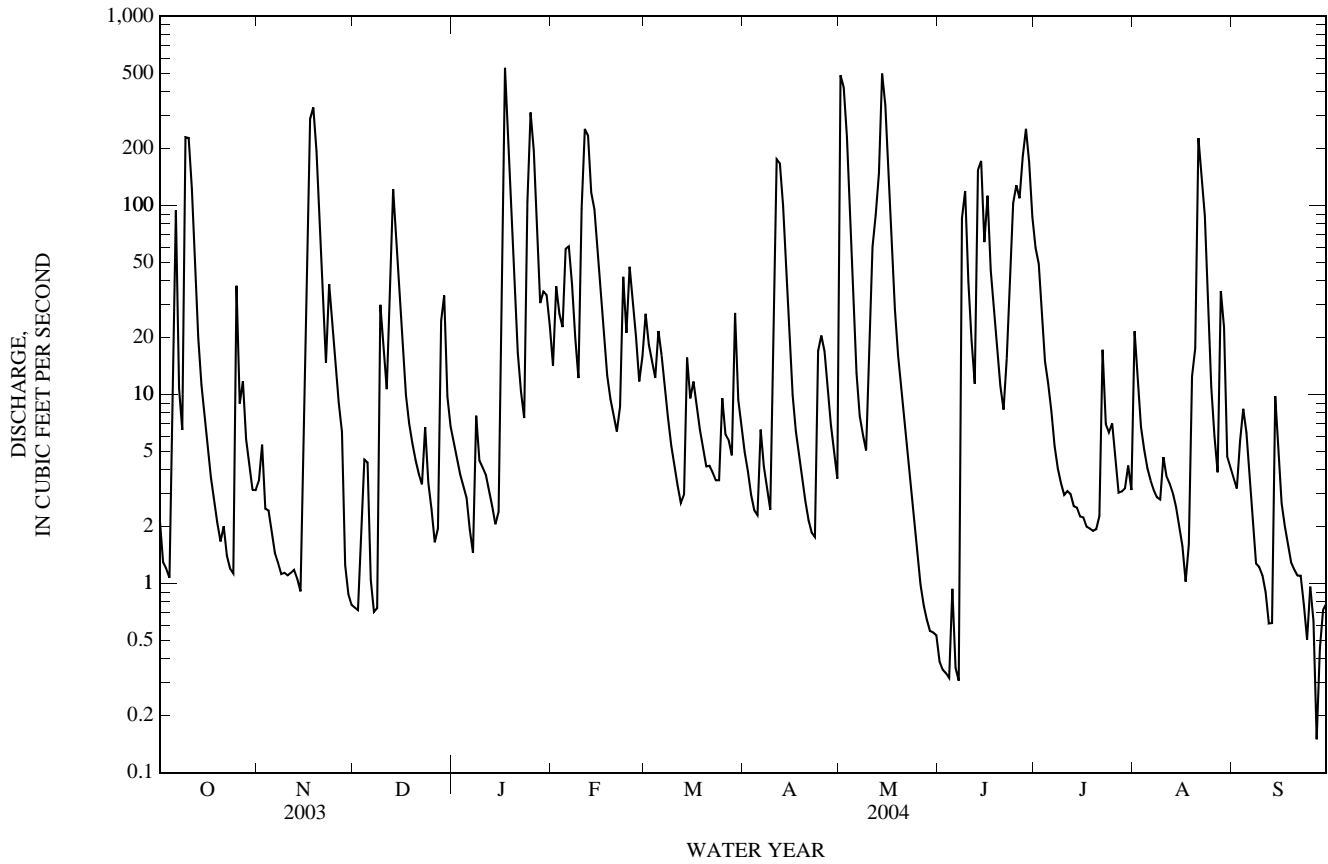
FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1999 - 2004

ANNUAL TOTAL	7,511.46	12,396.05	
ANNUAL MEAN	20.6	33.9	27.2
HIGHEST ANNUAL MEAN			40.7
LOWEST ANNUAL MEAN			8.91
HIGHEST DAILY MEAN	329	Nov 18	534
LOWEST DAILY MEAN	0.39	May 28	0.15
ANNUAL SEVEN-DAY MINIMUM	0.45	May 26	0.43
MAXIMUM PEAK FLOW			1,830
MAXIMUM PEAK STAGE			13.07
ANNUAL RUNOFF (AC-FT)	14,900	24,590	19,680
10 PERCENT EXCEEDS	49	101	62
50 PERCENT EXCEEDS	6.6	6.3	3.9
90 PERCENT EXCEEDS	0.99	1.1	0.48

08068390 Bear Branch at Research Forest Boulevard, The Woodlands, TX—Continued



08068400 Panther Branch at Gosling Road, The Woodlands, TX

LOCATION.--Lat 30°11'31", long 95°29'01", Montgomery County, Hydrologic Unit 12040102, on the right bank between the northbound and southbound lanes of Gosling Road and 0.5 mi north of Research Forest Blvd.

DRAINAGE AREA.--25.9 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Aug. 1974 to Sept. 1976 (daily mean discharge), May 1980 to Sept. 1988 (annual maximum), Jan. 1999 to current year. Prior to Jan. 1999, published as "near Conroe".

GAGE.--Water-stage recorder. Datum of gage is 125.25 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	2.4	6.6	3.9	8.2	24	66	10	730	e4.8	97	30	6.4
2	1.9	8.8	4.2	7.2	74	42	8.9	552	e5.0	91	20	5.5
3	1.6	6.2	5.3	6.0	50	32	7.3	258	5.5	37	8.6	9.8
4	1.3	5.9	8.5	5.3	36	27	6.6	125	5.9	20	7.3	14
5	11	5.5	8.0	4.9	103	54	7.7	45	7.7	18	6.6	13
6	100	5.1	4.5	3.7	91	35	15	21	5.9	13	6.2	6.8
7	15	5.2	4.1	3.4	61	22	10	13	5.8	8.8	5.5	6.2
8	7.8	4.9	5.0	16	31	17	7.5	11	136	7.6	5.3	5.1
9	198	5.1	53	8.0	19	14	6.6	9.7	182	7.0	5.5	5.2
10	198	5.0	31	5.9	127	11	45	38	56	6.3	8.1	4.9
11	108	5.0	17	5.1	268	9.4	379	118	26	6.4	6.4	4.5
12	65	5.0	29	4.4	190	9.2	223	227	16	6.5	5.4	3.8
13	29	5.0	160	3.6	119	9.5	132	248	172	6.3	5.0	4.0
14	16	5.3	88	4.3	126	37	63	789	251	6.0	4.7	26
15	11	9.1	53	4.7	94	25	28	362	95	5.8	4.6	14
16	7.4	30	25	29	61	24	16	182	183	6.0	4.9	8.2
17	5.6	353	14	614	33	19	11	97	83	5.6	4.7	6.6
18	4.9	327	9.7	149	20	15	8.2	50	45	5.4	5.5	5.9
19	3.7	147	7.3	95	15	13	7.4	26	25	4.9	25	5.1
20	3.4	95	5.6	52	13	10	7.1	17	15	2.7	36	5.0
21	3.6	50	4.8	25	10	11	5.5	13	12	4.9	256	5.2
22	e5.0	22	4.7	16	11	9.4	5.3	8.5	29	28	144	5.1
23	e4.0	56	11	12	87	8.6	5.6	7.0	89	11	104	4.3
24	e3.5	48	4.7	114	52	8.6	37	4.5	152	12	45	4.0
25	e14	23	3.7	307	98	31	41	3.5	162	11	19	5.7
26	e55	15	3.3	144	61	16	30	e3.4	138	8.8	12	5.3
27	e22	11	3.7	91	37	13	17	e3.3	237	5.9	8.7	3.1
28	9.2	4.3	27	48	24	11	12	e3.2	329	6.0	53	4.5
29	6.7	3.5	59	47	34	52	9.5	e3.2	203	6.8	64	5.1
30	5.7	3.4	15	66	---	17	7.6	e3.0	133	7.6	15	5.5
31	5.7	---	10	37	---	14	---	e4.8	---	6.3	7.2	---
TOTAL	925.4	1,275.9	683.0	1,936.7	1,969	682.7	1,169.8	3,976.1	2,809.6	469.6	933.2	207.8
MEAN	29.9	42.5	22.0	62.5	67.9	22.0	39.0	128	93.7	15.1	30.1	6.93
MAX	198	353	160	614	268	66	379	789	329	97	256	26
MIN	1.3	3.4	3.3	3.4	10	8.6	5.3	3.0	4.8	2.7	4.6	3.1
AC-FT	1,840	2,530	1,350	3,840	3,910	1,350	2,320	7,890	5,570	931	1,850	412

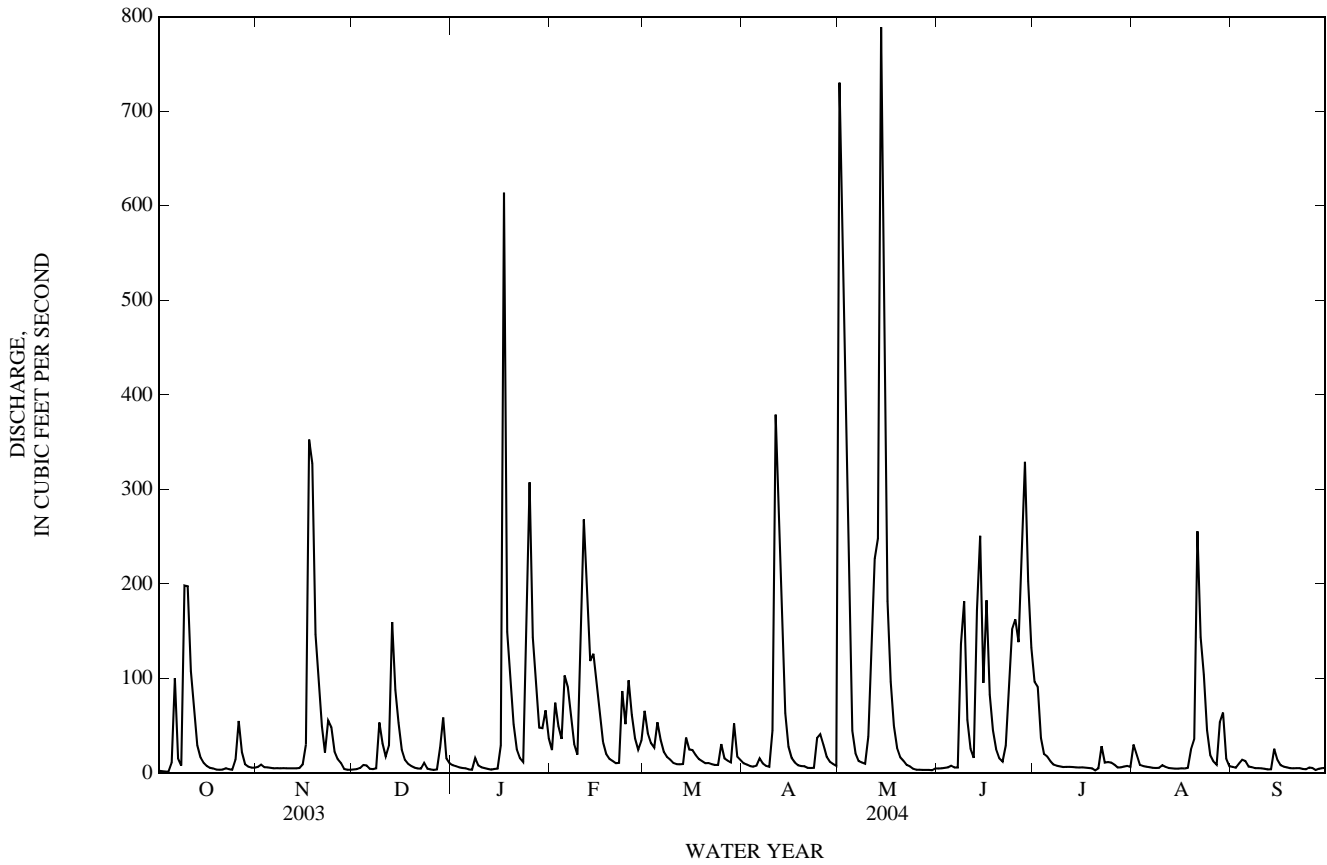
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2004h, BY WATER YEAR (WY)

MEAN	42.3	48.7	37.1	24.7	24.2	28.4	30.0	44.7	70.7	18.5	9.76	18.6
MAX	181	103	81.8	62.5	67.9	124	80.5	128	343	44.0	30.1	50.2
(WY)	(2003)	(2003)	(2002)	(2004)	(2004)	(2001)	(1975)	(2004)	(2001)	(2002)	(2004)	(2002)
MIN	1.04	1.70	6.50	0.81	0.27	1.36	1.50	4.12	10.5	2.85	1.78	0.15
(WY)	(1976)	(1976)	(1976)	(1976)	(1976)	(1976)	(1976)	(2003)	(1975)	(1976)	(1975)	(1975)

08068400 Panther Branch at Gosling Road, The Woodlands, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1974 - 2004h	
ANNUAL TOTAL	9,886.9		17,038.8		39.5	
ANNUAL MEAN	27.1		46.6		60.3	
HIGHEST ANNUAL MEAN					19.4	
LOWEST ANNUAL MEAN					4,590	
HIGHEST DAILY MEAN	353	Nov 17	789	May 14	19.4	2000
LOWEST DAILY MEAN	1.3	Oct 4	1.3	Oct 4	0.00	Aug 1, 1974
ANNUAL SEVEN-DAY MINIMUM	2.0	Sep 28	3.4	May 24	0.00	Aug 17, 1974
MAXIMUM PEAK FLOW			1,770	Jan 17	9,040	Jun 9, 2001
MAXIMUM PEAK STAGE			9.99	Jan 17	15.35	Jun 9, 2001
ANNUAL RUNOFF (AC-FT)	19,610		33,800		28,580	
10 PERCENT EXCEEDS	66		132		94	
50 PERCENT EXCEEDS	12		11		7.7	
90 PERCENT EXCEEDS	3.6		4.5		2.7	

h See Period of Record paragraph.  
e Estimated



08068400 Panther Branch at Gosling Road, The Woodlands, TX—Continued

## WATER-QUALITY RECORDS

## PERIOD OF RECORD.--

CHEMICAL DATA: Mar. 1974 to Sept. 1975, Mar. 1999 to Nov. 2000.  
 BIOCHEMICAL DATA: Mar. 1974 to Sept. 1975, Mar. 1999 to Nov. 2000.  
 PESTICIDE DATA: Mar. 1974 to Sept. 1975, Mar. 1999 to Nov. 2000.  
 SEDIMENT DATA: Mar. 1999 to Nov. 2000.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Mar. 1999 to current year.  
 pH: Mar. 1999 to current year.  
 WATER TEMPERATURE: Mar. 1999 to current year.  
 DISSOLVED OXYGEN: Mar. 1999 to current year.

INSTRUMENTATION.--Water-quality monitor since Mar. 1999.

REMARKS.--Records for specific conductance and water temperature good. Record for pH fair. Record for dissolved oxygen poor. Interruptions in the record were caused by malfunctions of the instrumentation.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,550 microsiemens/cm, May 4, 1999; minimum, 29 microsiemens/cm, June 10, 2001.  
 pH: Maximum, 9.2 standard units, Sept. 1, 2000; minimum, 6.2 standard units, Aug. 22, 23, 2002.  
 WATER TEMPERATURES: Maximum, 32.5°C, Aug. 7, 2003; minimum, 5.9°C, Jan. 20, 2001.  
 DISSOLVED OXYGEN: Maximum, 12.5 mg/L, May 31, 2003; minimum, 0.0 mg/L, Aug. 28, 29, Sept. 12, 2000.

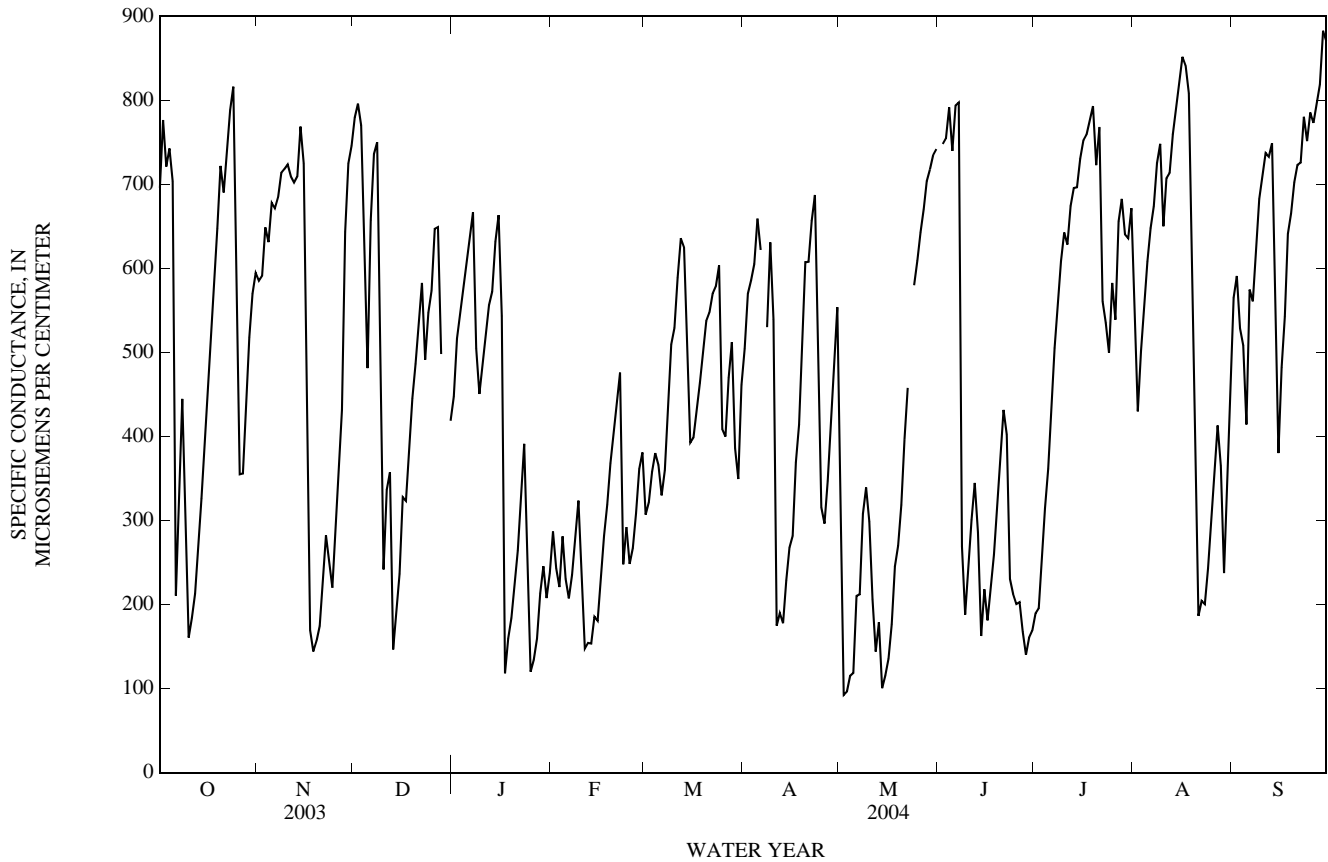
## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 973 microsiemens/cm, Sept. 29; minimum, 66 microsiemens/cm, May 1.  
 pH: Maximum, 8.6 standard units, July 20; minimum, 6.7 standard units, on several days.  
 WATER TEMPERATURE: Maximum, 32.3°C, Aug. 3; minimum, 7.0°C, Feb. 15.  
 DISSOLVED OXYGEN: Maximum, 11.8 mg/L, Nov. 14, Dec. 30, Jan. 6, 11; minimum, 3.1 mg/L, July 23, Aug. 22.

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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	813	528	696	643	476	585	827	663	780	488	398	447
2	830	656	777	693	420	591	828	653	796	599	438	517
3	784	644	721	699	523	649	832	686	770	591	441	550
4	818	645	743	687	523	631	797	463	619	620	472	579
5	850	180	704	709	596	678	552	390	481	634	535	608
6	280	177	211	702	567	671	763	544	658	683	550	636
7	429	280	349	721	588	685	797	620	736	724	602	667
8	507	343	445	749	609	714	784	706	750	686	382	505
9	540	93	327	764	591	718	731	177	441	520	339	451
10	193	120	161	766	607	724	304	185	242	531	407	485
11	194	176	184	743	633	709	402	250	337	556	436	518
12	252	183	213	736	630	702	455	113	357	583	493	556
13	301	212	265	775	650	709	186	107	147	592	506	573
14	382	241	326	814	669	769	201	168	187	702	551	632
15	542	258	415	842	524	725	365	182	237	718	523	663
16	535	378	486	602	267	465	633	219	328	634	108	543
17	611	424	547	267	87	170	365	222	324	159	74	118
18	646	507	600	163	119	144	425	271	379	173	151	160
19	733	482	648	166	145	157	488	365	445	209	166	184
20	764	633	722	195	153	175	551	380	487	256	171	221
21	746	516	690	260	182	224	592	418	538	321	179	264
22	849	611	736	339	216	282	615	474	583	387	261	330
23	867	697	788	339	183	253	607	378	491	478	299	391
24	892	726	816	253	177	220	596	450	547	491	132	268
25	888	214	551	354	214	286	640	435	574	135	107	120
26	420	273	355	430	263	368	688	542	647	145	121	134
27	421	305	356	543	304	432	703	546	649	192	137	159
28	510	340	449	777	511	643	689	171	498	251	170	213
29	578	376	518	777	576	725	---	---	---	299	190	246
30	645	398	570	800	612	746	---	---	---	231	182	208
31	648	478	595	---	---	---	456	361	419	277	188	237
MONTH	892	93	515	842	87	518				724	74	393





PH, WATER, UNFILTERED, FIELD, STANDARD UNITS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

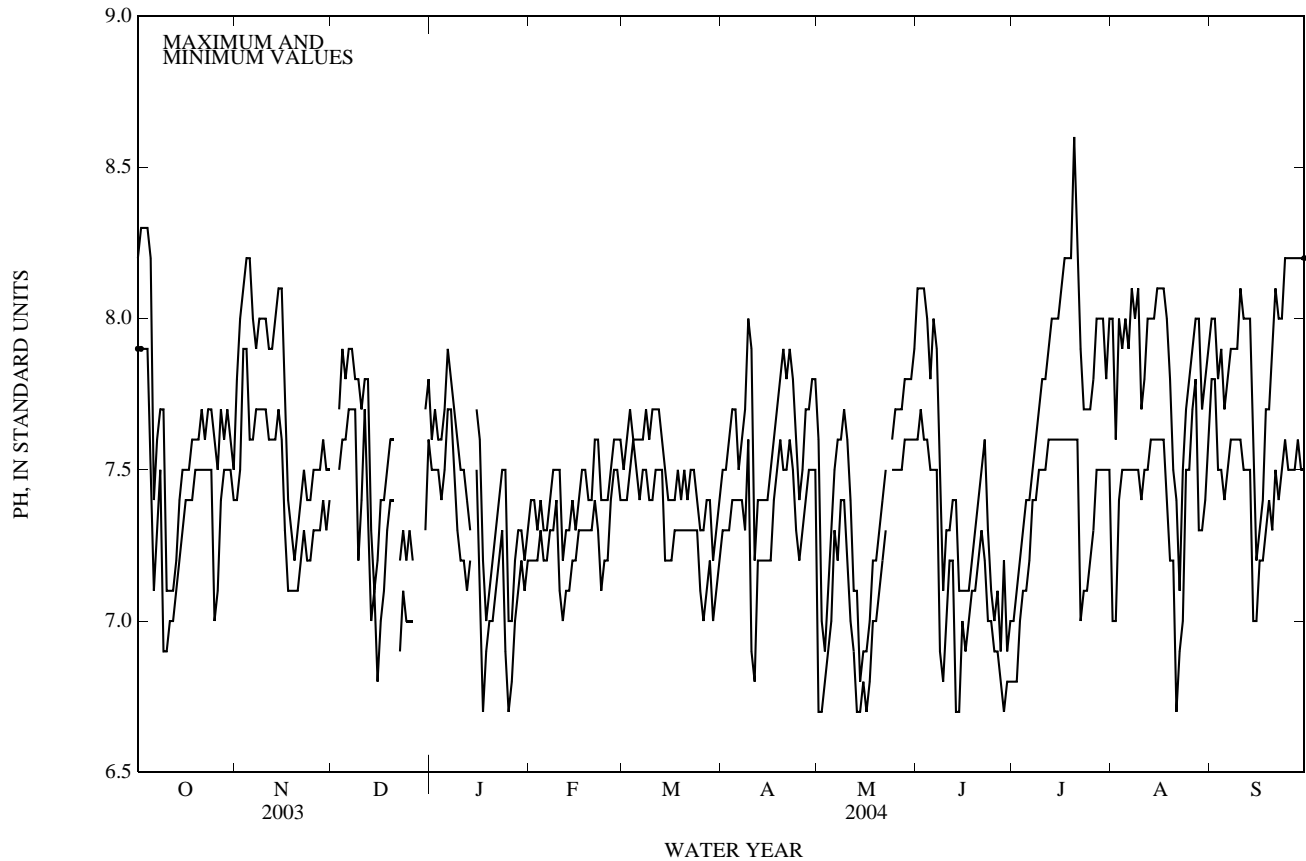
DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.2	7.9	7.8	7.4	---	---	7.6	7.5	7.4	7.2	7.5	7.4
2	8.3	7.9	8.0	7.5	---	---	7.7	7.5	7.4	7.2	7.6	7.4
3	8.3	7.9	8.1	7.9	7.7	7.5	7.6	7.5	7.3	7.2	7.7	7.5
4	8.3	7.9	8.2	7.9	7.9	7.6	7.6	7.4	7.4	7.3	7.6	7.6
5	8.2	7.4	8.2	7.6	7.8	7.6	7.7	7.5	7.3	7.2	7.6	7.5
6	7.4	7.1	8.0	7.6	7.9	7.7	7.9	7.7	7.3	7.2	7.6	7.4
7	7.6	7.3	7.9	7.7	7.9	7.7	7.8	7.7	7.4	7.3	7.6	7.5
8	7.7	7.5	8.0	7.7	7.8	7.7	7.7	7.5	7.5	7.3	7.7	7.5
9	7.7	6.9	8.0	7.7	7.8	7.2	7.6	7.3	7.5	7.4	7.6	7.4
10	7.1	6.9	8.0	7.7	7.7	7.4	7.5	7.2	7.5	7.1	7.7	7.4
11	7.1	7.0	7.9	7.6	7.8	7.7	7.5	7.2	7.2	7.0	7.7	7.5
12	7.1	7.0	7.9	7.6	7.8	7.3	7.4	7.1	7.3	7.1	7.7	7.5
13	7.2	7.1	8.0	7.6	7.3	7.0	7.3	7.2	7.3	7.1	7.6	7.5
14	7.4	7.2	8.1	7.7	7.1	7.1	---	---	7.4	7.2	7.5	7.2
15	7.5	7.3	8.1	7.6	7.2	6.8	7.7	7.5	7.3	7.2	7.4	7.2
16	7.5	7.4	7.7	7.3	7.4	7.0	7.6	7.2	7.4	7.3	7.4	7.2
17	7.5	7.4	7.4	7.1	7.4	7.1	7.2	6.7	7.5	7.3	7.4	7.3
18	7.6	7.4	7.3	7.1	7.5	7.3	7.0	6.9	7.5	7.3	7.5	7.3
19	7.6	7.5	7.2	7.1	7.6	7.4	7.1	7.0	7.4	7.3	7.4	7.3
20	7.6	7.5	7.3	7.1	7.6	7.4	7.2	7.0	7.4	7.3	7.5	7.3
21	7.7	7.5	7.4	7.2	---	---	7.3	7.1	7.6	7.4	7.4	7.3
22	7.6	7.5	7.5	7.3	7.2	6.9	7.4	7.2	7.6	7.3	7.5	7.3
23	7.7	7.5	7.4	7.2	7.3	7.1	7.5	7.3	7.4	7.1	7.5	7.3
24	7.7	7.5	7.4	7.2	7.2	7.0	7.5	6.9	7.4	7.2	7.4	7.3
25	7.6	7.0	7.5	7.3	7.3	7.0	7.0	6.7	7.4	7.2	7.3	7.1
26	7.5	7.1	7.5	7.3	7.2	7.0	7.0	6.8	7.5	7.4	7.3	7.0
27	7.7	7.4	7.5	7.3	---	---	7.2	7.0	7.6	7.5	7.4	7.1
28	7.6	7.5	7.6	7.4	---	---	7.3	7.1	7.6	7.5	7.4	7.2
29	7.7	7.5	7.5	7.3	---	---	7.3	7.2	7.6	7.4	7.2	7.0
30	7.6	7.5	7.5	7.4	7.7	7.3	7.2	7.1	---	---	7.3	7.1
31	7.5	7.4	---	---	7.8	7.6	7.3	7.2	---	---	7.4	7.2
MONTH	8.3	6.9	8.2	7.1			7.9	6.7	7.6	7.0	7.7	7.0



08068400 Panther Branch at Gosling Road, The Woodlands, TX—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	MAX	MIN	MAX	MIN	MAX	MIN
1	7.5	7.3	7.6	6.7	8.1	7.6	7.0	6.8	8.0	7.0	8.0	7.8
2	7.5	7.3	7.0	6.7	8.1	7.7	7.1	6.8	7.6	7.0	8.0	7.8
3	7.6	7.3	6.9	6.8	8.1	7.6	7.2	7.0	8.0	7.4	7.8	7.5
4	7.7	7.4	7.1	6.9	8.0	7.6	7.3	7.1	7.9	7.5	7.9	7.5
5	7.7	7.4	7.3	7.0	7.8	7.5	7.4	7.1	8.0	7.5	7.7	7.4
6	7.5	7.4	7.5	7.3	8.0	7.5	7.4	7.2	7.9	7.5	7.8	7.5
7	7.6	7.4	7.6	7.2	7.9	7.5	7.5	7.4	8.1	7.5	7.9	7.6
8	7.7	7.3	7.6	7.4	7.6	6.9	7.6	7.4	8.0	7.5	7.9	7.6
9	8.0	7.6	7.7	7.4	7.1	6.8	7.7	7.5	8.1	7.5	7.9	7.6
10	7.9	6.9	7.6	7.2	7.3	7.0	7.8	7.5	7.7	7.4	8.1	7.6
11	7.2	6.8	7.4	7.0	7.3	7.2	7.8	7.5	7.8	7.5	8.0	7.5
12	7.4	7.2	7.1	6.9	7.4	7.2	7.9	7.6	8.0	7.5	8.0	7.5
13	7.4	7.2	7.1	6.7	7.4	6.7	8.0	7.6	8.0	7.6	8.0	7.5
14	7.4	7.2	6.8	6.7	7.1	6.7	8.0	7.6	8.0	7.6	7.6	7.0
15	7.4	7.2	6.9	6.8	7.1	7.0	8.0	7.6	8.1	7.6	7.2	7.0
16	7.5	7.2	6.9	6.7	7.1	6.9	8.1	7.6	8.1	7.6	7.3	7.2
17	7.6	7.4	7.0	6.8	7.1	7.0	8.2	7.6	8.1	7.6	7.4	7.2
18	7.7	7.5	7.2	7.0	7.2	7.1	8.2	7.6	8.0	7.4	7.7	7.3
19	7.8	7.6	7.2	7.0	7.3	7.1	8.2	7.6	7.8	7.2	7.7	7.4
20	7.9	7.5	7.3	7.1	7.4	7.2	8.6	7.6	7.5	7.2	7.9	7.3
21	7.8	7.5	7.4	7.2	7.5	7.3	8.2	7.6	7.4	6.7	8.1	7.5
22	7.9	7.6	7.5	7.3	7.6	7.2	7.9	7.0	7.1	6.9	8.0	7.4
23	7.8	7.5	---	---	7.3	7.0	7.7	7.1	7.5	7.0	8.0	7.5
24	7.6	7.3	7.6	7.5	7.1	7.0	7.7	7.1	7.7	7.5	8.2	7.6
25	7.4	7.2	7.7	7.5	7.0	6.9	7.7	7.2	7.8	7.5	8.2	7.5
26	7.5	7.3	7.7	7.5	7.1	6.9	7.8	7.3	7.9	7.7	8.2	7.5
27	7.7	7.4	7.7	7.5	6.9	6.8	8.0	7.5	8.0	7.8	8.2	7.5
28	7.7	7.5	7.8	7.6	7.2	6.7	8.0	7.5	8.0	7.3	8.2	7.6
29	7.8	7.5	7.8	7.6	6.9	6.8	8.0	7.5	7.7	7.3	8.2	7.5
30	7.8	7.5	7.8	7.6	7.0	6.8	7.8	7.5	7.8	7.4	8.2	7.5
31	---	---	7.9	7.6	---	---	8.0	7.5	7.9	7.6	---	---
MONTH	8.0	6.8	7.9	6.7	8.1	6.7	8.6	6.8	8.1	6.7	8.2	7.0
YEAR												



## SAN JACINTO RIVER BASIN

08068400 Panther Branch at Gosling Road, The Woodlands, TX—Continued

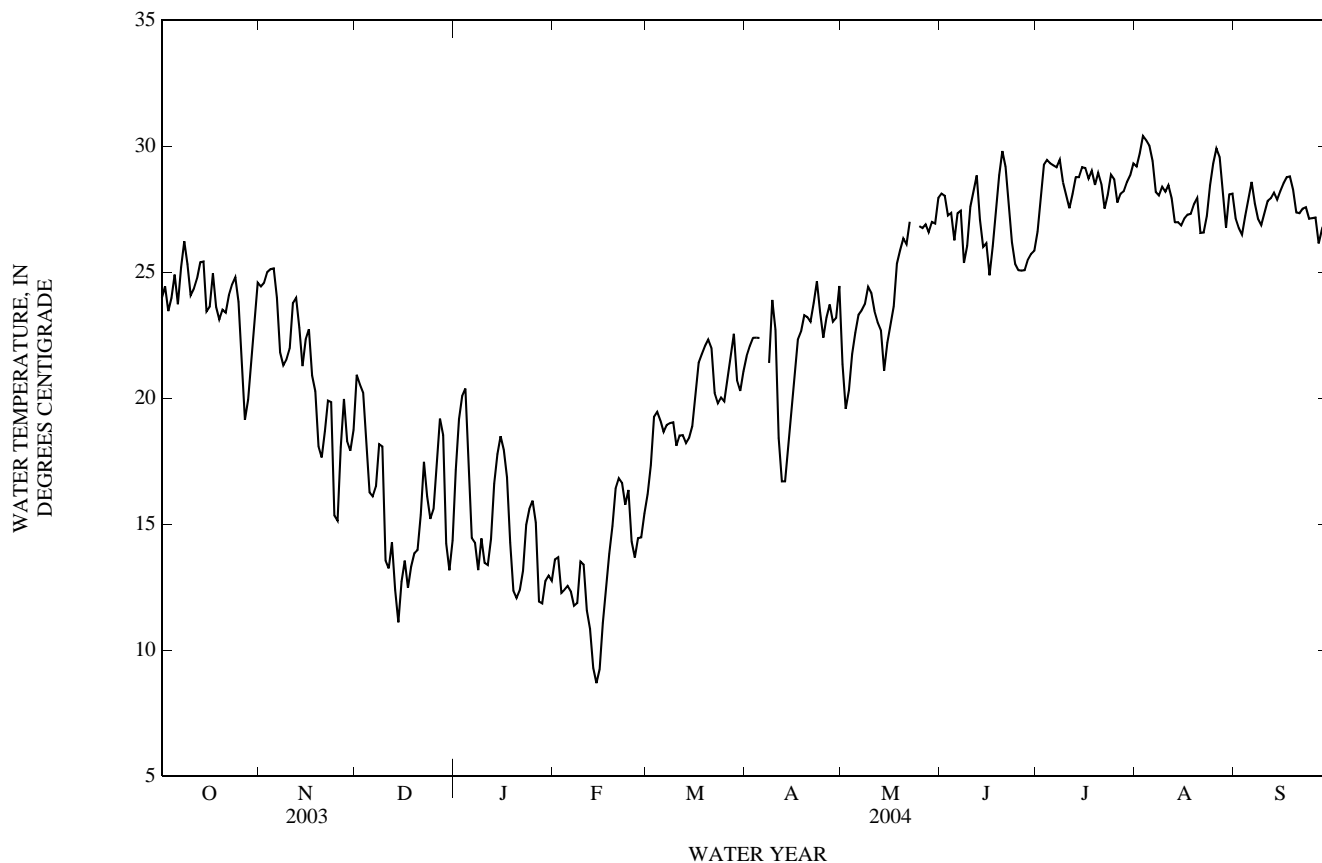
TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	26.0	21.4	24.0	25.7	23.2	24.4	22.5	19.3	20.9	18.4	16.3	17.2
2	25.8	22.9	24.4	25.5	23.1	24.6	22.0	18.6	20.5	20.4	18.1	19.2
3	25.4	21.5	23.5	26.2	23.9	25.0	21.7	19.1	20.2	20.9	19.2	20.1
4	26.1	22.4	24.0	26.3	23.9	25.1	19.5	16.8	18.5	21.1	19.6	20.4
5	27.4	22.9	24.9	26.2	24.0	25.2	17.3	14.7	16.3	19.6	15.7	17.2
6	25.5	22.4	23.7	25.0	22.6	24.0	18.2	14.6	16.1	15.7	12.8	14.5
7	27.1	23.5	25.2	22.6	21.0	21.8	18.6	15.1	16.5	15.1	13.2	14.3
8	27.6	24.8	26.2	22.0	20.3	21.3	19.8	17.0	18.2	14.4	11.3	13.2
9	26.8	24.0	25.3	22.7	20.3	21.5	19.8	14.9	18.1	16.0	13.1	14.4
10	24.8	23.5	24.1	23.4	20.2	22.0	14.9	12.1	13.6	14.7	11.8	13.5
11	26.1	22.8	24.3	25.0	22.9	23.8	14.8	11.1	13.3	14.9	11.5	13.4
12	26.2	23.5	24.8	25.0	23.4	24.0	15.6	12.8	14.3	15.8	12.6	14.4
13	26.6	24.4	25.4	23.7	21.6	22.8	13.4	11.0	12.4	17.8	15.4	16.6
14	26.6	24.3	25.4	22.7	19.5	21.3	12.9	9.5	11.1	18.9	16.4	17.8
15	25.6	21.1	23.4	23.6	21.6	22.3	14.9	10.8	12.7	19.3	17.6	18.5
16	25.3	21.5	23.6	24.1	21.4	22.7	14.6	12.6	13.6	18.9	17.1	18.0
17	26.2	23.9	25.0	21.4	20.4	20.9	14.1	9.9	12.5	17.5	16.2	16.9
18	24.7	21.9	23.6	21.1	18.6	20.3	14.9	10.8	13.3	16.2	12.5	14.3
19	24.8	21.5	23.1	19.3	16.8	18.1	15.3	11.7	13.9	14.0	10.9	12.4
20	25.4	21.7	23.5	19.6	15.9	17.7	15.7	11.6	14.0	13.6	10.7	12.1
21	25.3	21.4	23.4	20.4	17.2	18.7	17.2	13.1	15.4	14.3	10.7	12.4
22	26.3	22.1	24.1	21.4	18.5	19.9	18.8	15.4	17.5	14.6	11.3	13.1
23	26.8	22.5	24.5	21.7	16.8	19.8	18.7	14.3	16.1	16.7	13.2	15.0
24	26.5	23.2	24.8	16.8	14.2	15.4	16.6	13.2	15.2	16.5	14.4	15.6
25	25.2	22.7	23.8	17.2	12.8	15.1	16.6	14.0	15.6	17.2	14.7	15.9
26	22.9	18.8	21.4	19.9	15.9	18.1	18.4	15.9	17.3	16.8	12.9	15.1
27	20.4	18.0	19.1	21.6	18.8	20.0	20.2	18.4	19.2	13.7	10.3	11.9
28	22.0	17.3	19.9	19.8	16.5	18.3	20.4	14.4	18.5	13.7	10.1	11.9
29	23.2	18.8	21.4	19.6	16.0	17.9	15.1	13.4	14.2	13.9	11.6	12.8
30	24.6	20.8	23.0	20.8	16.7	18.7	14.7	11.3	13.2	13.3	12.7	13.0
31	25.0	23.9	24.6	---	---	---	16.3	12.3	14.4	13.4	11.9	12.8
MONTH	27.6	17.3	23.8	26.3	12.8	21.0	22.5	9.5	15.7	21.1	10.1	15.1
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.1	12.1	13.6	17.4	15.2	16.2	24.3	19.3	21.7	24.9	18.9	21.4
2	14.5	12.7	13.7	19.5	15.4	17.3	24.5	19.9	22.1	21.2	18.2	19.6
3	13.5	11.0	12.3	20.6	18.1	19.3	23.8	21.0	22.4	22.6	18.1	20.3
4	13.1	11.6	12.4	19.8	19.0	19.5	24.0	20.6	22.4	24.2	19.5	21.7
5	13.5	11.7	12.6	20.0	18.2	19.1	23.6	20.8	22.4	24.8	20.6	22.6
6	13.9	11.4	12.3	20.1	17.3	18.7	---	---	---	25.9	21.1	23.3
7	13.8	9.9	11.8	21.4	16.6	18.9	---	---	---	25.3	21.5	23.5
8	12.9	10.5	11.9	20.9	16.9	19.0	23.7	20.0	21.4	24.8	22.6	23.7
9	15.2	11.8	13.5	21.3	16.6	19.0	25.1	20.9	23.9	26.1	22.9	24.4
10	15.0	11.6	13.4	20.3	15.9	18.1	24.3	20.2	22.7	25.3	23.0	24.2
11	12.0	11.3	11.6	20.5	16.3	18.5	20.2	17.4	18.4	24.6	21.9	23.5
12	12.1	9.9	10.8	19.4	17.3	18.5	17.4	16.1	16.7	24.8	21.6	23.0
13	9.9	9.0	9.3	18.9	17.0	18.2	19.3	14.7	16.7	24.5	20.3	22.7
14	9.2	7.8	8.7	18.9	18.0	18.4	20.7	15.7	18.1	22.5	20.0	21.1
15	11.9	7.0	9.3	20.4	17.6	18.9	21.7	16.7	19.3	23.8	20.5	22.2
16	13.4	9.0	11.1	22.6	18.2	20.3	23.9	18.2	20.7	24.4	21.4	22.9
17	15.1	9.8	12.4	23.3	19.8	21.4	24.6	20.3	22.3	24.9	22.5	23.6
18	16.1	11.3	13.8	23.7	20.0	21.7	24.4	20.9	22.6	26.4	24.0	25.3
19	17.5	12.0	14.9	23.2	21.0	22.1	24.8	21.7	23.3	27.9	24.0	25.9
20	18.2	14.5	16.4	24.3	20.4	22.3	24.2	22.0	23.2	28.4	24.6	26.3
21	18.6	14.7	16.8	22.9	21.1	22.0	23.8	22.1	23.0	28.2	24.4	26.1
22	18.6	13.8	16.6	21.7	18.2	20.2	25.2	22.4	23.8	28.3	24.8	27.0
23	16.7	14.9	15.8	21.3	17.7	19.8	25.8	23.7	24.6	---	---	---
24	16.8	16.0	16.4	21.0	19.1	20.0	24.6	22.0	23.4	---	---	---
25	16.2	12.9	14.3	20.7	18.8	19.9	23.3	22.1	22.4	28.4	25.5	26.8
26	15.9	11.8	13.7	22.0	20.0	20.8	25.3	21.5	23.2	28.4	25.3	26.7
27	16.7	12.3	14.4	24.3	19.7	21.6	26.2	21.4	23.7	28.8	25.4	26.9
28	16.1	12.8	14.5	24.6	21.2	22.6	24.2	21.8	23.0	27.6	25.8	26.6
29	16.5	14.6	15.4	22.5	18.7	20.7	24.9	21.5	23.2	28.7	25.7	27.0
30	---	---	---	23.3	17.5	20.3	25.8	23.3	24.5	27.7	26.3	26.9
31	---	---	---	23.5	18.4	21.1	---	---	---	30.2	26.4	27.9
MONTH	18.6	7.0	13.2	24.6	15.2	19.8						

08068400 Panther Branch at Gosling Road, The Woodlands, TX—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	30.4	26.0	28.1	28.1	25.3	26.6	30.6	28.3	29.2	28.5	25.6	27.1
2	29.9	25.6	28.0	29.9	26.4	28.0	31.6	28.0	29.7	27.3	26.1	26.7
3	29.2	25.7	27.2	31.0	27.7	29.3	32.3	28.8	30.4	27.1	25.8	26.5
4	29.8	25.8	27.3	31.4	27.8	29.5	31.8	28.8	30.2	28.7	25.9	27.2
5	27.2	25.7	26.3	31.3	27.7	29.3	31.6	28.6	30.0	29.6	26.3	27.9
6	29.7	25.7	27.3	31.1	27.6	29.2	30.2	28.5	29.4	30.1	27.4	28.6
7	29.4	26.1	27.4	30.9	27.5	29.2	29.8	26.8	28.2	28.9	26.8	27.7
8	27.5	24.5	25.4	31.3	28.0	29.5	29.9	26.5	28.0	28.3	26.3	27.1
9	27.9	24.7	26.0	29.8	27.5	28.6	30.4	27.0	28.4	28.9	25.2	26.9
10	29.1	26.5	27.6	29.6	26.9	28.0	29.0	27.3	28.2	29.4	25.5	27.3
11	29.6	27.3	28.2	28.6	26.6	27.5	30.0	27.1	28.4	29.5	26.6	27.8
12	30.9	27.2	28.8	30.4	26.2	28.1	29.7	26.8	27.9	29.9	26.3	27.9
13	29.1	24.6	27.1	30.8	27.2	28.8	29.0	25.3	27.0	30.1	26.8	28.2
14	28.2	24.1	26.0	30.5	27.3	28.8	29.2	25.4	27.0	28.8	27.0	27.9
15	27.4	25.4	26.1	31.1	27.5	29.2	29.2	25.1	26.9	29.9	26.6	28.2
16	25.7	23.7	24.9	30.9	27.9	29.1	29.7	25.1	27.1	29.8	27.1	28.5
17	27.4	24.9	26.0	30.4	27.5	28.7	29.7	25.3	27.3	30.3	27.4	28.8
18	29.6	25.7	27.6	31.0	27.9	29.0	29.4	25.7	27.3	30.3	27.6	28.8
19	30.7	26.9	28.8	30.4	27.1	28.5	28.8	26.7	27.7	29.9	27.0	28.3
20	31.8	28.2	29.8	31.8	27.0	28.9	30.2	25.9	27.9	29.1	25.7	27.4
21	30.6	28.1	29.2	30.5	27.1	28.5	29.6	24.4	26.6	29.0	26.1	27.3
22	29.4	26.9	27.8	29.1	27.0	27.5	27.9	25.5	26.6	29.6	26.0	27.5
23	26.9	25.5	26.2	30.2	26.2	28.1	29.3	25.9	27.2	29.5	26.2	27.6
24	26.1	24.9	25.3	30.8	27.1	28.9	30.5	26.8	28.4	29.0	26.1	27.1
25	25.8	24.6	25.1	30.0	27.7	28.7	31.4	27.8	29.3	28.5	26.2	27.1
26	25.7	24.5	25.1	29.2	26.4	27.8	31.6	28.5	29.9	28.8	25.7	27.2
27	25.8	24.4	25.1	30.0	26.5	28.1	31.1	28.3	29.6	27.5	24.3	26.1
28	26.8	24.4	25.5	29.5	27.1	28.2	30.4	26.0	28.2	28.9	25.2	26.7
29	26.7	24.7	25.7	30.1	27.3	28.6	28.5	25.3	26.8	28.8	24.7	26.3
30	26.5	25.3	25.9	29.9	27.8	28.8	30.0	26.3	28.1	28.1	24.2	26.2
31	---	---	---	31.2	27.9	29.3	29.6	26.7	28.1	---	---	---
MONTH	31.8	23.7	26.8	31.8	25.3	28.6	32.3	24.4	28.2	30.3	24.2	27.5
YEAR												

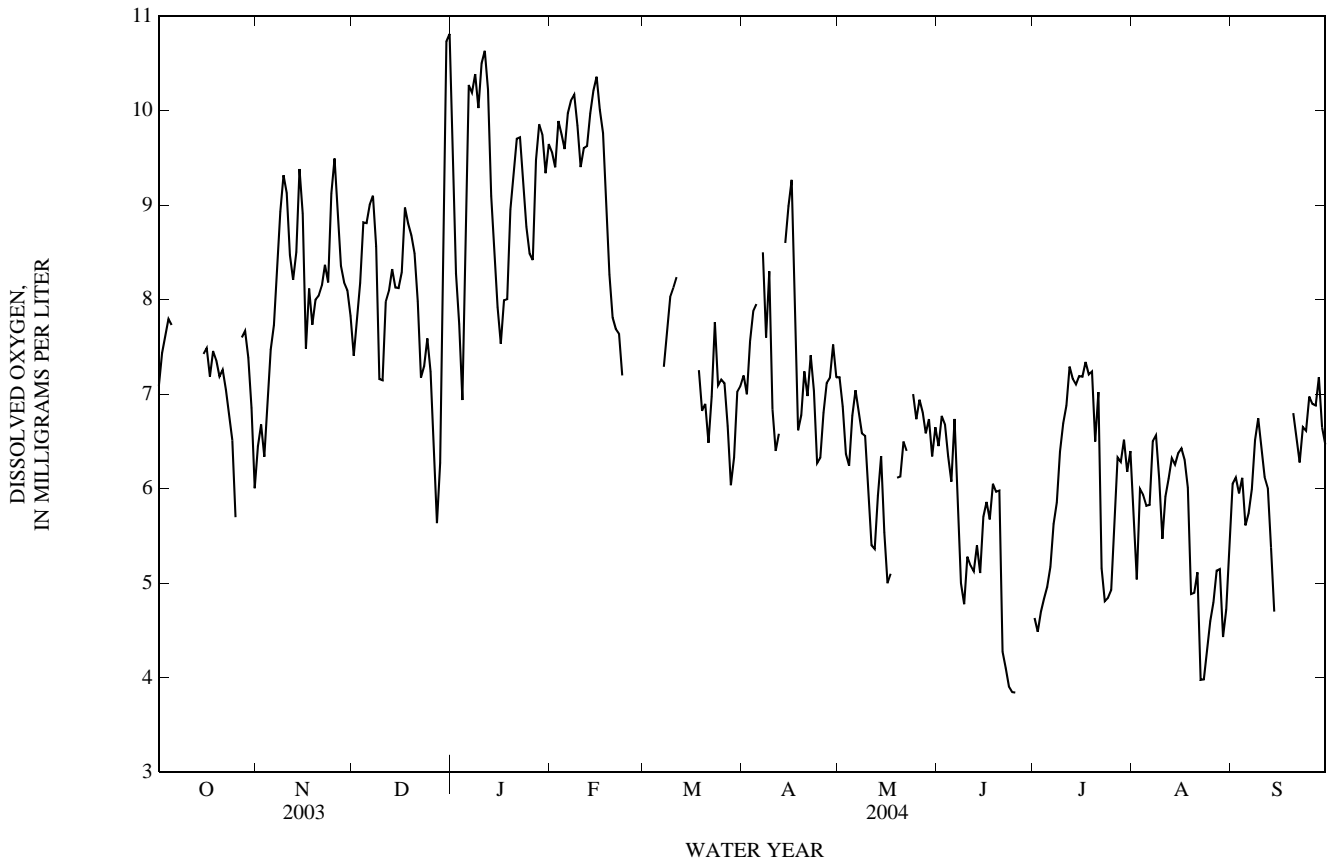




08068400 Panther Branch at Gosling Road, The Woodlands, TX—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER—CONTINUED  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	9.1	4.7	6.5	5.0	4.4	4.6	9.1	3.6	5.7	7.1	5.2	6.1
2	9.5	5.3	6.8	4.8	4.2	4.5	6.4	3.3	5.0	7.2	5.3	6.1
3	10.2	5.2	6.7	5.1	4.4	4.7	7.4	4.6	6.0	6.5	5.3	6.0
4	9.3	4.7	6.3	5.0	4.7	4.8	7.9	4.9	5.9	7.3	4.8	6.1
5	8.6	4.7	6.1	5.6	4.2	5.0	7.9	4.6	5.8	7.1	4.6	5.6
6	10.0	5.1	6.7	5.6	4.4	5.2	8.3	4.3	5.8	7.6	4.8	5.7
7	8.5	4.1	5.9	6.0	5.2	5.6	9.4	5.0	6.5	8.4	4.4	6.0
8	6.6	3.5	5.0	6.6	5.3	5.9	9.3	4.9	6.6	8.4	5.4	6.5
9	5.3	4.2	4.8	7.5	5.6	6.4	8.9	4.8	6.1	9.0	5.5	6.7
10	5.8	4.9	5.3	7.9	6.0	6.7	7.4	4.0	5.5	8.7	5.3	6.4
11	5.8	4.3	5.2	8.4	6.0	6.9	8.2	4.6	5.9	8.7	4.8	6.1
12	5.8	4.6	5.1	9.2	6.2	7.3	8.5	4.7	6.1	9.0	4.2	6.0
13	6.8	4.3	5.4	9.5	5.7	7.2	8.9	4.9	6.3	8.5	3.9	5.4
14	5.5	4.5	5.1	9.6	5.5	7.1	9.0	4.8	6.3	6.0	3.4	4.7
15	6.5	5.0	5.7	9.9	5.5	7.2	9.2	5.0	6.4	---	---	---
16	6.6	5.4	5.9	10.3	5.5	7.2	9.4	5.0	6.4	---	---	---
17	6.0	5.3	5.7	11.5	5.6	7.3	9.7	4.9	6.3	---	---	---
18	6.3	5.7	6.1	11.3	5.2	7.2	8.9	3.9	6.0	---	---	---
19	6.3	5.7	6.0	11.3	5.1	7.2	7.1	3.7	4.9	---	---	---
20	6.5	5.4	6.0	11.0	5.5	6.5	6.0	3.8	4.9	8.9	4.4	6.8
21	4.6	4.0	4.3	11.1	5.2	7.0	7.0	3.6	5.1	9.5	4.8	6.5
22	4.6	3.5	4.1	8.0	3.3	5.2	4.7	3.1	4.0	10.4	5.0	6.3
23	4.2	3.5	3.9	6.4	3.1	4.8	4.9	3.4	4.0	9.7	5.0	6.7
24	4.0	3.6	3.8	6.9	3.3	4.8	4.8	3.8	4.3	11.0	5.1	6.6
25	4.2	3.4	3.8	6.6	4.2	4.9	4.9	4.3	4.6	10.8	5.1	7.0
26	---	---	---	7.4	4.4	5.6	5.1	4.5	4.8	11.1	5.1	6.9
27	---	---	---	8.7	4.9	6.3	5.7	4.7	5.1	10.9	4.7	6.9
28	---	---	---	8.8	5.1	6.3	6.5	3.9	5.2	10.7	4.9	7.2
29	---	---	---	9.2	5.0	6.5	5.4	3.6	4.4	10.9	4.7	6.6
30	---	---	---	8.2	4.7	6.2	5.5	3.7	4.7	10.2	4.6	6.5
31	---	---	---	9.5	4.5	6.4	6.3	4.8	5.4	---	---	---
MONTH				11.5	3.1	6.1	9.7	3.1	5.5			
YEAR												



## SAN JACINTO RIVER BASIN

08068450 Panther Branch near Spring, TX

LOCATION.--Lat 30°07'51", long 95°28'52", Montgomery County, Hydrologic Unit 12040102, on right bank at downstream side of bridge on Sawdust Road, 3.0 mi upstream from Spring Creek, and 5.1 mi northwest of Spring.

DRAINAGE AREA.--34.5 mi<sup>2</sup>.

PERIOD OF RECORD.--Apr. 1972 to Sept. 1976 (daily mean discharge), Apr. 1980 to Sept. 1988 (annual maximum), Oct. 1999 to current year. Water-quality records: Chemical data: May 1972 to Sept. 1975. Biochemical data: May 1972 to Sept. 1975. Pesticide data: May 1972 to Sept. 1975. Sediment data: Oct. 1973 to Aug. 1976.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Aug. 1999, gage located 300 ft upstream at datum 98.69 ft above NGVD of 1929. Satellite telemeter at station.

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

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	12	19	15	25	49	119	21	1,010	11	118	17	21
2	11	19	14	24	90	76	18	635	10	115	50	17
3	9.9	18	15	25	80	50	17	265	10	78	25	22
4	10	17	15	23	54	39	16	149	7.8	50	19	28
5	36	16	22	21	99	57	14	85	12	35	15	43
6	188	14	18	18	118	55	26	41	11	35	15	34
7	91	12	17	13	88	35	36	25	12	24	13	39
8	47	11	18	30	61	22	22	19	167	20	13	20
9	552	13	50	36	41	16	18	17	242	18	12	16
10	741	13	80	22	159	13	101	49	140	16	15	14
11	224	15	43	19	480	12	415	211	69	16	16	12
12	117	15	56	18	378	11	239	292	44	17	16	13
13	65	15	282	17	179	12	149	348	67	15	11	14
14	42	11	143	16	168	34	97	855	294	15	11	39
15	26	12	89	17	137	58	60	388	183	14	11	66
16	21	35	58	49	93	37	36	191	174	13	10	36
17	19	793	36	1,290	65	29	25	118	164	12	11	22
18	15	955	27	318	44	22	21	79	100	15	10	17
19	14	299	22	157	35	18	18	54	61	12	20	20
20	14	152	21	90	32	17	15	32	40	14	72	17
21	13	89	18	54	27	19	16	22	28	13	367	16
22	13	51	18	34	26	16	15	17	47	44	238	18
23	13	64	33	26	110	14	15	14	104	60	142	17
24	12	89	24	145	84	14	44	13	166	34	97	19
25	38	54	18	632	133	36	89	11	182	22	62	16
26	73	38	15	300	96	33	80	11	177	23	38	16
27	49	30	15	139	62	25	37	11	222	18	27	17
28	30	19	29	84	43	23	23	11	312	21	146	14
29	23	13	115	74	52	64	18	11	265	24	173	13
30	21	14	52	121	---	58	17	10	154	20	76	10
31	19	---	30	70	---	27	---	11	---	18	35	---
TOTAL	2,558.9	2,915	1,408	3,907	3,083	1,061	1,718	5,005	3,475.8	949	1,783	666
MEAN	82.5	97.2	45.4	126	106	34.2	57.3	161	116	30.6	57.5	22.2
MAX	741	955	282	1,290	480	119	415	1,010	312	118	367	66
MIN	9.9	11	14	13	26	11	14	10	7.8	12	10	10
AC-FT	5,080	5,780	2,790	7,750	6,120	2,100	3,410	9,930	6,890	1,880	3,540	1,320

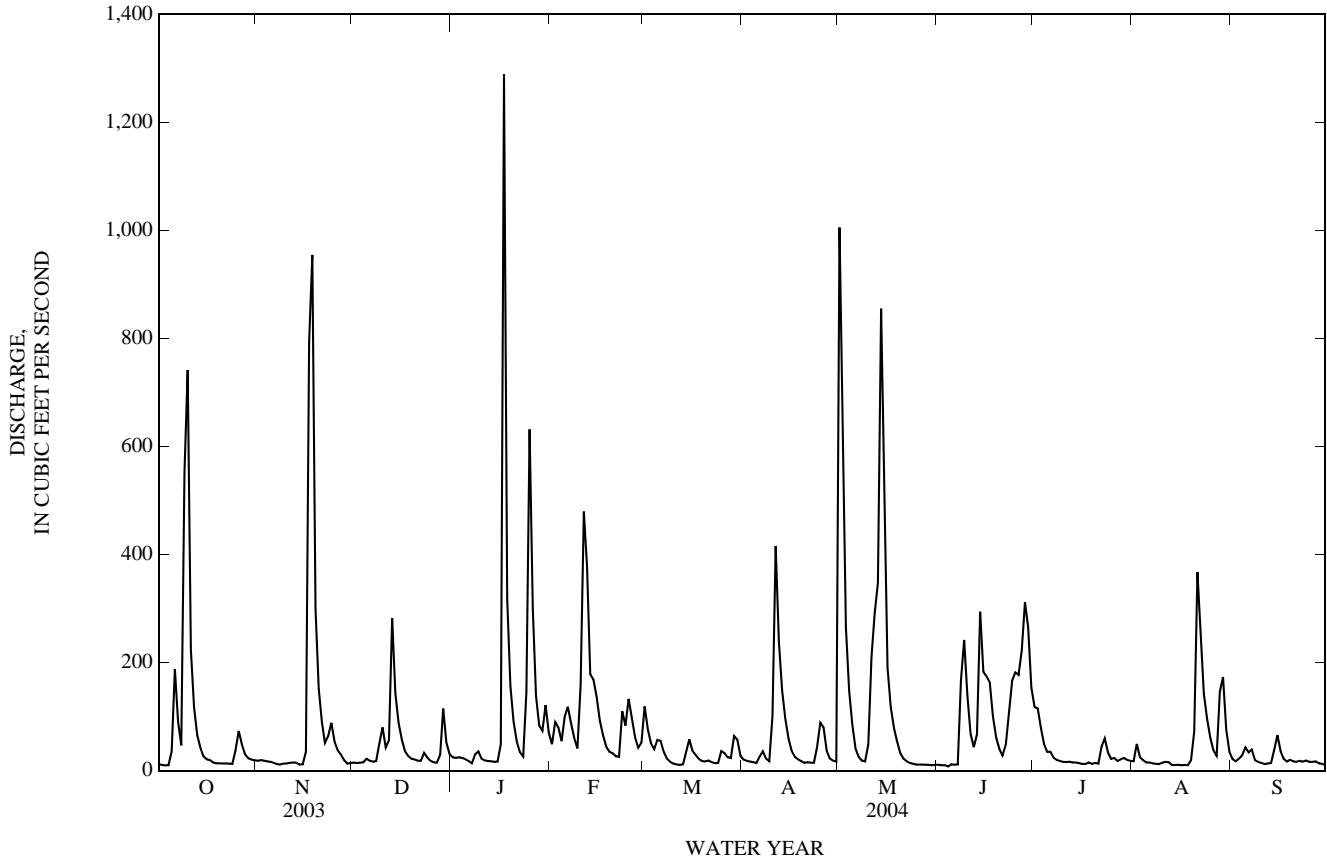
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004h, BY WATER YEAR (WY)

MEAN	68.5	66.4	48.8	54.6	39.3	48.0	47.2	49.6	87.4	19.3	14.5	40.3
MAX	270	187	103	165	106	217	133	161	497	50.0	57.5	92.0
(WY)	(2003)	(2003)	(2002)	(1974)	(2004)	(2001)	(1973)	(2004)	(2001)	(2002)	(2004)	(1973)
MIN	2.13	3.43	1.70	1.34	0.45	2.44	0.85	1.35	1.04	0.00	0.17	0.15
(WY)	(1973)	(1976)	(1973)	(1976)	(1976)	(1976)	(1974)	(1974)	(1974)	(1974)	(1976)	(1972)

08068450 Panther Branch near Spring, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1972 - 2004h	
ANNUAL TOTAL	18,299.4		28,529.7			
ANNUAL MEAN	50.1		77.9		49.8	
HIGHEST ANNUAL MEAN					98.6	2001
LOWEST ANNUAL MEAN					7.04	1976
HIGHEST DAILY MEAN	955	Nov 18	1,290	Jan 17	8,450	Jun 9, 2001
LOWEST DAILY MEAN	3.3	May 30	7.8	Jun 4	0.00	Jun 10, 1972
ANNUAL SEVEN-DAY MINIMUM	3.9	May 27	10	May 29	0.00	Jun 28, 1972
MAXIMUM PEAK FLOW			2,520	May 1	13,100	Jun 9, 2002
MAXIMUM PEAK STAGE			112.62	May 1	119.17	Jun 9, 2001
ANNUAL RUNOFF (AC-FT)	36,300		56,590		36,090	
10 PERCENT EXCEEDS	93		175		95	
50 PERCENT EXCEEDS	21		26		13	
90 PERCENT EXCEEDS	9.0		12		0.21	

h See Period of Record paragraph.



## 08068500 Spring Creek near Spring, TX

LOCATION.--Lat 30°06'37", long 95°26'10", Montgomery County, Hydrologic Unit 12040102, near right bank at downstream side of the northbound feeder road of Interstate Highway 45, 0.85 mi upstream from Missouri Pacific Railroad bridge, 2.4 mi northeast of Spring, Harris County, and 4.0 mi downstream from Willow Creek.

DRAINAGE AREA.--409 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Apr. 1939 to current year. From 1975 to 1995 published as "Spring Creek at Spring" (station 08068520).

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 72.6 ft above NGVD of 1929. Prior to Jan. 5, 1946, nonrecording gage, and Jan. 6, 1946, to Feb. 19, 1965, water-stage recorder at datum 5.5 ft higher. Oct. 2, 1965, to Feb. 19, 1976, water-stage recorder at former site at datum 10.93 ft higher. Feb. 16, 1976, to Sept. 30, 1995, water-stage recorder at former site 3.6 mi downstream at datum 10.43 ft lower; unadjusted for land-surface subsidence. Radio telemeter at station. 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 1879, 34.3 ft, May 30, 1929, from floodmarks identified by local residents, discharge, 48,300 ft<sup>3</sup>/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	37	59	52	113	300	391	106	2,560	73	1,520	61	101
2	35	54	50	95	373	573	92	4,160	70	776	130	79
3	34	52	48	84	424	669	98	3,070	77	561	80	82
4	33	48	47	77	386	501	191	2,180	74	306	62	104
5	75	47	47	72	511	328	164	653	71	217	54	143
6	787	45	44	66	1,110	331	135	216	69	182	49	168
7	274	43	43	58	852	322	143	148	69	154	46	111
8	119	41	42	74	373	195	137	118	478	139	46	80
9	1,280	42	85	85	225	149	133	107	984	127	46	86
10	3,720	43	135	66	642	129	318	177	425	112	52	84
11	1,640	43	82	57	2,480	114	2,240	536	205	189	65	70
12	525	43	101	53	3,340	105	2,010	805	143	124	119	61
13	184	42	1,120	51	4,160	99	2,010	1,260	387	106	72	57
14	122	37	721	50	3,930	119	1,480	3,940	2,060	115	54	77
15	90	38	252	50	2,270	168	556	4,820	1,640	97	47	101
16	72	79	162	78	1,380	164	217	5,450	1,260	83	43	96
17	63	2,050	122	3,970	823	145	156	3,270	1,260	74	41	73
18	55	3,920	101	2,790	348	140	129	1,290	978	69	39	55
19	49	1,960	86	2,460	248	129	112	634	368	63	56	54
20	47	1,120	80	1,990	211	117	102	351	244	60	134	49
21	44	341	74	486	182	114	94	240	181	58	1,390	46
22	43	152	70	219	164	132	88	176	208	99	684	43
23	42	140	101	188	296	116	84	147	451	131	306	42
24	41	178	94	645	400	115	116	130	1,390	169	170	41
25	48	113	78	2,740	1,400	117	204	117	1,950	105	122	40
26	184	88	72	2,690	1,590	122	406	108	1,790	89	93	37
27	236	76	70	2,960	1,180	172	1,030	105	2,840	71	77	39
28	137	64	77	1,810	409	128	709	94	3,330	69	491	35
29	91	54	280	486	260	141	201	86	3,380	70	499	34
30	73	54	167	740	---	139	134	80	2,660	76	366	33
31	62	---	135	451	---	117	---	77	---	68	159	---
TOTAL	10,242	11,066	4,638	25,754	30,267	6,301	13,595	37,105	29,115	6,079	5,653	2,121
MEAN	330	369	150	831	1,044	203	453	1,197	970	196	182	70.7
MAX	3,720	3,920	1,120	3,970	4,160	669	2,240	5,450	3,380	1,520	1,390	168
MIN	33	37	42	50	164	99	84	77	69	58	39	33
AC-FT	20,320	21,950	9,200	51,080	60,030	12,500	26,970	73,600	57,750	12,060	11,210	4,210

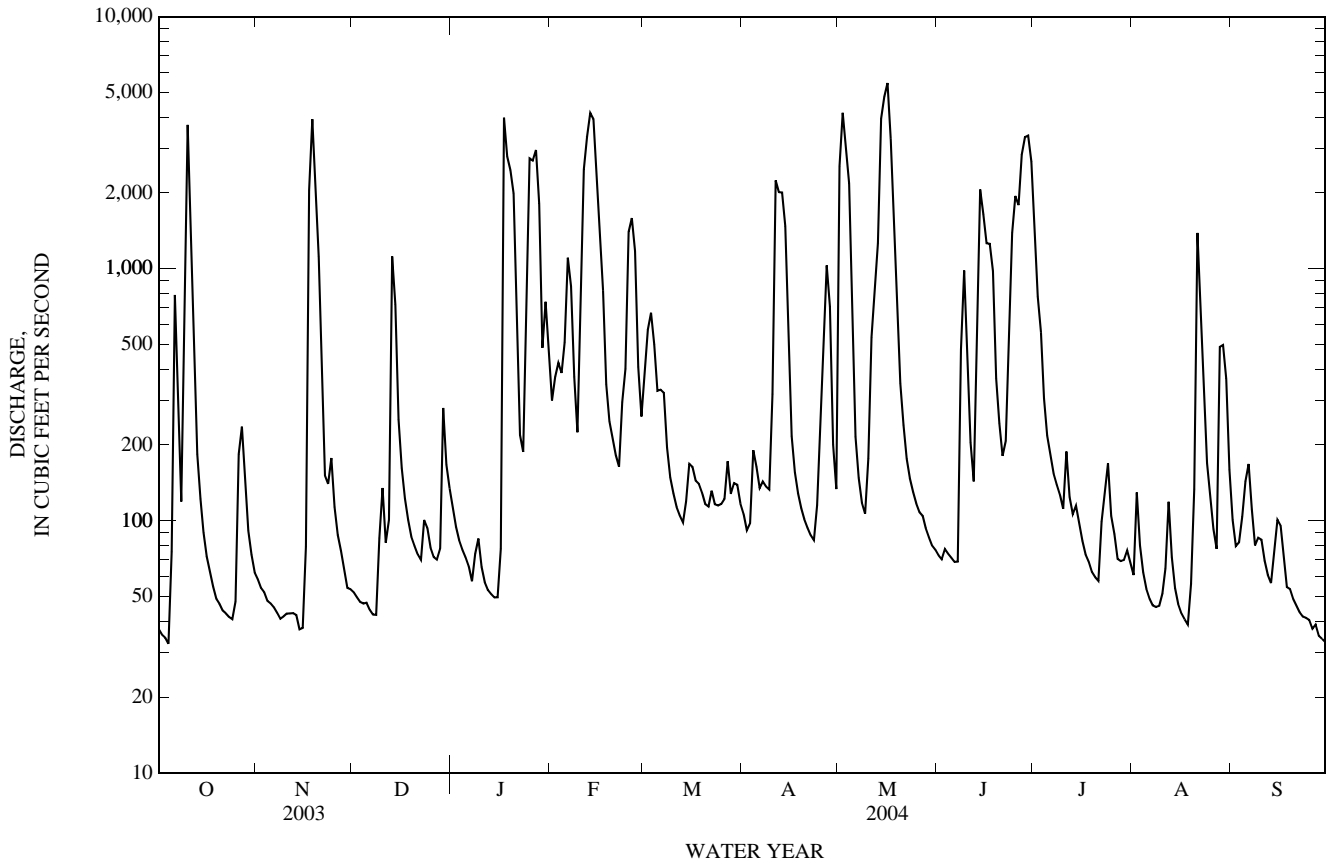
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004, BY WATER YEAR (WY)

MEAN	244	319	258	350	368	261	340	351	328	94.5	76.5	134
MAX	5,189	2,982	1,949	1,710	1,932	1,972	2,106	1,541	2,818	577	1,208	1,184
(WY)	(1995)	(1999)	(1941)	(1979)	(1992)	(2001)	(1979)	(1993)	(2001)	(1946)	(1945)	(1979)
MIN	3.06	3.55	8.88	4.52	13.1	11.6	13.2	9.10	6.57	5.58	2.84	3.86
(WY)	(1957)	(1957)	(1957)	(1957)	(1957)	(1971)	(1971)	(1956)	(1971)	(1956)	(1956)	(1956)



08068500 Spring Creek near Spring, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004	
ANNUAL TOTAL	90,891		181,936			
ANNUAL MEAN	249		497		261	
HIGHEST ANNUAL MEAN					819	1941
LOWEST ANNUAL MEAN					13.4	1956
HIGHEST DAILY MEAN	5,010	Feb 24	5,450	May 16	55,900	Oct 18, 1994
LOWEST DAILY MEAN	30	Aug 10	33	Oct 4	1.1	Oct 23, 1956
ANNUAL SEVEN-DAY MINIMUM	33	Aug 4	37	Sep 24	1.6	Oct 20, 1956
MAXIMUM PEAK FLOW			5,830	May 16	76,500	Oct 18, 1994
MAXIMUM PEAK STAGE			17.14	May 16	39.56	Oct 18, 1994
ANNUAL RUNOFF (AC-FT)	180,300		360,900		188,900	
10 PERCENT EXCEEDS	390		1,640		456	
50 PERCENT EXCEEDS	81		122		46	
90 PERCENT EXCEEDS	40		46		12	



08068500 Spring Creek near Spring, TX—Continued

## WATER-QUALITY RECORDS

## PERIOD OF RECORD.--

CHEMICAL DATA: Aug. 1983 to Sept. 1999.  
 BIOCHEMICAL DATA: Aug. 1983 to Nov. 1999.  
 PESTICIDE DATA: Aug. 1983 to Sept. 1999.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Dec. 1999 to current year.  
 pH: Dec. 1999 to current year.  
 WATER TEMPERATURE: Dec. 1999 to current year.  
 DISSOLVED OXYGEN: Dec. 1999 to current year.

INSTRUMENTATION.--Water-quality monitor since Dec. 1999.

REMARKS.--Records for water temperature and specific conductance are good; record for pH is fair; record for dissolved oxygen is poor. Interruptions in the record were caused by malfunctions of the instrument.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 802 microsiemens/cm, Aug. 29, 2000; minimum, 30 microsiemens/cm, June 9, 2001.  
 pH: Maximum, 9.7 standard units, Mar. 27, 2001; minimum, 5.8 standard units, Jan. 5, 2000.  
 WATER TEMPERATURE: Maximum, 35.7°C, Aug. 7, 2003; minimum, 5.0°C, Jan. 4, 2001.  
 DISSOLVED OXYGEN: Maximum, 18.4 mg/L, Aug. 19, 2000; minimum, 0.1 mg/L, Aug. 17, 2003.

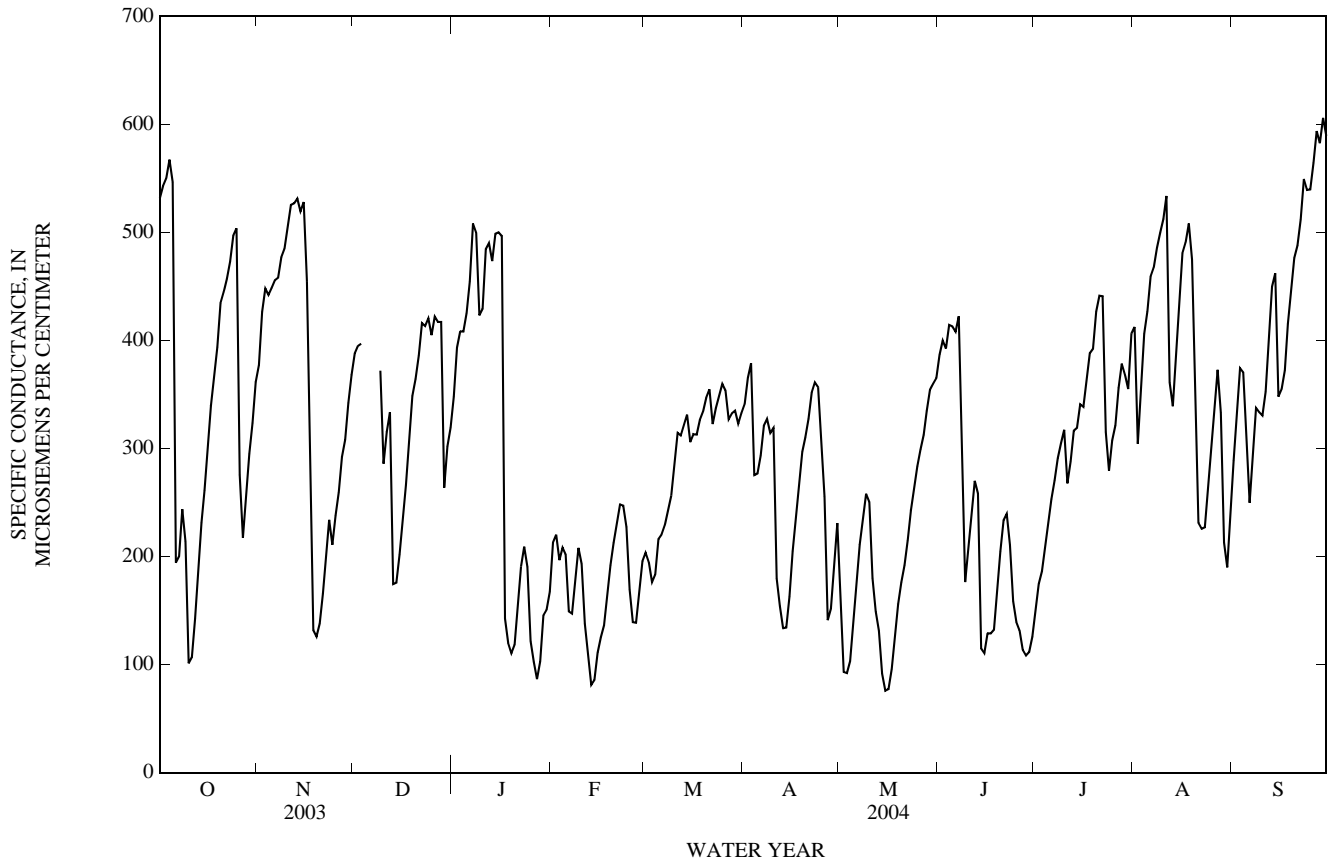
## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 637 microsiemens/cm, Sept. 29; minimum, 62 microsiemens/cm, May 1.  
 pH: Maximum, 8.6 standard units, Sept. 29, 30; minimum, 6.3 standard units, Nov. 30.  
 WATER TEMPERATURE: Maximum, 35.0°C, Aug. 5; minimum, 8.0°C, Feb. 15.  
 DISSOLVED OXYGEN: Maximum, 13.2 mg/L, Sept. 30; minimum, 1.5 mg/L, May 1.

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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	556	506	532	397	360	377	419	350	388	400	330	348
2	562	521	543	448	388	426	415	364	395	420	362	393
3	577	521	550	477	393	448	417	367	397	426	374	408
4	595	540	567	456	406	442	---	---	---	427	368	408
5	613	89	547	464	411	449	---	---	---	450	381	425
6	343	134	194	469	424	456	---	---	---	476	422	455
7	228	181	200	471	430	458	---	---	---	534	463	508
8	275	223	244	493	443	477	---	---	---	536	449	500
9	284	84	214	510	449	485	472	257	372	463	370	423
10	113	96	101	535	447	506	306	265	286	475	394	429
11	115	100	107	544	493	525	373	285	315	515	449	484
12	178	114	142	546	490	527	375	135	334	524	434	490
13	218	175	189	550	491	531	243	150	174	486	437	473
14	265	214	231	548	497	519	190	159	176	520	471	499
15	297	245	261	554	457	528	219	187	202	528	454	500
16	325	280	302	579	171	455	254	216	235	552	187	497
17	353	316	339	386	82	239	303	250	266	187	106	143
18	377	340	365	157	120	132	351	292	309	127	117	120
19	416	342	394	135	121	126	378	330	349	119	106	110
20	462	387	435	147	131	138	380	331	364	135	110	118
21	468	415	445	187	147	166	408	363	386	181	134	157
22	480	429	457	237	183	198	439	367	416	208	177	191
23	500	450	473	264	209	234	466	357	413	230	196	209
24	520	469	497	228	191	211	476	368	420	248	133	190
25	547	471	504	269	210	238	435	342	405	137	112	122
26	471	199	276	318	232	259	454	371	422	114	89	102
27	313	188	217	332	255	292	448	372	417	92	82	87
28	276	236	252	344	278	308	449	357	417	124	89	103
29	328	275	295	358	310	342	417	227	264	182	124	146
30	348	306	324	385	331	368	380	247	302	169	140	151
31	381	345	361	---	---	---	349	285	319	217	150	167
MONTH	613	84	341	579	82	362				552	82	302





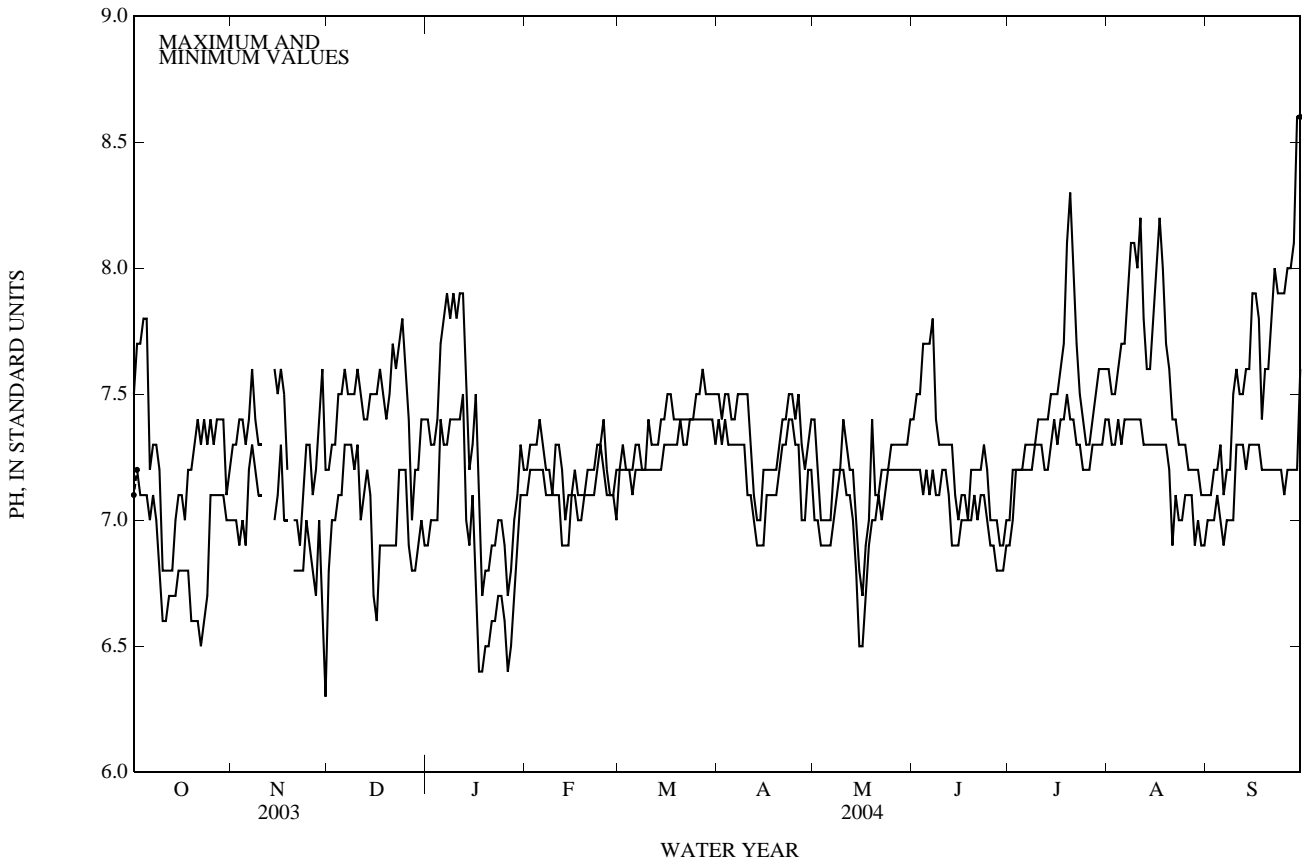
PH, WATER, UNFILTERED, FIELD, STANDARD UNITS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.5	7.1	7.3	7.0	7.2	6.8	7.4	6.9	7.2	7.1	7.2	7.2
2	7.7	7.2	7.3	7.0	7.3	7.0	7.3	7.0	7.3	7.2	7.3	7.2
3	7.7	7.1	7.4	6.9	7.3	7.0	7.3	7.0	7.3	7.2	7.2	7.2
4	7.8	7.1	7.4	7.0	7.5	7.1	7.4	7.0	7.3	7.2	7.2	7.2
5	7.8	7.1	7.3	6.9	7.5	7.1	7.7	7.4	7.4	7.2	7.2	7.1
6	7.2	7.0	7.4	7.2	7.6	7.3	7.8	7.3	7.3	7.2	7.3	7.2
7	7.3	7.1	7.6	7.3	7.5	7.3	7.9	7.3	7.2	7.1	7.3	7.2
8	7.3	7.0	7.4	7.2	7.5	7.3	7.8	7.4	7.2	7.1	7.2	7.2
9	7.2	6.8	7.3	7.1	7.5	7.2	7.9	7.4	7.1	7.1	7.2	7.2
10	6.8	6.6	7.3	7.1	7.6	7.3	7.8	7.4	7.3	7.1	7.4	7.2
11	6.8	6.6	---	---	7.5	7.0	7.9	7.4	7.3	7.1	7.3	7.2
12	6.8	6.7	---	---	7.4	7.1	7.9	7.5	7.2	6.9	7.3	7.2
13	6.8	6.7	---	---	7.4	7.2	7.5	7.0	7.0	6.9	7.3	7.2
14	7.0	6.7	7.6	7.0	7.5	7.1	7.2	6.9	7.1	6.9	7.4	7.2
15	7.1	6.8	7.5	7.1	7.5	6.7	7.3	7.1	7.1	7.1	7.4	7.3
16	7.1	6.8	7.6	7.3	7.5	6.6	7.5	6.8	7.2	7.1	7.5	7.3
17	7.0	6.8	7.5	7.0	7.6	6.9	7.1	6.4	7.1	7.0	7.5	7.3
18	7.2	6.8	7.2	7.0	7.5	6.9	6.7	6.4	7.1	7.0	7.4	7.3
19	7.2	6.6	---	---	7.4	6.9	6.8	6.5	7.1	7.1	7.4	7.3
20	7.3	6.6	7.0	6.8	7.5	6.9	6.8	6.5	7.2	7.1	7.4	7.4
21	7.4	6.6	7.0	6.8	7.7	6.9	6.9	6.6	7.2	7.1	7.4	7.3
22	7.3	6.5	6.9	6.8	7.6	6.9	6.9	6.6	7.2	7.1	7.4	7.3
23	7.4	6.6	7.1	6.8	7.7	7.2	7.0	6.7	7.3	7.2	7.4	7.4
24	7.3	6.7	7.3	7.0	7.8	7.2	7.0	6.7	7.3	7.3	7.4	7.4
25	7.4	7.1	7.3	6.9	7.6	7.2	6.9	6.6	7.4	7.2	7.5	7.4
26	7.3	7.1	7.1	6.8	7.4	6.9	6.7	6.4	7.2	7.1	7.5	7.4
27	7.4	7.1	7.2	6.7	7.0	6.8	6.8	6.5	7.1	7.1	7.6	7.4
28	7.4	7.1	7.4	7.0	7.2	6.8	7.0	6.7	7.1	7.1	7.5	7.4
29	7.4	7.1	7.6	6.6	7.2	6.9	7.1	6.9	7.2	7.0	7.5	7.4
30	7.1	7.0	7.2	6.3	7.4	7.0	7.3	7.1	---	---	7.5	7.4
31	7.2	7.0	---	---	7.4	6.9	7.2	7.1	---	---	7.5	7.3
MONTH	7.8	6.5			7.8	6.6	7.9	6.4	7.4	6.9	7.6	7.1

08068500 Spring Creek near Spring, TX—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.5	7.4	7.4	7.0	7.4	7.2	7.0	6.9	7.6	7.4	7.1	7.0
2	7.4	7.3	7.2	7.0	7.5	7.2	7.2	7.0	7.5	7.3	7.1	7.0
3	7.5	7.4	7.0	6.9	7.5	7.2	7.2	7.2	7.5	7.3	7.2	7.0
4	7.5	7.3	7.0	6.9	7.7	7.1	7.2	7.2	7.6	7.4	7.2	7.1
5	7.4	7.3	7.0	6.9	7.7	7.2	7.2	7.2	7.7	7.3	7.3	7.0
6	7.4	7.3	7.0	6.9	7.7	7.1	7.3	7.2	7.7	7.4	7.1	6.9
7	7.5	7.3	7.2	7.0	7.8	7.2	7.3	7.2	7.9	7.4	7.2	7.0
8	7.5	7.3	7.2	7.1	7.4	7.1	7.3	7.2	8.1	7.4	7.2	7.0
9	7.5	7.3	7.2	7.2	7.3	7.1	7.3	7.3	8.1	7.4	7.5	7.0
10	7.5	7.1	7.4	7.2	7.3	7.2	7.4	7.3	8.0	7.4	7.6	7.3
11	7.3	7.1	7.3	7.1	7.3	7.2	7.4	7.3	8.2	7.4	7.5	7.3
12	7.1	7.0	7.2	7.1	7.3	7.1	7.4	7.2	7.8	7.3	7.5	7.3
13	7.0	6.9	7.2	7.0	7.3	6.9	7.4	7.2	7.6	7.3	7.6	7.2
14	7.0	6.9	7.0	6.8	7.1	6.9	7.5	7.3	7.6	7.3	7.6	7.3
15	7.2	6.9	6.8	6.5	7.0	6.9	7.5	7.4	7.8	7.3	7.9	7.3
16	7.2	7.1	6.7	6.5	7.1	7.0	7.5	7.3	8.0	7.3	7.9	7.3
17	7.2	7.1	6.9	6.7	7.1	7.0	7.6	7.4	8.2	7.3	7.8	7.3
18	7.2	7.1	7.0	6.9	7.0	7.0	7.7	7.4	8.0	7.3	7.4	7.2
19	7.2	7.1	7.4	7.0	7.2	7.0	8.1	7.5	7.7	7.3	7.6	7.2
20	7.3	7.2	7.1	7.0	7.2	7.1	8.3	7.4	7.6	7.2	7.6	7.2
21	7.4	7.3	7.1	7.1	7.2	7.0	8.0	7.4	7.4	6.9	7.8	7.2
22	7.4	7.3	7.2	7.0	7.2	7.1	7.7	7.3	7.4	7.1	8.0	7.2
23	7.5	7.4	7.2	7.1	7.3	7.1	7.5	7.3	7.3	7.0	7.9	7.2
24	7.5	7.4	7.2	7.2	7.2	7.0	7.4	7.2	7.3	7.0	7.9	7.2
25	7.4	7.3	7.3	7.2	7.0	6.9	7.3	7.2	7.3	7.1	7.9	7.1
26	7.5	7.3	7.3	7.2	7.0	6.9	7.3	7.2	7.2	7.1	8.0	7.2
27	7.3	7.0	7.3	7.2	7.0	6.8	7.4	7.3	7.2	7.1	8.0	7.2
28	7.2	7.0	7.3	7.2	6.9	6.8	7.5	7.3	7.2	6.9	8.1	7.2
29	7.3	7.2	7.3	7.2	6.9	6.8	7.6	7.3	7.2	7.0	8.6	7.2
30	7.4	7.2	7.3	7.2	7.0	6.9	7.6	7.3	7.1	6.9	8.6	7.6
31	---	---	7.4	7.2	---	---	7.6	7.4	7.1	6.9	---	---
MONTH	7.5	6.9	7.4	6.5	7.8	6.8	8.3	6.9	8.2	6.9	8.6	6.9
YEAR												



## SAN JACINTO RIVER BASIN

08068500 Spring Creek near Spring, TX—Continued

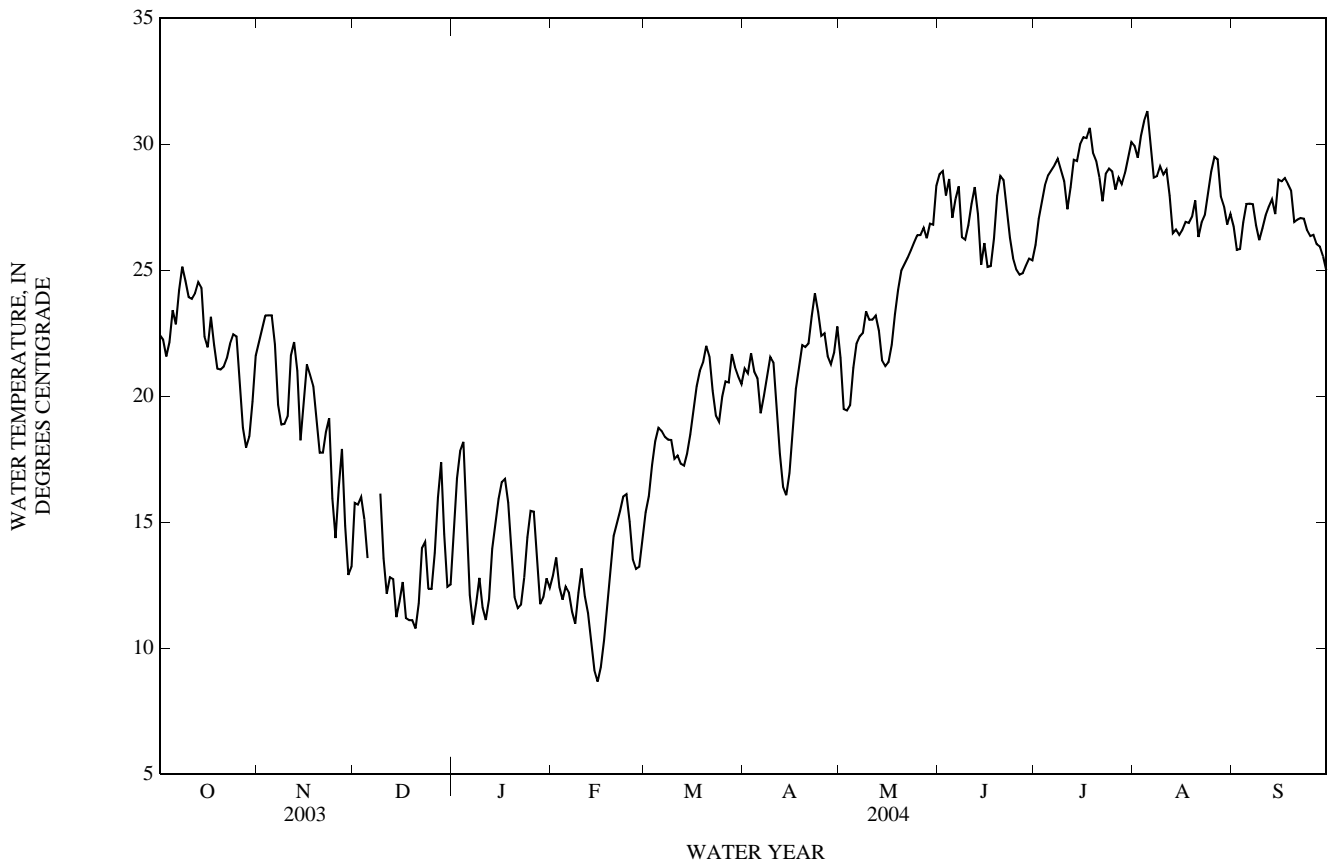
TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	25.3	20.2	22.4	23.6	21.2	22.1	17.3	14.6	15.8	15.9	13.8	14.7
2	24.6	20.5	22.2	24.0	21.6	22.7	16.7	14.6	15.7	17.8	15.8	16.7
3	24.7	19.2	21.6	25.0	22.1	23.2	17.1	14.8	16.0	18.8	17.0	17.8
4	25.4	19.6	22.1	24.5	22.2	23.2	16.2	14.2	15.1	18.7	17.5	18.2
5	26.9	21.4	23.4	24.7	22.1	23.2	14.5	12.6	13.6	17.5	13.4	15.3
6	23.6	22.0	22.9	22.8	20.6	22.1	---	---	---	13.4	11.4	12.1
7	25.6	23.4	24.2	20.6	18.9	19.7	---	---	---	11.5	10.4	10.9
8	26.6	24.1	25.1	19.6	18.3	18.9	---	---	---	13.0	10.9	11.8
9	25.3	24.0	24.6	20.1	18.1	18.9	17.7	14.8	16.1	13.8	12.1	12.8
10	24.2	23.7	23.9	21.0	17.6	19.2	14.8	12.8	13.6	12.9	10.3	11.6
11	24.3	23.5	23.9	23.5	20.4	21.6	12.9	11.2	12.2	12.6	9.6	11.1
12	24.9	23.4	24.1	23.6	20.9	22.1	13.9	12.3	12.8	13.6	10.6	11.9
13	25.4	24.0	24.5	22.0	19.1	21.0	13.4	11.7	12.7	15.7	12.8	13.9
14	25.6	23.3	24.3	19.6	16.7	18.3	11.8	10.6	11.2	16.3	13.9	14.9
15	23.8	20.9	22.4	21.3	18.2	19.7	13.2	10.6	11.9	16.7	15.3	15.9
16	23.5	20.3	21.9	22.5	20.6	21.3	13.2	11.7	12.6	17.6	16.2	16.6
17	24.8	22.2	23.1	21.5	20.1	20.8	12.1	10.1	11.2	17.5	16.2	16.7
18	23.7	20.6	22.0	20.8	19.8	20.4	12.4	9.9	11.1	16.6	14.6	15.8
19	23.1	19.4	21.1	19.8	18.2	19.0	12.4	9.9	11.1	14.6	12.9	13.8
20	23.3	19.3	21.1	18.2	17.3	17.8	12.1	9.5	10.8	12.9	11.6	12.0
21	23.5	19.3	21.2	18.8	17.1	17.8	13.6	10.3	11.8	12.5	11.0	11.6
22	24.0	19.7	21.5	19.4	17.6	18.6	15.5	12.5	14.0	12.6	11.1	11.7
23	24.3	20.3	22.1	20.0	17.4	19.1	15.2	13.0	14.2	13.8	11.9	12.8
24	24.3	20.9	22.5	17.4	14.5	15.9	13.2	11.2	12.4	15.5	13.3	14.4
25	22.8	22.0	22.4	15.5	13.2	14.4	13.2	11.4	12.4	15.8	15.1	15.5
26	22.5	19.0	20.7	17.8	15.2	16.4	14.9	12.8	13.8	15.8	14.7	15.4
27	19.3	17.8	18.7	19.3	16.3	17.9	17.4	14.7	16.0	14.7	12.6	13.6
28	19.4	16.8	18.0	16.3	13.5	14.9	18.9	16.4	17.4	12.6	11.3	11.8
29	20.3	16.8	18.4	14.2	11.6	12.9	16.4	13.1	14.5	12.9	11.4	12.0
30	21.8	18.0	19.8	14.8	11.6	13.2	13.4	11.4	12.4	12.9	12.5	12.8
31	22.3	21.0	21.6	---	---	---	13.8	11.4	12.5	12.7	12.1	12.4
MONTH	26.9	16.8	22.2	25.0	11.6	19.2				18.8	9.6	13.8
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	13.6	12.3	12.9	16.1	14.8	15.4	24.8	18.4	21.1	23.0	20.4	21.5
2	14.6	13.0	13.6	17.0	15.2	16.0	23.4	18.8	20.9	20.4	19.0	19.5
3	13.0	11.7	12.4	17.9	16.6	17.3	24.2	19.9	21.7	20.1	18.9	19.4
4	12.2	11.6	11.9	18.7	17.8	18.2	22.9	19.6	21.0	20.7	18.7	19.6
5	13.3	12.0	12.4	19.6	18.3	18.7	22.5	19.6	20.7	23.3	19.6	21.1
6	12.8	11.7	12.2	20.0	17.7	18.6	20.3	18.9	19.3	24.5	20.4	22.1
7	12.2	10.8	11.5	20.0	17.2	18.4	23.0	18.2	20.0	24.1	20.9	22.4
8	11.5	10.3	11.0	20.1	16.9	18.3	23.4	18.5	20.8	23.8	21.5	22.5
9	13.2	11.4	12.2	20.6	16.7	18.3	25.2	18.9	21.6	25.5	21.8	23.4
10	14.0	12.4	13.2	19.9	15.7	17.5	23.8	19.8	21.3	24.3	21.9	23.0
11	12.4	11.9	12.1	20.2	15.6	17.6	20.1	18.6	19.5	23.7	22.6	23.0
12	11.9	10.8	11.4	18.5	16.3	17.3	18.6	16.8	17.7	24.0	22.6	23.2
13	10.8	9.6	10.2	18.3	16.3	17.2	17.0	15.9	16.4	23.2	21.7	22.6
14	9.6	8.6	9.1	18.2	17.4	17.7	17.1	15.1	16.1	21.7	21.2	21.4
15	9.4	8.0	8.7	20.0	17.6	18.5	19.0	15.4	16.9	21.5	20.8	21.2
16	10.1	8.5	9.3	21.8	17.8	19.5	21.6	16.7	18.8	21.8	20.9	21.3
17	11.6	9.3	10.3	22.4	19.0	20.4	22.7	18.6	20.3	22.4	21.6	22.0
18	13.2	10.4	11.7	23.0	19.6	21.0	23.5	19.3	21.1	24.4	22.4	23.2
19	14.7	11.5	13.0	23.0	20.4	21.3	24.4	20.1	22.0	25.7	23.2	24.2
20	15.8	13.4	14.5	24.6	20.1	22.0	23.5	20.6	22.0	26.5	23.8	25.0
21	16.6	13.8	15.0	22.9	20.3	21.6	23.4	21.0	22.1	26.6	24.1	25.2
22	17.1	14.1	15.4	22.4	18.7	20.2	25.8	21.3	23.2	27.5	24.1	25.5
23	16.5	15.5	16.0	21.3	17.6	19.2	26.0	22.5	24.1	27.8	24.1	25.8
24	16.5	15.8	16.1	19.6	18.3	19.0	24.5	22.4	23.3	28.9	24.1	26.1
25	15.8	13.9	15.0	21.4	18.8	20.0	23.2	22.1	22.4	28.8	24.6	26.4
26	14.1	13.0	13.5	22.1	19.7	20.6	24.3	21.5	22.5	28.5	24.5	26.4
27	13.9	12.4	13.2	22.1	19.4	20.5	22.5	20.9	21.6	29.0	24.8	26.7
28	13.9	12.6	13.2	23.5	20.4	21.7	21.9	20.7	21.3	27.4	25.3	26.3
29	15.0	13.6	14.3	22.0	20.1	21.1	23.6	20.6	21.7	29.1	25.2	26.8
30	---	---	---	23.9	18.4	20.8	24.7	21.5	22.8	27.7	26.0	26.8
31	---	---	---	23.7	18.0	20.5	---	---	---	31.5	26.1	28.3
MONTH	17.1	8.0	12.6	24.6	14.8	19.2	26.0	15.1	20.8	31.5	18.7	23.6

08068500 Spring Creek near Spring, TX—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	31.4	26.5	28.8	27.3	25.2	26.0	31.9	28.3	29.9	29.5	24.5	26.7
2	31.3	27.0	28.9	28.9	25.9	27.0	32.0	27.3	29.5	26.8	24.8	25.8
3	30.6	25.9	28.0	29.5	26.5	27.8	34.0	27.6	30.3	27.3	24.8	25.8
4	31.8	26.4	28.6	30.7	26.7	28.4	34.8	28.1	30.9	29.9	25.0	26.9
5	28.4	26.0	27.1	31.1	27.1	28.8	35.0	28.4	31.3	30.7	25.6	27.6
6	31.2	25.5	27.8	31.8	27.0	29.0	32.0	28.9	30.0	30.3	26.0	27.6
7	30.8	26.4	28.3	32.0	26.9	29.2	31.9	26.2	28.7	29.8	26.1	27.6
8	28.6	24.6	26.3	31.8	27.5	29.4	32.3	25.9	28.7	28.9	25.3	26.8
9	27.1	25.6	26.2	31.1	27.3	29.0	32.4	26.5	29.1	29.7	23.6	26.2
10	28.1	25.9	26.8	30.6	26.6	28.5	30.6	27.4	28.8	30.2	23.9	26.7
11	30.1	26.2	27.6	28.4	26.2	27.4	32.4	26.7	29.0	30.0	24.9	27.2
12	31.2	26.2	28.3	32.0	25.6	28.3	30.4	26.3	28.0	30.5	25.1	27.5
13	29.3	23.6	27.2	33.0	26.7	29.4	29.3	24.1	26.5	30.3	25.7	27.8
14	25.9	24.5	25.2	32.1	26.9	29.3	29.9	24.1	26.6	28.6	26.0	27.2
15	26.5	25.6	26.1	33.4	27.3	30.0	29.8	23.5	26.4	31.9	26.5	28.6
16	25.6	24.9	25.1	33.0	27.9	30.3	30.3	23.7	26.6	31.5	26.1	28.5
17	25.8	24.6	25.2	33.5	27.7	30.2	30.5	23.9	26.9	32.1	26.0	28.7
18	27.9	25.1	26.2	33.8	28.4	30.6	29.4	24.5	26.9	30.9	26.2	28.4
19	30.4	26.3	28.0	32.1	27.6	29.7	28.5	25.8	27.1	31.3	25.9	28.2
20	31.3	27.0	28.7	32.4	26.8	29.3	30.1	25.7	27.8	29.8	24.4	26.9
21	30.6	26.8	28.6	31.3	26.5	28.7	28.0	24.5	26.3	29.7	25.0	27.0
22	28.6	26.6	27.4	28.7	26.5	27.7	27.6	26.4	26.9	29.8	24.9	27.1
23	26.6	25.8	26.3	32.2	26.6	28.8	28.9	26.2	27.2	30.1	24.7	27.0
24	25.8	25.0	25.5	31.5	26.9	29.0	30.9	26.3	28.1	28.6	25.2	26.6
25	25.3	24.8	25.0	31.0	27.6	28.9	31.9	26.9	28.9	28.5	24.9	26.3
26	25.1	24.6	24.8	30.8	26.3	28.2	32.1	27.4	29.5	29.2	24.1	26.4
27	25.1	24.6	24.9	32.2	26.1	28.7	31.9	27.5	29.4	28.6	23.9	26.0
28	25.8	24.8	25.2	30.3	26.6	28.4	30.7	25.4	27.9	28.8	23.6	25.9
29	25.8	25.2	25.5	31.4	26.8	28.8	28.6	26.9	27.5	28.3	23.1	25.5
30	25.7	25.2	25.4	32.4	27.3	29.5	28.1	25.6	26.8	28.0	22.3	25.0
31	---	---	---	33.0	27.8	30.1	29.9	25.6	27.2	---	---	---
MONTH	31.8	23.6	26.8	33.8	25.2	28.9	35.0	23.5	28.2	32.1	22.3	27.0
YEAR												



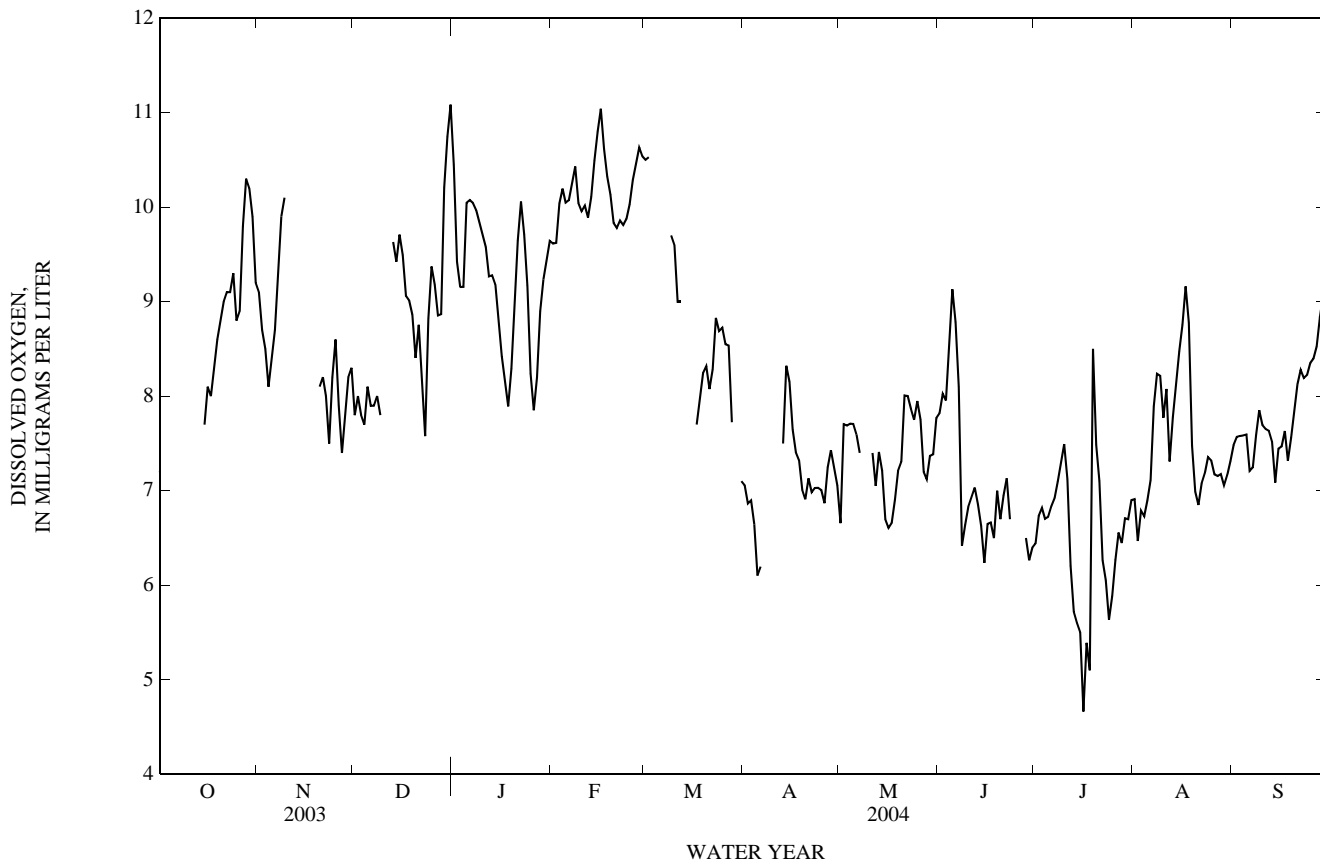




08068500 Spring Creek near Spring, TX—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER—CONTINUED  
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	9.9	6.3	7.8	6.5	6.4	6.4	8.3	6.2	6.9	7.9	7.0	7.5
2	10.5	6.0	8.0	7.0	6.5	6.7	6.7	6.3	6.5	8.0	7.2	7.6
3	11.1	6.3	8.0	7.0	6.5	6.8	7.6	6.1	6.8	8.2	7.2	7.6
4	12.7	5.5	8.5	6.9	6.5	6.7	7.7	6.0	6.7	8.6	7.1	7.6
5	12.3	7.3	9.1	6.9	6.6	6.7	8.5	5.9	6.9	8.3	6.3	7.6
6	12.3	6.3	8.8	7.1	6.5	6.8	9.1	5.9	7.1	7.8	6.3	7.2
7	10.6	6.3	8.1	7.3	6.6	6.9	10.5	6.4	7.9	8.6	5.6	7.2
8	7.4	5.7	6.4	7.6	6.6	7.1	11.5	6.4	8.2	8.6	6.7	7.6
9	6.9	5.7	6.6	7.7	6.9	7.3	11.5	6.3	8.2	8.7	6.7	7.9
10	7.3	5.7	6.8	8.0	7.1	7.5	10.9	6.1	7.8	8.5	7.1	7.7
11	7.6	6.1	6.9	7.6	6.2	7.1	11.4	6.2	8.1	9.0	6.8	7.7
12	8.0	6.3	7.0	7.7	3.6	6.2	9.0	5.9	7.3	9.3	6.8	7.6
13	7.7	5.7	6.9	8.2	3.3	5.7	9.4	6.8	7.8	9.3	6.4	7.5
14	6.8	6.3	6.6	8.3	3.1	5.6	10.3	6.5	8.1	8.9	6.3	7.1
15	6.5	6.0	6.2	7.3	2.7	5.5	11.2	6.9	8.5	9.5	6.3	7.4
16	7.0	6.3	6.6	6.9	2.3	4.7	12.1	6.4	8.8	9.4	6.4	7.5
17	7.0	6.3	6.7	9.4	3.0	5.4	13.1	6.5	9.2	9.6	6.6	7.6
18	6.9	5.9	6.5	9.8	2.5	5.1	12.2	6.3	8.8	9.0	6.4	7.3
19	7.4	5.9	7.0	10.2	6.0	8.5	9.7	6.2	7.5	9.7	6.4	7.6
20	7.1	6.1	6.7	10.8	5.5	7.5	8.4	5.8	7.0	10.2	6.6	7.9
21	7.4	6.3	7.0	10.8	5.2	7.1	7.8	5.9	6.8	10.7	6.7	8.1
22	7.5	6.6	7.1	8.0	5.1	6.3	7.5	6.8	7.1	11.4	6.4	8.3
23	7.2	5.5	6.7	7.2	5.3	6.1	7.8	6.8	7.2	11.3	6.2	8.2
24	---	---	---	6.2	5.2	5.6	8.4	6.8	7.4	11.6	6.4	8.2
25	---	---	---	6.8	5.5	5.9	8.3	6.8	7.3	11.7	6.5	8.4
26	---	---	---	6.9	5.6	6.3	8.0	6.7	7.2	12.4	6.3	8.4
27	---	---	---	7.5	5.8	6.6	8.0	6.6	7.2	12.5	6.5	8.5
28	6.8	6.3	6.5	7.6	5.9	6.4	8.1	6.7	7.2	13.0	6.6	8.8
29	6.3	6.2	6.3	8.0	6.0	6.7	7.6	6.6	7.1	12.9	6.6	9.1
30	6.5	6.3	6.4	7.7	6.2	6.7	7.4	6.9	7.2	13.2	6.9	9.3
31	---	---	---	8.0	6.2	6.9	7.8	7.0	7.3	---	---	---
MONTH				10.8	2.3	6.5	13.1	5.8	7.5	13.2	5.6	7.9
YEAR												



08068720 Cypress Creek at Katy-Hockley Road near Hockley, TX

LOCATION.--Lat 29°57'00", long 95°48'29", Harris County, Hydrologic Unit 12040102, on left bank at bridge on Katy-Hockley Road, 3.3 mi downstream from Cypress Creek at Sharp Road near Hockley (station 08068700), 5.6 mi southeast of Hockley, and 6.3 mi upstream from Cypress Creek at House and Hahl Road near Cypress (station 08068740).

DRAINAGE AREA.--110 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1975 to July 1983, Feb. 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. A concrete weir located 0.9 mi downstream from the gage, washed out on Aug. 11, 1991. Datum of gage is 100.00 ft above NGVD of 1929. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation. Considerable diversions and return flow from irrigation occurs upstream from station, especially during the period Apr. through Oct. Stage-discharge relation affected by seasonal vegetal growth during most years. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in June 1960 reached a stage of 62.0 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	0.18	9.0	6.5	4.7	86	40	2.0	552	3.7	922	2.0	1.2
2	0.10	6.8	4.8	3.2	102	52	1.8	1,020	2.6	653	2.8	0.48
3	0.02	5.3	3.7	2.5	83	47	1.7	801	2.2	271	2.3	0.69
4	0.00	4.6	2.9	2.4	53	41	1.6	551	2.4	129	1.5	5.2
5	0.01	3.8	2.0	2.0	165	41	1.6	208	1.5	77	0.92	10
6	3.4	2.6	1.8	1.4	234	55	1.6	87	2.1	50	0.55	3.0
7	32	1.5	1.2	1.1	100	35	1.7	52	4.4	35	0.40	3.2
8	5.6	1.1	0.87	2.1	54	23	1.8	41	17	23	0.32	2.8
9	107	0.86	1.1	2.9	41	16	2.5	30	57	15	0.28	1.3
10	522	0.78	1.4	2.7	75	11	4.2	24	32	9.6	0.27	0.23
11	467	0.66	1.3	2.6	485	8.6	65	157	11	8.1	0.53	0.27
12	150	0.50	10	2.0	782	9.0	175	660	5.1	28	0.42	0.34
13	49	0.36	172	1.7	712	7.4	102	751	12	24	0.37	0.25
14	23	0.25	122	1.5	470	12	39	1,100	23	11	0.55	0.26
15	17	0.19	48	1.4	312	16	18	1,280	9.4	5.8	0.57	0.91
16	15	0.17	28	8.4	164	16	11	1,350	201	3.7	0.46	0.34
17	8.4	62	18	516	104	12	7.9	1,280	194	2.7	0.40	0.27
18	4.5	528	11	838	75	8.3	5.1	1,190	73	1.9	0.34	0.32
19	2.7	572	7.4	740	59	6.8	3.4	841	37	1.6	0.35	0.17
20	4.7	271	4.7	324	52	5.3	2.3	403	14	1.3	0.34	0.14
21	3.8	91	3.2	91	46	5.2	1.8	201	8.4	1.5	0.47	0.16
22	2.6	63	2.4	54	39	4.8	1.5	119	10	1.1	3.7	0.20
23	2.0	49	3.0	37	40	6.5	1.3	73	172	1.1	2.4	0.17
24	1.6	37	2.6	75	108	4.6	1.4	55	394	2.2	1.5	0.14
25	66	26	2.0	541	184	3.7	96	39	706	8.1	2.5	0.12
26	126	21	1.8	860	132	3.5	385	24	711	6.8	2.3	0.11
27	67	15	1.5	756	68	3.1	261	17	871	2.8	1.8	0.10
28	39	13	1.7	341	44	2.7	104	12	1,040	3.1	e1.5	0.06
29	23	12	8.0	116	33	2.4	51	9.4	1,150	2.5	e14	0.05
30	16	8.4	20	160	---	2.3	34	6.4	1,110	3.8	20	0.03
31	12	---	8.4	125	---	2.1	---	4.8	---	1.7	7.5	---
TOTAL	1,770.61	1,806.87	503.27	5,616.6	4,902	503.3	1,386.2	12,938.6	6,876.8	2,307.4	73.34	32.51
MEAN	57.1	60.2	16.2	181	169	16.2	46.2	417	229	74.4	2.37	1.08
MAX	522	572	172	860	782	55	385	1,350	1,150	922	20	10
MIN	0.00	0.17	0.87	1.1	33	2.1	1.3	4.8	1.5	1.1	0.27	0.03
AC-FT	3,510	3,580	998	11,140	9,720	998	2,750	25,660	13,640	4,580	145	64

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004h, BY WATER YEAR (WY)

	58.3	72.0	73.8	96.4	85.3	59.4	61.2	86.5	89.1	16.0	6.31	32.4
MEAN	58.3	72.0	73.8	96.4	85.3	59.4	61.2	86.5	89.1	16.0	6.31	32.4
MAX	368	393	257	508	534	353	344	417	375	98.7	54.5	358
(WY)	(1999)	(2003)	(1977)	(1979)	(1992)	(2001)	(1991)	(2004)	(1987)	(1979)	(2002)	(1979)
MIN	0.00	0.00	0.00	0.28	0.00	0.00	0.10	0.00	0.05	0.00	0.02	0.00
(WY)	(2000)	(2000)	(1989)	(2000)	(1976)	(2000)	(1987)	(1996)	(2003)	(1998)	(1988)	(1999)

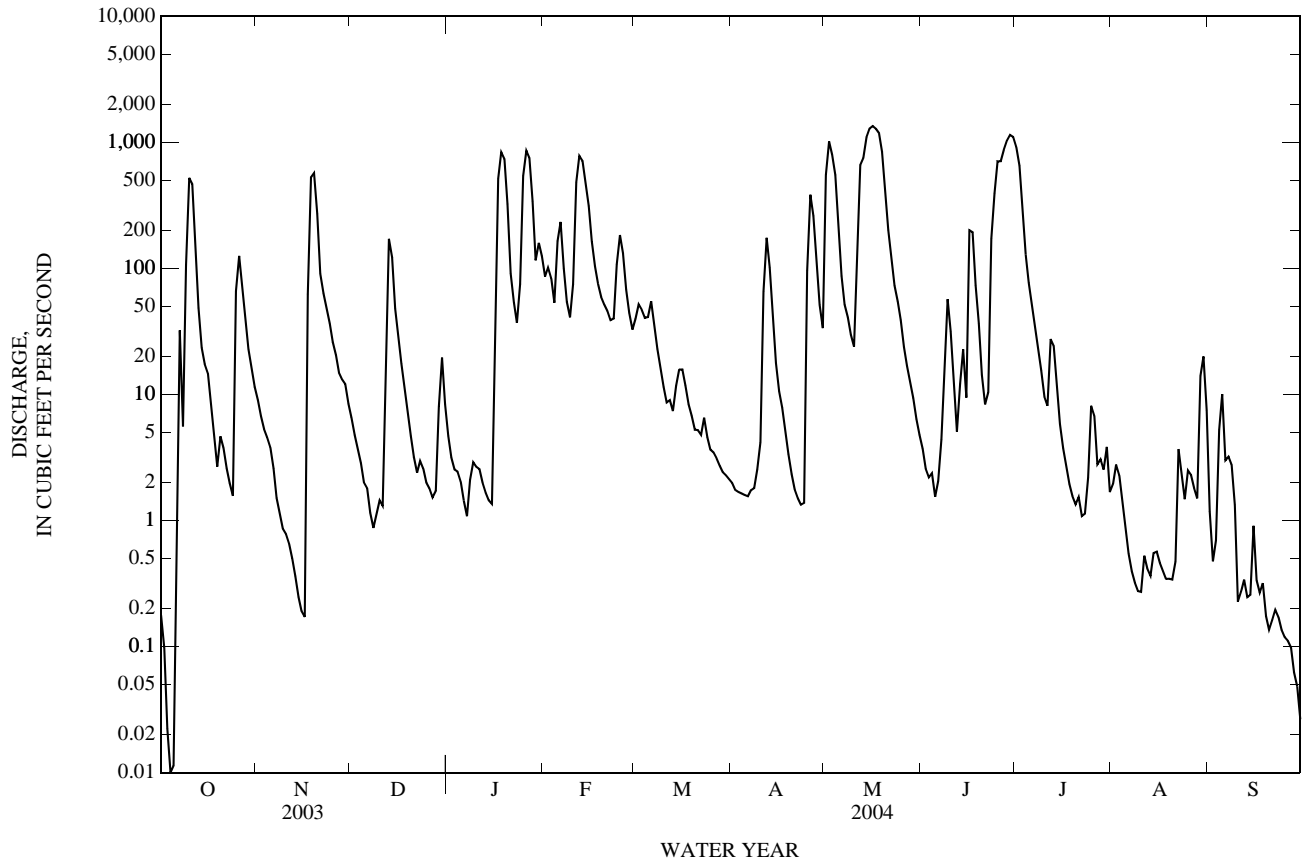
SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1975 - 2004h	
ANNUAL TOTAL	14,285.14		38,717.50			
ANNUAL MEAN	39.1		106		61.1	
HIGHEST ANNUAL MEAN					186	
LOWEST ANNUAL MEAN					5.01	
HIGHEST DAILY MEAN	848	Feb 23	1,350	May 16	2,240	Jan 20, 1979
LOWEST DAILY MEAN	0.00	May 17	0.00	Oct 4	0.00	Sep 9, 1975
ANNUAL SEVEN-DAY MINIMUM	0.00	May 17	0.09	Sep 24	0.00	Jan 31, 1976
MAXIMUM PEAK FLOW			1,370	May 16	2,370	Jan 20, 1979
MAXIMUM PEAK STAGE			59.37	May 16	63.49	Oct 19, 1998
ANNUAL RUNOFF (AC-FT)	28,330		76,800		44,260	
10 PERCENT EXCEEDS	76		388		121	
50 PERCENT EXCEEDS	1.8		8.1		2.8	
90 PERCENT EXCEEDS	0.00		0.39		0.00	

h See PERIOD OF RECORD paragraph.

e Estimated

08068720 Cypress Creek at Katy-Hockley Road near Hockley, TX—Continued



## 08068740 Cypress Creek at House and Hahl Road near Cypress, TX

LOCATION.--Lat 29°57'32", long 95°43'03". Harris County, Hydrologic Unit 12040102, on right bank at bridge on House and Hahl Road, 1.4 mi southwest of Cypress, and 6.3 mi downstream from Cypress Creek at Katy-Hockley Road near Hockley (station 08068720).

DRAINAGE AREA.--131 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 100.00 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. No known regulation. Stage-discharge relation affected by seasonal vegetal growth during most years. Considerable diversions and return flow from irrigation occurs upstream from station, especially during the period Apr. through Oct. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1908, about 49 ft in 1937, 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	0.83	13	10	9.4	122	69	6.0	816	6.7	1,210	6.8	4.3
2	0.68	10	8.4	7.8	137	76	6.1	1,620	5.5	902	5.4	2.7
3	0.64	8.0	7.4	6.9	113	71	6.4	1,250	5.2	455	3.5	3.4
4	0.67	6.6	6.6	6.4	80	60	6.1	805	5.0	177	2.5	3.0
5	9.7	6.0	5.7	5.6	194	66	6.0	389	5.1	97	2.2	14
6	63	5.3	4.9	4.8	314	74	11	158	4.5	61	2.0	5.6
7	25	4.4	4.6	4.0	149	53	9.1	90	5.5	40	1.9	5.0
8	7.9	3.8	4.2	8.5	77	34	5.7	73	111	26	1.8	4.3
9	227	4.2	16	6.9	60	23	5.6	58	78	17	1.9	3.6
10	733	4.3	6.0	5.6	108	16	44	32	52	28	2.2	1.7
11	558	4.9	3.3	5.3	606	12	202	149	17	14	1.9	2.0
12	244	5.5	35	4.9	870	11	232	656	10	18	1.6	1.6
13	69	5.9	266	4.5	851	11	154	792	117	23	1.5	1.4
14	33	7.2	186	4.4	628	20	66	1,430	113	10	1.5	60
15	19	9.0	77	4.4	440	25	35	1,500	79	6.5	1.6	32
16	16	10	46	14	241	20	22	1,460	190	5.2	1.6	4.8
17	11	317	30	746	144	16	16	1,470	290	4.4	1.4	2.1
18	6.2	883	19	934	103	12	12	1,530	146	3.7	1.6	1.8
19	3.9	733	13	904	84	9.8	10	1,220	96	3.1	1.9	2.9
20	4.6	454	10	469	73	9.4	8.9	615	34	2.6	3.3	1.6
21	4.5	152	7.9	158	64	9.3	7.4	281	13	5.1	24	1.3
22	3.6	91	6.4	89	56	9.0	6.4	143	25	5.4	7.9	1.1
23	2.9	70	12	67	77	9.1	6.0	94	209	20	10	1.1
24	2.7	56	6.6	158	145	9.0	14	61	498	21	3.9	1.1
25	212	38	5.5	698	261	8.0	131	42	830	11	3.5	1.1
26	275	29	5.3	912	192	8.2	455	28	951	10	3.4	1.5
27	138	21	5.6	888	98	7.6	351	23	1,260	6.7	3.1	1.4
28	69	15	11	492	65	7.1	141	17	1,380	5.2	2.9	1.2
29	38	15	25	179	54	8.4	78	13	1,440	5.0	19	1.1
30	26	12	26	219	---	7.3	56	12	1,400	5.2	17	1.1
31	17	---	14	175	---	6.2	---	8.9	---	8.1	8.7	---
TOTAL	2,821.82	2,994.1	884.4	7,191.4	6,406	777.4	2,109.7	16,835.9	9,376.5	3,206.2	151.5	169.8
MEAN	91.0	99.8	28.5	232	221	25.1	70.3	543	313	103	4.89	5.66
MAX	733	883	266	934	870	76	455	1,620	1,440	1,210	24	60
MIN	0.64	3.8	3.3	4.0	54	6.2	5.6	8.9	4.5	2.6	1.4	1.1
AC-FT	5,600	5,940	1,750	14,260	12,710	1,540	4,180	33,390	18,600	6,360	301	337

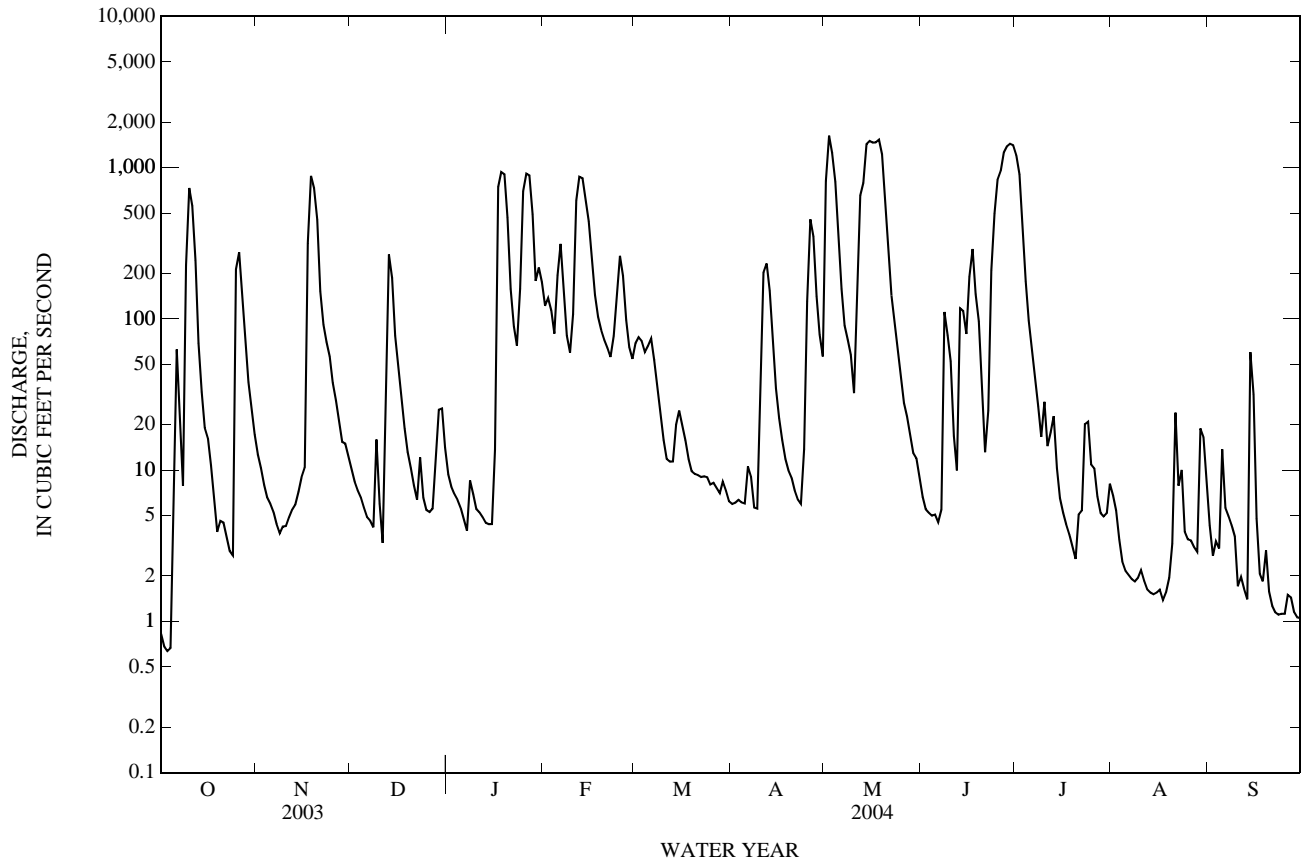
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004, BY WATER YEAR (WY)

MEAN	90.8	105	101	120	109	76.0	82.5	116	127	25.1	17.0	52.1
MAX	996	787	336	685	649	430	463	543	625	120	214	537
(WY)	(1999)	(1999)	(1977)	(1979)	(1992)	(2001)	(1991)	(2004)	(1993)	(1979)	(1983)	(1979)
MIN	0.95	0.27	0.26	1.65	0.07	1.27	0.16	0.35	0.93	0.25	0.15	0.86
(WY)	(1989)	(1978)	(1989)	(1996)	(1976)	(1986)	(1987)	(1996)	(1988)	(2000)	(2000)	(1988)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1975 - 2004
ANNUAL TOTAL	20,404.09	52,924.72	
ANNUAL MEAN	55.9	145	84.7
HIGHEST ANNUAL MEAN			255
LOWEST ANNUAL MEAN			9.49
HIGHEST DAILY MEAN	984	1,620	7,640
LOWEST DAILY MEAN	0.64	0.64	0.00
ANNUAL SEVEN-DAY MINIMUM	0.90	1.2	0.00
MAXIMUM PEAK FLOW		1,680	9,710
MAXIMUM PEAK STAGE		44.56	48.45
ANNUAL RUNOFF (AC-FT)	40,470	105,000	61,350
10 PERCENT EXCEEDS	131	494	180
50 PERCENT EXCEEDS	6.0	14	5.9
90 PERCENT EXCEEDS	1.3	2.4	0.37

08068740 Cypress Creek at House and Hahl Road near Cypress, TX—Continued



08068780 Little Cypress Creek near Cypress, TX

LOCATION.--Lat 30°00'57", long 95°41'50", Harris County, Hydrologic Unit 12040102, on right bank, 5 ft downstream from bridge on Cypress-Rose Hill Road, 3.2 mi north of Cypress, and 6.9 mi upstream from mouth.

DRAINAGE AREA.--41.0 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1982 to Sept. 1992 (daily mean discharge), Oct. 1992 to Sept. 2001 (peak discharges greater than base discharge), Oct. 2001 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 80.00 ft above NGVD of 1929, 1973 adjustment. Radio telemeter at station. Satellite telemeter at station.

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

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	3.2	1.1	2.7	16	19	0.77	387	0.91	80	6.9	0.28
2	1.9	2.6	0.90	2.4	18	16	0.62	550	3.8	44	3.5	0.16
3	2.2	2.1	0.82	2.1	12	11	1.0	103	3.5	22	11	0.23
4	2.2	1.9	1.2	2.0	13	8.3	1.1	31	2.5	13	5.4	0.08
5	2.6	6.8	0.61	1.8	102	14	0.50	15	1.5	9.4	2.7	7.9
6	73	5.1	0.89	1.5	62	12	0.64	10	0.99	6.9	2.4	1.7
7	24	3.7	0.59	1.4	20	6.9	0.79	7.8	0.95	5.3	1.1	0.94
8	14	2.0	0.52	1.5	11	4.6	0.98	4.3	21	4.5	0.76	0.76
9	113	1.5	3.2	2.1	7.6	3.1	0.79	2.4	26	3.9	1.9	0.73
10	489	1.3	1.5	2.2	54	2.2	7.3	2.1	8.5	3.8	2.0	0.63
11	115	0.87	0.86	1.7	289	1.7	32	11	5.1	4.7	2.3	0.36
12	34	0.69	11	1.3	252	1.4	13	62	3.4	3.2	1.8	0.19
13	17	0.49	148	1.2	101	1.2	7.0	94	140	2.7	2.3	0.10
14	23	0.41	47	1.1	100	1.5	4.5	689	413	2.4	3.6	0.36
15	8.0	0.38	21	1.1	80	2.9	3.5	640	121	2.1	2.1	19
16	5.3	0.73	12	3.0	39	2.1	2.3	221	230	1.7	1.5	4.6
17	3.2	110	7.6	427	24	2.2	1.6	94	125	1.8	1.7	2.7
18	2.5	416	5.2	387	12	1.8	1.2	220	287	1.3	1.2	1.7
19	1.7	142	3.5	90	9.8	e1.8	0.85	78	161	1.1	1.3	1.2
20	1.2	41	2.6	37	7.1	e1.6	0.79	31	63	1.0	1.0	0.78
21	4.6	20	2.1	19	5.3	e1.6	0.74	15	23	21	1.8	0.53
22	12	12	1.8	13	3.9	1.6	0.62	9.7	18	29	0.93	0.35
23	12	8.6	4.2	9.4	7.7	1.3	0.58	6.7	207	4.7	5.6	0.26
24	5.5	9.4	3.8	57	20	1.0	0.93	4.9	283	12	1.8	0.18
25	12	5.0	2.2	377	65	1.00	49	3.7	415	5.2	0.56	0.12
26	e160	3.9	1.8	260	26	0.96	57	2.8	241	2.1	0.40	0.05
27	29	2.3	1.6	65	17	0.94	13	2.3	437	1.3	0.40	0.08
28	24	1.8	1.8	25	9.0	0.88	6.4	2.4	583	0.95	0.40	0.16
29	22	1.4	8.9	19	5.5	0.88	4.4	2.0	251	1.7	2.2	0.10
30	5.7	1.1	4.9	63	---	1.8	2.7	1.5	127	1.4	1.3	0.06
31	3.9	---	3.3	29	---	1.3	---	1.2	---	14	0.53	---
TOTAL	1,225.5	808.27	306.49	1,906.5	1,388.9	128.56	216.60	3,304.8	4,203.15	308.15	72.38	46.29
MEAN	39.5	26.9	9.89	61.5	47.9	4.15	7.22	107	140	9.94	2.33	1.54
MAX	489	416	148	427	289	19	57	689	583	80	11	19
MIN	1.2	0.38	0.52	1.1	3.9	0.88	0.50	1.2	0.91	0.95	0.40	0.05
AC-FT	2,430	1,600	608	3,780	2,750	255	430	6,560	8,340	611	144	92

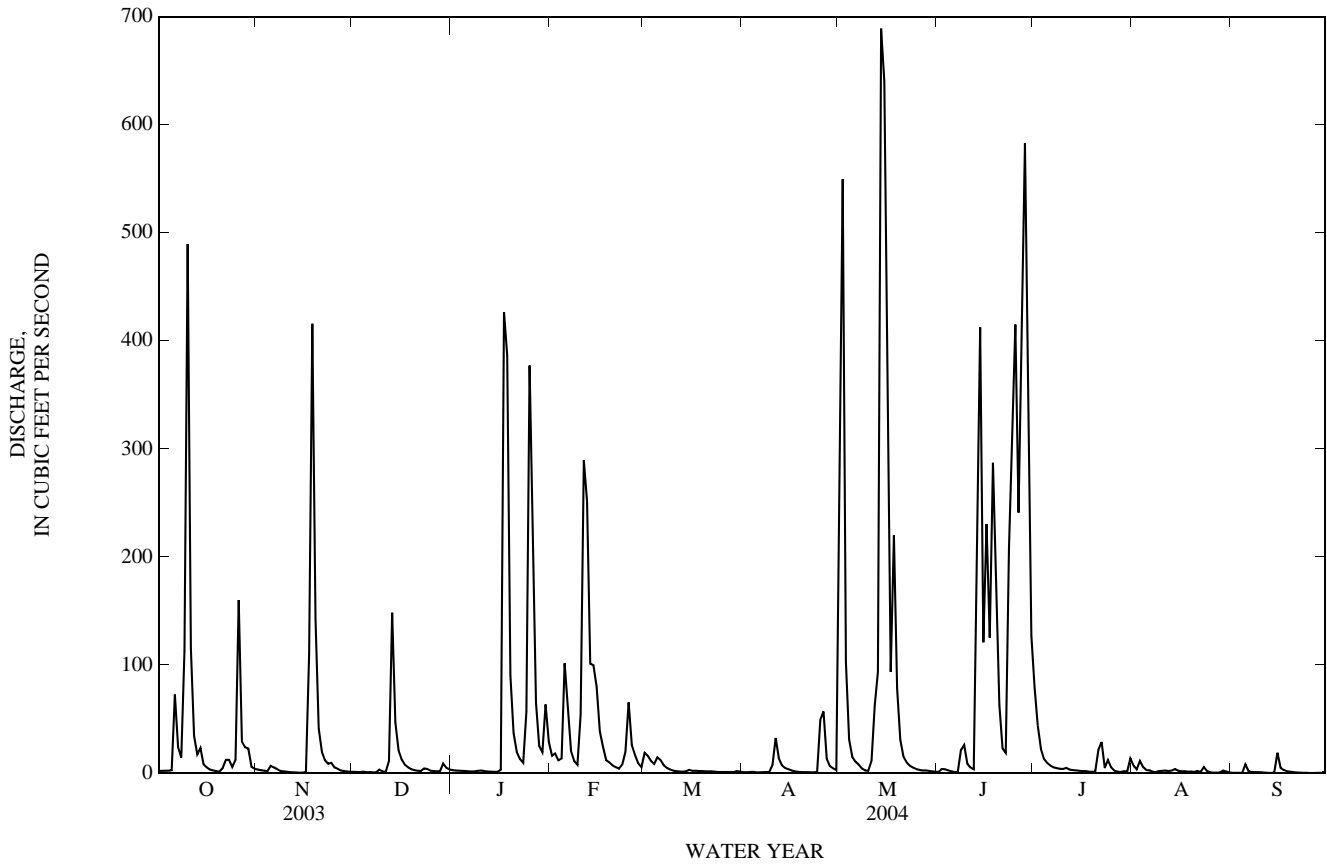
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004h, BY WATER YEAR (WY)

MEAN	16.9	52.7	33.0	35.5	37.6	25.1	21.8	30.0	42.8	6.74	7.61	13.7
MAX	90.9	215	82.4	176	205	162	202	135	178	37.3	71.3	90.3
(WY)	(2003)	(1999)	(1998)	(1991)	(1992)	(2001)	(1991)	(1982)	(2001)	(1983)	(1983)	(2001)
MIN	0.03	0.56	0.29	0.69	0.45	0.30	0.14	0.10	0.05	0.40	0.16	0.00
(WY)	(1989)	(2000)	(1989)	(1986)	(2000)	(1986)	(1987)	(2002)	(1990)	(2003)	(1988)	(1988)

08068780 Little Cypress Creek near Cypress, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1982 - 2004h	
ANNUAL TOTAL	5,921.86		13,915.59		25.3	
ANNUAL MEAN	16.2		38.0		59.3	
HIGHEST ANNUAL MEAN					1992	
LOWEST ANNUAL MEAN					1989	
HIGHEST DAILY MEAN	489	Oct 10	689	May 14	2,710	Jun 9, 2001
LOWEST DAILY MEAN	0.00	May 21	0.05	Sep 26	0.00	Jun 23, 1982
ANNUAL SEVEN-DAY MINIMUM	0.00	May 21	0.11	Sep 24	0.00	Jun 23, 1982
MAXIMUM PEAK FLOW			929	May 1	3,640	Jun 9, 2001
MAXIMUM PEAK STAGE			76.69	May 1	81.41	Oct 18, 1994
ANNUAL RUNOFF (AC-FT)	11,750		27,600		18,310	
10 PERCENT EXCEEDS	29		102		38	
50 PERCENT EXCEEDS	2.2		3.5		1.1	
90 PERCENT EXCEEDS	0.00		0.72		0.04	

h See PERIOD OF RECORD paragraph.  
e Estimated



SAN JACINTO RIVER BASIN

08068800 Cypress Creek at Grant Road near Cypress, TX

LOCATION.--Lat 29°58'24", long 95°35'54", Harris County, Hydrologic Unit 12040102, on right bank, 10 ft downstream from bridge on Grant Road and 6.0 mi east of Cypress.

DRAINAGE AREA.--214 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1982 (discharge measurements only), Oct. 1982 to Sept. 1992, Oct. 1992 to Sept. 2001 (peak discharges greater than base discharge), Oct. 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 80.00 ft above NGVD of 1929, 1973 adjustment. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No known regulation or diversions. Base flow sustained by effluent from urbanized areas and drainage from irrigated farming areas in the 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	5.3	42	29	30	197	100	15	1,090	20	1,420	40	18
2	5.0	38	26	26	221	113	16	2,440	19	1,120	30	14
3	5.3	29	23	24	177	105	16	1,800	25	707	27	20
4	5.5	29	22	23	125	85	16	1,110	20	323	25	15
5	13	30	20	22	344	113	18	650	21	173	18	23
6	335	32	18	20	485	113	31	267	18	104	16	23
7	118	26	18	18	282	83	33	125	17	75	15	17
8	73	21	18	53	142	55	19	87	488	57	15	16
9	430	19	54	36	90	40	15	66	325	45	15	15
10	1,650	19	47	23	235	32	103	56	127	36	51	13
11	1,160	18	21	21	908	26	720	132	57	71	64	11
12	580	17	75	20	1,200	24	363	600	37	38	21	14
13	206	17	665	19	1,070	24	254	866	129	52	16	12
14	120	14	379	18	875	58	120	2,070	998	36	15	34
15	73	17	172	18	659	58	66	2,300	448	28	15	153
16	54	49	101	82	405	37	45	1,950	547	28	e15	38
17	41	1,050	65	1,920	228	33	33	1,590	528	23	e16	22
18	32	2,320	46	1,500	155	28	28	1,650	561	20	e16	16
19	26	1,360	36	1,180	118	23	22	1,460	404	19	e24	16
20	23	753	28	739	97	21	18	939	224	18	16	15
21	24	356	24	312	81	20	20	448	94	17	232	12
22	32	185	22	149	70	23	19	209	126	84	63	13
23	37	160	65	102	137	20	16	128	395	39	54	11
24	32	126	35	348	178	20	63	87	1,070	110	35	10
25	412	80	23	1,270	441	18	184	64	1,460	128	26	10
26	845	60	20	1,350	337	18	520	46	1,440	52	24	11
27	349	47	19	1,100	179	18	450	34	1,780	29	23	11
28	177	36	28	743	118	17	225	30	2,130	23	40	11
29	126	34	167	378	83	18	100	26	1,960	23	45	11
30	75	31	61	460	---	19	65	23	1,640	30	38	10
31	56	---	45	301	---	17	---	21	---	35	25	---
TOTAL	7,120.1	7,015	2,372	12,305	9,637	1,379	3,613	22,364	17,108	4,963	1,075	615
MEAN	230	234	76.5	397	332	44.5	120	721	570	160	34.7	20.5
MAX	1,650	2,320	665	1,920	1,200	113	720	2,440	2,130	1,420	232	153
MIN	5.0	14	18	18	70	17	15	21	17	17	15	10
AC-FT	14,120	13,910	4,700	24,410	19,110	2,740	7,170	44,360	33,930	9,840	2,130	1,220

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004h, BY WATER YEAR (WY)

	99.9	196	184	182	204	139	110	133	251	47.6	50.0	59.8
MEAN	99.9	196	184	182	204	139	110	133	251	47.6	50.0	59.8
MAX	470	924	594	669	1,099	711	697	721	752	160	302	387
(WY)	(2003)	(2003)	(1992)	(1991)	(1992)	(2001)	(1991)	(2004)	(2001)	(2004)	(1983)	(2001)
MIN	2.63	3.42	1.95	7.47	7.88	3.59	1.46	5.35	6.33	6.55	3.78	1.98
(WY)	(1988)	(1989)	(1989)	(1986)	(1989)	(1986)	(1987)	(1985)	(1984)	(1986)	(1987)	(1988)

SUMMARY STATISTICS

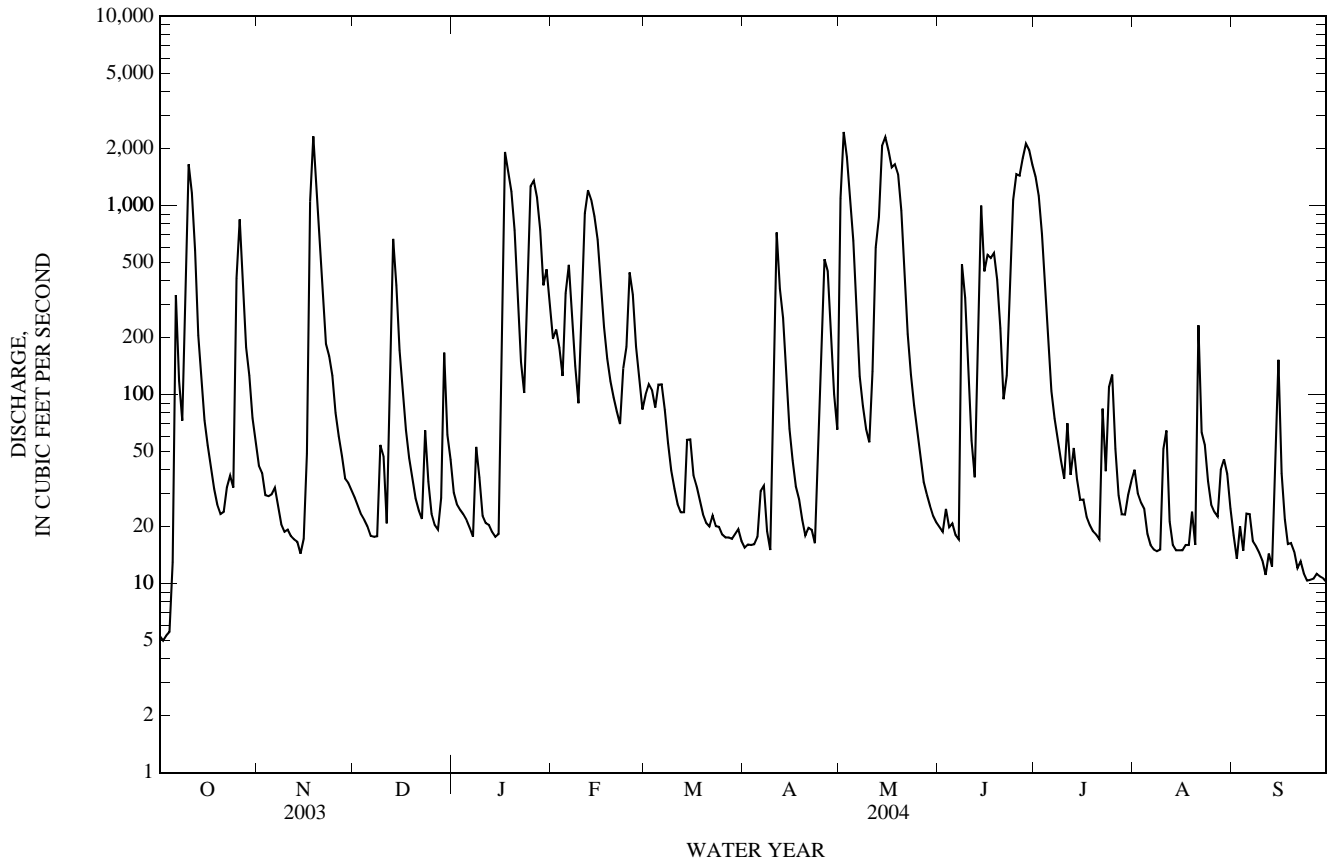
	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004h	
ANNUAL TOTAL	40,104.6		89,566.1			
ANNUAL MEAN	110		245		131	
HIGHEST ANNUAL MEAN					339	
LOWEST ANNUAL MEAN					23.7	
HIGHEST DAILY MEAN	2,320	Nov 18	2,440	May 2	6,600	Jun 9, 2001
LOWEST DAILY MEAN	4.1	Aug 8	5.0	Oct 2	0.05	Apr 26, 1989
ANNUAL SEVEN-DAY MINIMUM	5.0	Jul 18	11	Sep 24	0.07	Apr 23, 1989
MAXIMUM PEAK FLOW			2,920	Nov 18	10,500	Oct 18, 1994
MAXIMUM PEAK STAGE			38.88	Nov 18	47.38	Oct 18, 1994
ANNUAL RUNOFF (AC-FT)	79,550		177,700		95,230	
10 PERCENT EXCEEDS	272		869		334	
50 PERCENT EXCEEDS	23		44		13	
90 PERCENT EXCEEDS	5.8		16		1.7	

h See Period of Record paragraph.

e Estimated



08068800 Cypress Creek at Grant Road near Cypress, TX—Continued



## SAN JACINTO RIVER BASIN

08068900 Cypress Creek at Stuebner-Airline Road near Westfield, TX

LOCATION.--Lat 30°00'23", long 95°30'42", Harris County, Hydrologic Unit 12040102, on right bank at downstream side of bridge on Stuebner-Airline Road, 1.3 mi upstream from Spring Gulley, and 6.5 mi west of Westfield.

DRAINAGE AREA.--248 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1982 to May 1986, Feb. to Sept. 1987 (gage heights and discharge measurements only), Oct. 1987 to Sept. 1989 (mean daily discharge), Oct. 1989 to Sept. 1992 (annual maximum gage height and discharge), Oct. 1992 to current year (peak discharges greater than base discharge).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 70.00 ft above NGVD of 1929, 1973 adjustment. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation or diversions. Low flow is sustained by wastewater effluent from urbanized areas and drainage from irrigated farm land.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,800 ft<sup>3</sup>/s, June 9, 2001, gage height, 41.33 ft.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 9	2015	3,790	28.07	May 1	1515	3,920	28.38
Nov 17	2015	*6,660	*33.63	May 14	0700	3,080	26.36
Jan 17	0245	4,640	29.95				

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## 08069000 Cypress Creek near Westfield, TX

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

DRAINAGE AREA.--285 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 63.89 ft above NGVD of 1929, unadjusted for land-surface subsidence. Prior to Mar. 17, 1951, water-stage recorder at upstream side of bridge at datum 12.00 ft higher. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records fair, except those for estimated daily discharge, which are poor. No known regulation or diversions. Low flow is maintained by wastewater effluent. Channel below gage was rectified in 1950-51, 1975, and 1981. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, 34 ft May 1929 (discharge, 26,000 ft<sup>3</sup>/s), present datum, from information by local resident. Flood in Nov. 1940 reached a stage of about 32 ft, present datum (discharge, 15,000 ft<sup>3</sup>/s), 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	39	89	67	74	307	400	44	3,060	62	1,720	81	e60
2	38	76	60	68	385	207	42	3,070	58	1,300	85	e56
3	37	70	57	60	271	170	42	2,280	106	848	61	e205
4	38	61	54	59	205	147	43	1,410	76	436	64	e116
5	102	62	52	58	377	234	45	827	70	233	54	e74
6	687	63	49	54	606	182	103	411	61	174	45	e73
7	236	59	48	51	418	139	103	222	60	136	43	e64
8	163	54	50	232	232	99	56	171	1,380	130	42	e57
9	2,160	51	228	132	150	78	46	140	1,290	97	44	e57
10	3,180	52	148	71	698	65	633	246	265	90	86	e56
11	1,500	51	66	59	1,610	59	2,200	439	154	107	210	e49
12	841	52	220	57	1,420	54	629	826	105	91	63	e64
13	399	50	1,410	55	1,270	56	407	1,540	373	87	e42	e80
14	201	46	544	53	1,250	216	225	3,470	1,370	87	e43	e129
15	141	102	286	59	888	177	130	2,730	1,040	69	e37	e199
16	99	436	164	160	586	94	92	2,470	774	65	e37	e80
17	87	5,050	112	4,440	341	69	75	2,060	1,360	62	e36	e76
18	77	6,730	88	1,880	236	64	63	1,960	918	56	e38	e58
19	65	1,960	76	1,440	178	57	59	1,860	552	52	e118	e50
20	60	1,030	66	1,010	149	51	51	1,340	345	52	e144	e46
21	56	566	59	533	124	76	50	707	188	54	e1,390	e41
22	58	286	57	245	134	55	53	342	336	157	e466	e40
23	67	290	220	168	294	49	48	215	525	190	e249	e39
24	67	227	102	747	198	48	255	165	1,580	299	e105	e38
25	391	142	64	2,570	1,300	46	446	132	1,790	295	e70	e40
26	1,180	108	54	1,470	529	45	620	109	1,800	208	e62	e39
27	546	92	52	1,270	308	46	538	92	2,090	85	e54	e40
28	279	77	125	942	192	48	358	83	2,400	185	e83	e38
29	183	68	414	707	236	53	176	74	2,300	96	e136	e36
30	132	68	134	967	---	50	112	67	2,040	97	e103	e35
31	99	---	95	460	---	46	---	64	---	80	e97	---
TOTAL	13,208	18,068	5,221	20,151	14,892	3,180	7,744	32,582	25,468	7,638	4,188	2,035
MEAN	426	602	168	650	514	103	258	1,051	849	246	135	67.8
MAX	3,180	6,730	1,410	4,440	1,610	400	2,200	3,470	2,400	1,720	1,390	205
MIN	37	46	48	51	124	45	42	64	58	52	36	35
AC-FT	26,200	35,840	10,360	39,970	29,540	6,310	15,360	64,630	50,520	15,150	8,310	4,040

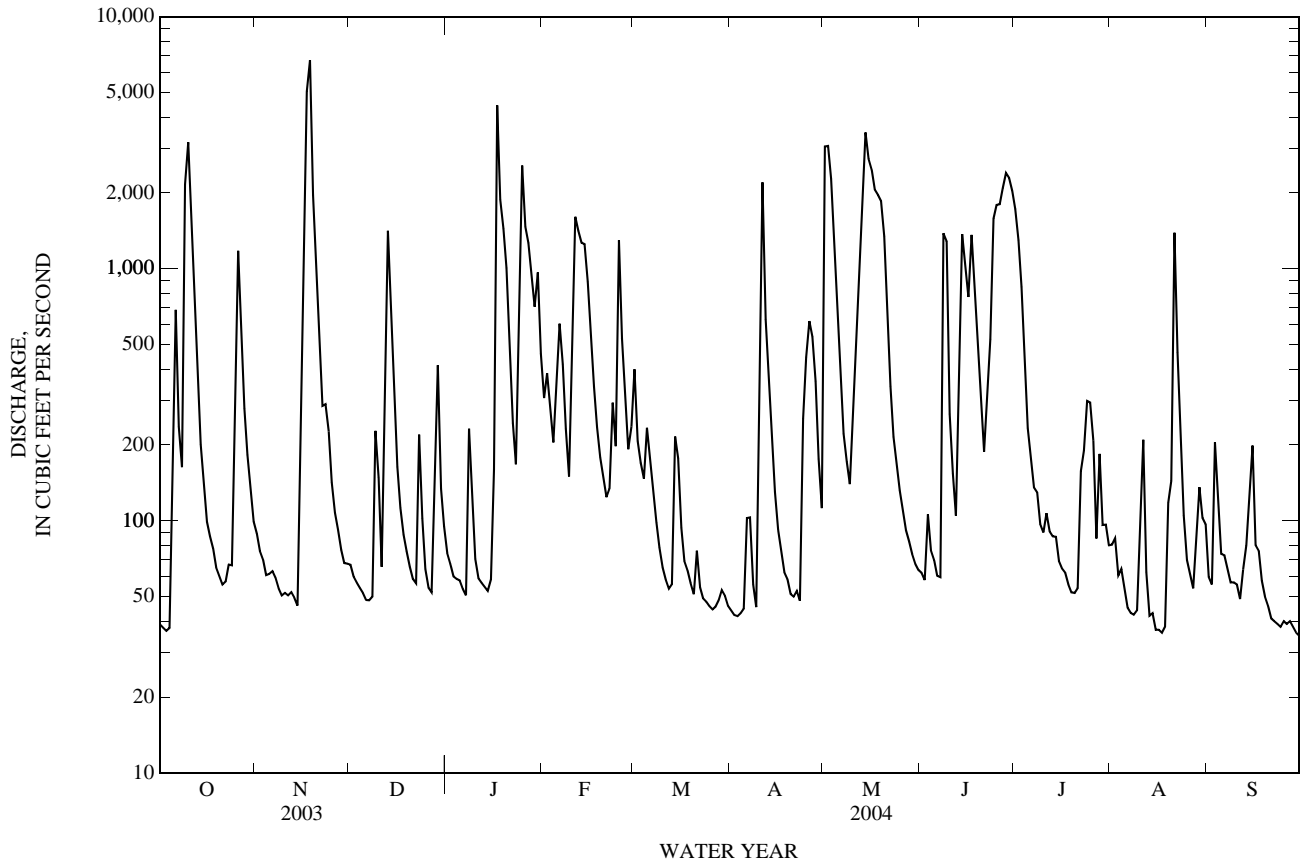
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2004, BY WATER YEAR (WY)

MEAN	208	214	198	241	236	136	207	278	270	88.0	67.4	149
MAX	1,768	1,788	931	1,168	1,322	811	1,133	1,260	1,527	588	562	862
(WY)	(1995)	(1947)	(1992)	(1979)	(1992)	(2001)	(1973)	(1953)	(2001)	(1960)	(1945)	(1961)
MIN	0.13	0.02	0.15	0.60	1.39	0.21	1.50	1.77	1.64	0.26	0.09	1.21
(WY)	(1957)	(1956)	(1951)	(1951)	(1951)	(1956)	(1963)	(1956)	(1958)	(1958)	(1948)	(1956)

08069000 Cypress Creek near Westfield, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1944 - 2004	
ANNUAL TOTAL	79,070		154,375		191	
ANNUAL MEAN	217		422		510	
HIGHEST ANNUAL MEAN					7.53	1956
LOWEST ANNUAL MEAN					15,600	Oct 8, 1949
HIGHEST DAILY MEAN	6,730	Nov 18	6,730	Nov 18	0.00	Aug 3, 1948
LOWEST DAILY MEAN	14	Aug 26	35	Sep 30	0.00	Aug 3, 1948
ANNUAL SEVEN-DAY MINIMUM	24	Aug 2	38	Sep 24	22,100	Oct 8, 1949
MAXIMUM PEAK FLOW			12,200	Nov 17	33.44	Oct 8, 1949
MAXIMUM PEAK STAGE			26.54	Nov 17		
ANNUAL RUNOFF (AC-FT)	156,800		306,200		138,200	
10 PERCENT EXCEEDS	490		1,370		438	
50 PERCENT EXCEEDS	67		106		30	
90 PERCENT EXCEEDS	27		47		1.8	

e Estimated





## 08069000 Cypress Creek near Westfield, TX—Continued

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

Date	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Biomass phytoplankton, ashfree drymass mg/L (49953)	Biomass plankton, ash wgt mg/L (81353)	Biomass plankton, dry wgt mg/L (81354)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC MF, col/100 mL (31625)	Fecal streptococci KF MF, col/100 mL (31673)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)
JUN 08-09 08...	3.1	8.0	18.9	52.7	1,130	1,180	--	--	--	9.9d	.8d	16	.23
JUN 15-15 15...	2.0	7.8	14.3	54.0	1,560	1,610	--	--	--	2.8d	<.1d	10	E.17n
JUL 28... 28...	4.5	6.9	11.3	15.2	566	582	180	1,000	267	<.1d	<.1d	5	.29
SEP 20... 20...	9.6	5.1	10.2	<15.0c	700	714	4,000	>6000k	105k	--	--	12	.27

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

Date	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)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)
JUN 08-09 08...	3	41	<.06	E.03n	<.8	.150	3.6	41	.14	1.1	<.02	1.2	1.05
JUN 15-15 15...	2	34	<.06	<.04	E.5n	.098	2.7	69	.12	1.3	<.02	.7	.97
JUL 28... 28...	4	97	<.06	E.03	<.8	.569	4.7	33	.12	27.4	<.02	2.9	1.48
SEP 20... 20...	4	93	<.06	.05	<.8	.683	5.2	17	.16	7.4	<.02	4.2	1.49

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

Date	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	1,4-Dichlorobenzene, water, fltrd, ug/L (34572)	1-Methylnaphthalene, water, fltrd, ug/L (62054)	2,6-Diethyl-aniline, water, fltrd, 0.7u GF (82660)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	OIAT, water, fltrd, 0.7u GF (62676)	OIET, water, fltrd, ug/L (50355)	OEAT, water, fltrd, 0.7u GF (62678)	2-Methylnaphthalene, water, fltrd, ug/L (62056)	3-beta-Coprostanol, water, fltrd, ug/L (62057)
JUN 08-09 08...	<3	<.2	8.2	--	--	--	--	--	--	--	--	--	--
JUN 15-15 15...	<3	<.2	6.2	--	--	<.006	E.053	--	--	--	--	--	--
JUL 28... 28...	<3	<.2	8.2	--	--	<.006	E.046	--	--	--	--	--	--
SEP 20... 20...	<3	<.2	19.2	<.5	<.5	<.006	E.014	--	--	--	--	<.5	<.2

08069000 Cypress Creek near Westfield, TX—Continued

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

Date	3-Methyl-1H-indole, water, fltrd, ug/L (62058)	3-tert-Butyl-4-hydroxy-anisole, wat flt ug/L (62059)	4-Cumyl-phenol, water, fltrd, ug/L (62060)	4-Octyl-phenol, water, fltrd, ug/L (62061)	4-Nonyl-phenol, water, fltrd, ug/L (62085)	4-tert-Octyl-phenol, water, fltrd, ug/L (62062)	5-Methyl-1H-benzotriazole, wat flt ug/L (62063)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Amoxi-cilin, water, fltrd, ug/L (61743)	Ampi-cillin, water, fltrd, ug/L (62889)	Anhydro-chlor-tetra-cycline, wat flt 0.7u GF ug/L (62650)
JUN 08-09	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 08-09	--	--	--	--	--	--	--	<.006	<.005	<.005	--	--	--
JUN 15-15	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15-15	--	--	--	--	--	--	--	<.006	<.005	<.005	--	--	--
JUL 28-09	--	--	--	--	--	--	--	<.006	<.005	<.005	--	--	--
JUL 28-09	--	--	--	--	--	--	--	--	--	--	<.0100	<.01	<.01
SEP 20-09	<1	<5	<1	<1	<5	<1	<2	<.006	<.005	<.005	--	--	--
SEP 20-09	--	--	--	--	--	--	--	--	--	--	--	--	--

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

Date	Anhydro-erthromycin, water, fltrd, ug/L (63674)	Anhydro-tetracycline, water, fltrd, 0.7u GF ug/L (62651)	Anthra-cene, water, fltrd, ug/L (34221)	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)	Benzo-[a]-pyrene, water, fltrd, ug/L (34248)	Benzo-phenone, water, fltrd, ug/L (62067)	beta-Sitos-terol, water, fltrd, ug/L (62068)	beta-Stigma-stanol, water, fltrd, ug/L (62086)	Bisphe-nol A, water, fltrd, ug/L (62069)	Butyl-ate, water, fltrd, ug/L (04208)	Caf-feine, water, fltrd, ug/L (50305)
JUN 08-09	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 08-09	--	--	--	.959	<.050	<.010	--	--	--	--	--	<.004	--
JUN 15-15	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15-15	--	--	--	.905	<.050	<.010	--	--	--	--	--	<.004	--
JUL 28-09	--	--	--	.877	<.050	<.010	--	--	--	--	--	<.004	--
JUL 28-09	.06	<.01	--	.50	--	--	--	--	--	--	--	--	--
SEP 20-09	--	--	<.5	.065	<.050	<.010	<.5	E.2t	Mt	<2	Mt	<.004	E.2t
SEP 20-09	--	--	--	.35	--	--	--	--	--	--	--	--	--

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

Date	Camphor, water, fltrd, ug/L (62070)	Carba-dox, water, fltrd, 0.7u GF ug/L (62658)	Car-baryl, water, fltrd, 0.7u GF ug/L (82680)	Carba-zole, water, fltrd, ug/L (62071)	Carbo-furan, water, fltrd, 0.7u GF ug/L (82674)	Cefo-taxime, water, fltrd, ug/L (62890)	Chloro-diamino-s-tri-azine, wat flt 0.7u GF ug/L (62674)	Chloro-tetra-cycline, water, fltrd, ug/L (61744)	Chlor-pyri-fos, water, fltrd, ug/L (38933)	Choles-terol, water, fltrd, ug/L (62072)	Cipro-flox-acin, water, fltrd, ug/L (62898)	cis-Per-methrin, water, fltrd, 0.7u GF ug/L (82687)	Clin-a-flox-acin, water, fltrd, ug/L (62901)
JUN 08-09	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 08-09	--	--	E.199	--	<.020	--	--	--	.055	--	--	<.006	--
JUN 15-15	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15-15	--	--	E.204	--	<.020	--	--	--	.011	--	--	<.006	--
JUL 28-09	--	--	E.078	--	<.020	--	--	--	<.005	--	--	<.006	--
JUL 28-09	--	<.01	--	--	--	<.01	.04	<.0100	--	--	<.01	--	<.01
SEP 20-09	<.5	--	<.041	<.5	<.020	--	--	--	<.005	Mt	--	<.006	--
SEP 20-09	--	--	--	--	--	--	<.03	--	--	--	--	--	--



## 08069000 Cypress Creek near Westfield, TX—Continued

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

Date	Cloxa- cillin, water, fltrd, ug/L (62891)	Cot- inine, water, fltrd, ug/L (62005)	Cyana- zine acid, water, wat flt ug/L (61745)	Cyana- zine amide, water, fltrd, ug/L (61709)	Cyana- zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	DEET, water, fltrd, ug/L (62082)	De- ethyl cyana- zine acid, wat flt ug/L (61750)	De- ethyl cyana- zine amide, wat flt ug/L (61751)	De- ethyl cyana- zine, water, fltrd, ug/L (61749)	Deme- clocyc- line, water, fltrd 0.7u GF ug/L (62680)	De- methyl fluo- meturon water, fltrd, ug/L (61755)	Desulf- inyl fipro- nil, water, fltrd, ug/L (62170)
JUN 08-09	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 08...	--	--	--	--	<.018	<.003	--	--	--	--	--	--	E.006n
JUN 15-15	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	<.018	<.003	--	--	--	--	--	--	E.005t
JUL 28...	--	--	--	--	<.018	<.003	--	--	--	--	--	--	E.005t
JUL 28...	<.01	--	<.03	<.03	<.03	--	--	<.03	<.025	<.2	<.01	<.2	--
SEP 20...	--	<1.00	--	--	<.018	<.003	E.2t	--	--	--	--	--	<.012
SEP 20...	--	--	<.03	<.03	<.03	--	--	<.03	<.025	<.2	--	<.2	--

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

Date	Diazi- non, water, fltrd, ug/L (39572)	Diel- drin, water, fltrd, ug/L (39381)	Di- ethoxy- nonyl- phenol, water, fltrd, ug/L (62083)	Di- ethoxy- octyl- phenol, water, fltrd, ug/L (61705)	Disul- foton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd, ug/L (50374)	D-Limo- nene, water, fltrd, ug/L (62073)	Doxy- cycline water fltrd 0.7u GF ug/L (62694)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Eryth- romycin water, fltrd, ug/L (62797)	Ethal- flur- alin, water, fltrd 0.7u GF ug/L (82663)	Etho- prop, water, fltrd 0.7u GF ug/L (82672)	Ethoxy- octyl- phenol, water, fltrd ug/L (61706)
JUN 08-09	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 08...	.153	<.009	--	--	<.02	--	--	--	<.004	--	<.009	<.005	--
JUN 15-15	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	.065	<.009	--	--	<.02	--	--	--	<.004	--	<.009	<.005	--
JUL 28...	.036	<.009	--	--	<.02	--	--	--	<.004	--	<.009	<.005	--
JUL 28...	--	--	--	--	--	<.2	--	<.01	--	<.0050	--	--	--
SEP 20...	<.005	<.009	E.2t	Mt	<.02	--	<.5	--	<.004	--	<.009	<.005	Mt
SEP 20...	--	--	--	--	--	<.2	--	--	--	--	--	--	--

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

Date	Desulf- inyl- fipro- nil amide, wat flt ug/L (62169)	Fipro- nil sulfide water, fltrd, ug/L (62167)	Fipro- nil sulfone water, fltrd, ug/L (62168)	Fipro- nil, water, fltrd, ug/L (62166)	Flume- quine, water, fltrd 0.7u GF ug/L (62717)	Fluo- meturon water fltrd 0.7u GF ug/L (38811)	Fluor- anthene water, fltrd, ug/L (34377)	Fluor- anthene -d10, sur Sch 20/8033 wat flt pct rcv (99586)	Fonofos water, fltrd, ug/L (04095)	HHCB, water, fltrd, ug/L (62075)	Hy- droxy- sim- azine, water, fltrd, ug/L (63154)	Indole, water, fltrd, ug/L (62076)	Isobor- neol, water, fltrd, ug/L (62077)
JUN 08-09	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 08...	E.004t	E.007n	E.020n	E.070	--	--	--	<.003	--	--	--	--	--
JUN 15-15	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	<.029	E.006t	E.013n	E.039	--	--	--	<.003	--	--	--	--	--
JUL 28...	<.029	E.005t	E.010t	E.025	--	--	--	<.003	--	--	--	--	--
JUL 28...	--	--	--	--	<.01	<.2	--	--	--	<.03	--	--	--
SEP 20...	<.029	<.013	<.024	<.016	--	--	Mt	107	<.003	E.1t	--	<.5	<.5
SEP 20...	--	--	--	--	--	<.2	--	--	--	--	<.03	--	--



## 08069000 Cypress Creek near Westfield, TX—Continued

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

Date	Pro-panil, water, fltrd 0.7u GF (82679)	Propar-gite, water, fltrd 0.7u GF (82685)	Propa-zine, water, fltrd, ug/L (38535)	Pyrene, water, fltrd, ug/L (34470)	Rox-ithro-mycin, water, fltrd, ug/L (62895)	Sara-flox-acin, water, fltrd 0.7u GF (62771)	Sima-zine, water, fltrd, ug/L (04035)	Sulfa-chlor-pyrid-azine, wat flt gf 0.7u ug/L (62774)	Sulfa-diazine water, fltrd, ug/L (62963)	Sulfa-dimeth-oxine, water, fltrd 0.7u GF ug/L (62776)	Sulfa-mera-zine, water, fltrd 0.7u GF ug/L (62777)	Sulfa-meth-azine, water, fltrd, ug/L (61762)	Sulfa-methox-axole, water, fltrd 0.7u GF ug/L (62775)
JUN 08-09	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 08...	<.011	<.02	--	--	--	--	.026	--	--	--	--	--	--
JUN 15-15	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	<.011	<.02	--	--	--	--	.017	--	--	--	--	--	--
JUL 28...	<.011	<.06	--	--	--	--	<.010	--	--	--	--	--	--
JUL 28...	--	--	<.03	--	<.01	<.01	<.03	<.01	<.01	<.01	<.01	<.0050	.03
SEP 20...	<.011	<.02	--	Mt	--	--	.015	--	--	--	--	--	--
SEP 20...	--	--	<.03	--	--	--	<.03	--	--	--	--	--	--

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

Date	Sulfa-thi-azole, water, fltrd 0.7u GF (62778)	Tebu-thiuron water, fltrd 0.7u GF (82670)	Terba-cil, water, fltrd 0.7u GF (82665)	Terbu-fos, water, fltrd 0.7u GF (82675)	Tetra-chloro-ethene, water, fltrd, ug/L (34476)	Tetra-cycline water, fltrd 0.7u GF ug/L (62781)	Thio-bencarb water, fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-bromo-methane water, fltrd, ug/L (34288)	Tri-butyl phosph-ate, water, fltrd, ug/L (62089)	Triclo-san, water, fltrd, ug/L (62090)	Tri-ethyl citrate water, fltrd, ug/L (62091)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
JUN 08-09	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 08...	--	<.02	<.034	<.02	--	--	<.010	<.002	--	--	--	--	<.009
JUN 15-15	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	<.02	<.034	<.02	--	--	<.010	<.002	--	--	--	--	.015
JUL 28...	--	<.02	<.034	<.02	--	--	<.010	<.002	--	--	--	--	<.009
JUL 28...	<.01	--	--	--	--	<.01	--	--	--	--	--	--	--
SEP 20...	--	<.02	<.034	<.02	<.5	--	<.010	<.002	E.1t	E.1t	<1	E.1t	<.009
SEP 20...	--	--	--	--	--	--	--	--	--	--	--	--	--

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

Date	Tri-meth-oprim, water, fltrd, ug/L (62023)	Tri-phenyl phosph-ate, water, fltrd, ug/L (62092)	Tri-s(2-butoxy-ethyl) phosph-ate, wat flt ug/L (62093)	Tri-s(2-chloro-ethyl) phosph-ate, wat flt ug/L (62087)	Tri-s(di-chloro-i-Pr) phosph-ate, wat flt ug/L (62088)	Tylosin water, fltrd, ug/L (62896)	Vir-ginia-mycin, water, fltrd, ug/L (62897)	Uranium natural water, fltrd, ug/L (22703)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
JUN 08-09	--	--	--	--	--	--	--	.12	336	--
JUN 08...	--	--	--	--	--	--	--	--	--	--
JUN 15-15	--	--	--	--	--	--	--	.08	214	--
JUN 15...	--	--	--	--	--	--	--	--	--	--
JUL 28...	--	--	--	--	--	--	--	.30	13	2.3
JUL 28...	<.005	--	--	--	--	<.01	<.01	--	--	--
SEP 20...	--	<.5	E.3t	E.3t	E.3t	--	--	.40	54	12
SEP 20...	--	--	--	--	--	--	--	--	--	--

Remark codes used in this table:

- < -- Less than
- > -- Greater 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
- k -- Counts outside acceptable range
- n -- Below the LRL and above the LT-MDL
- o -- Result determined by alternate method
- t -- Below the long-term MDL

08070000 East Fork San Jacinto River near Cleveland, TX

LOCATION.--Lat 30°20'11", long 95°06'14", Liberty County, Hydrologic Unit 12040103, near left bank at downstream side of bridge on State Highway 105, 1,880 ft downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 1.2 mi west of Cleveland, and 4.3 mi downstream from Winter Creek.

DRAINAGE AREA.--325 mi<sup>2</sup>.

PERIOD OF RECORD.--Apr. 1939 to current year. Water-quality records: Chemical data: Sept. 1961 to Apr. 1964, Jan. 1968 to Sept. 1989. Biochemical data: Aug. 1983 to Sept. 1989. Pesticide data: Jan. to Aug. 1984.

GAGE.--Water-stage recorder. Datum of gage is 107.98 ft above NGVD of 1929. Prior to Sept. 13, 1955, at site 1,800 ft upstream at datum 5.00 ft higher. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 5, 1935, reached a stage of 23.6 ft (discharge, 53,500 ft<sup>3</sup>/s), present site and datum, 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	72	126	301	577	170	916	77	3,430	55	38
2	24	29	68	95	269	994	126	4,100	78	2,710	53	36
3	24	29	65	85	208	1,140	111	4,510	74	1,580	51	38
4	24	29	62	78	170	1,060	104	2,130	78	907	48	44
5	24	29	60	74	248	568	98	411	262	435	46	43
6	25	28	57	70	503	553	99	211	164	210	44	39
7	28	27	56	69	761	763	114	159	167	155	42	38
8	26	28	57	71	477	496	107	135	150	125	40	36
9	68	29	67	83	208	242	99	122	674	107	47	34
10	314	29	91	77	607	188	105	113	859	97	40	32
11	558	29	76	71	2,230	165	177	235	962	92	59	31
12	309	29	68	70	6,030	152	653	465	737	100	61	30
13	116	30	147	69	8,250	144	895	461	231	186	45	29
14	69	28	196	68	4,510	150	593	1,580	159	355	39	29
15	52	27	143	67	2,910	186	286	2,310	302	264	38	29
16	43	59	107	71	1,740	189	172	2,690	1,070	112	37	30
17	39	812	85	772	941	175	135	2,140	2,460	87	35	29
18	38	3,270	76	1,630	441	154	115	530	2,490	78	35	27
19	35	2,570	71	3,240	303	139	105	219	1,710	72	44	28
20	33	1,170	68	2,950	247	132	98	176	394	69	76	28
21	32	341	66	1,300	214	132	95	145	186	67	65	26
22	31	151	65	268	191	135	94	122	150	64	56	26
23	31	127	69	175	237	143	92	109	169	63	56	25
24	30	156	69	179	450	145	93	99	370	67	55	26
25	28	117	64	922	687	129	119	92	542	64	61	27
26	37	93	63	2,230	792	125	186	88	1,070	64	52	28
27	41	84	63	3,440	722	120	280	84	2,280	61	46	28
28	39	76	67	2,380	459	117	306	81	3,520	62	44	28
29	34	70	111	576	277	122	175	80	6,800	63	43	26
30	32	72	132	368	---	150	121	78	4,430	60	49	26
31	30	---	139	418	---	214	---	78	---	61	43	---
TOTAL	2,239	9,597	2,600	22,092	35,383	9,699	5,923	24,669	32,615	11,867	1,505	934
MEAN	72.2	320	83.9	713	1,220	313	197	796	1,087	383	48.5	31.1
MAX	558	3,270	196	3,440	8,250	1,140	895	4,510	6,800	3,430	76	44
MIN	24	27	56	67	170	117	92	78	74	60	35	25
AC-FT	4,440	19,040	5,160	43,820	70,180	19,240	11,750	48,930	64,690	23,540	2,990	1,850
CFSM	0.22	0.98	0.26	2.19	3.75	0.96	0.61	2.45	3.35	1.18	0.15	0.10
IN.	0.26	1.10	0.30	2.53	4.05	1.11	0.68	2.82	3.73	1.36	0.17	0.11

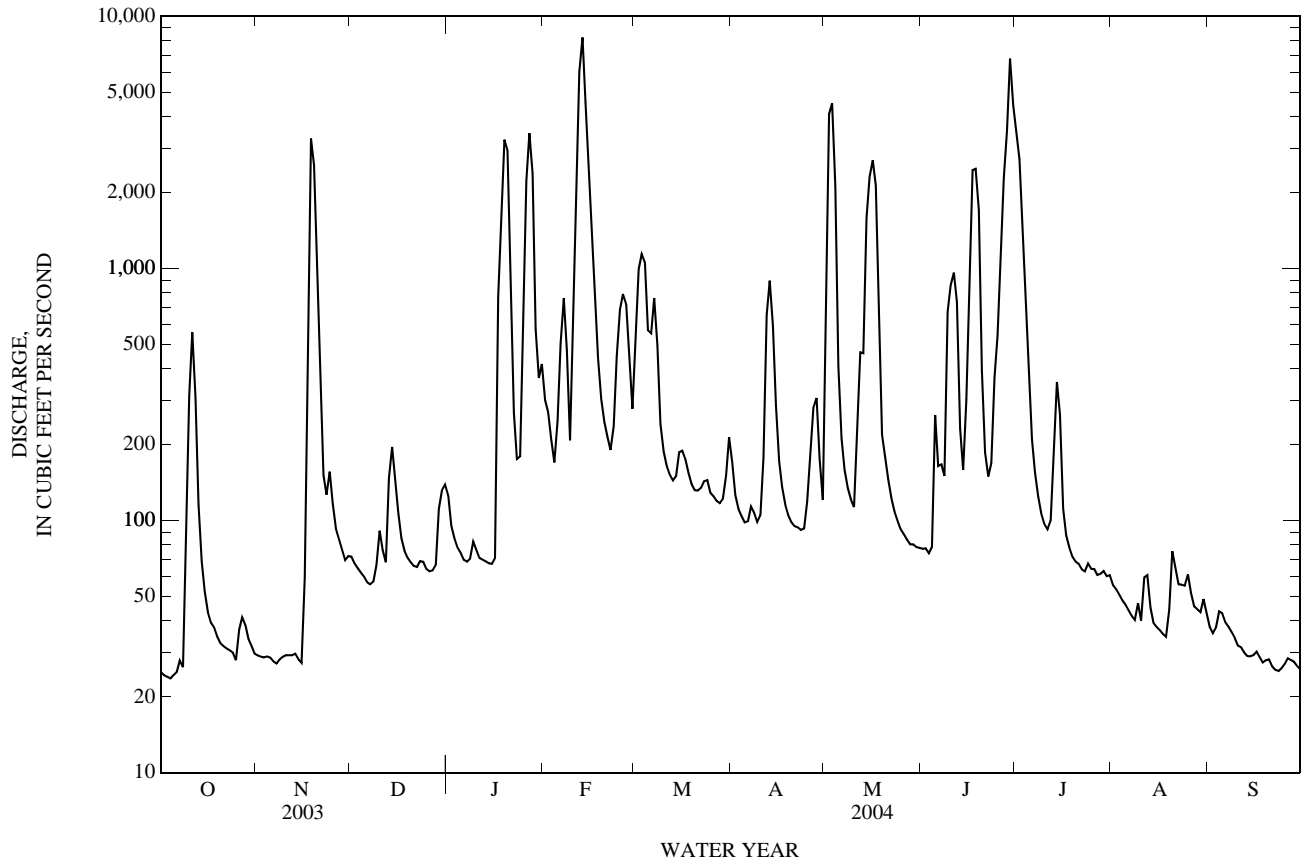
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004, BY WATER YEAR (WY)

MEAN	170	311	283	385	400	278	330	290	287	92.3	49.8	82.3
MAX	2,964	3,101	1,613	1,745	1,336	892	2,302	1,473	2,023	676	939	894
(WY)	(1995)	(1941)	(1941)	(1998)	(1992)	(2001)	(1945)	(1983)	(1973)	(1989)	(1983)	(1961)
MIN	5.61	9.58	14.6	13.0	20.2	17.1	15.5	18.1	12.0	5.70	5.51	4.46
(WY)	(1957)	(1957)	(1957)	(1957)	(1971)	(1971)	(1971)	(1963)	(1954)	(1971)	(1956)	(1956)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1939 - 2004
ANNUAL TOTAL	60,712	159,123	
ANNUAL MEAN	166	435	246
HIGHEST ANNUAL MEAN			733
LOWEST ANNUAL MEAN			22.8
HIGHEST DAILY MEAN	5,570	Feb 23	8,250
LOWEST DAILY MEAN	19	Aug 7	24
ANNUAL SEVEN-DAY MINIMUM	20	Aug 4	25
MAXIMUM PEAK FLOW			10,200
MAXIMUM PEAK STAGE			18.50
ANNUAL RUNOFF (AC-FT)	120,400	315,600	178,300
ANNUAL RUNOFF (CFSM)	0.512	1.34	0.757
ANNUAL RUNOFF (INCHES)	6.95	18.21	10.29
10 PERCENT EXCEEDS	246	1,060	496
50 PERCENT EXCEEDS	61	99	51
90 PERCENT EXCEEDS	26	29	14

08070000 East Fork San Jacinto River near Cleveland, TX—Continued



08070200 East Fork San Jacinto River near New Caney, TX

LOCATION.--Lat 30°08'43", long 95°07'27", Montgomery County, Hydrologic Unit 12040103, on right bank at downstream side of bridge on Farm Road 1485, 1.0 mi upstream from Church House Gully, 5.5 mi east of New Caney, and 5.9 mi upstream from Caney Creek.

DRAINAGE AREA.--388 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1952 to Sept. 1958, Oct. 1969 to Sept. 1976 and Oct. 1983 to Apr. 1984 (occasional low-flow measurements), May 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 43.98 ft above NGVD of 1929 (Texas Department of Transportation benchmark). Radio telemeter at station. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1973 reached a stage of 29.6 ft, from floodmark on left bank, identified by local resident. Flood in Nov. 1940 may have been slightly higher.

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

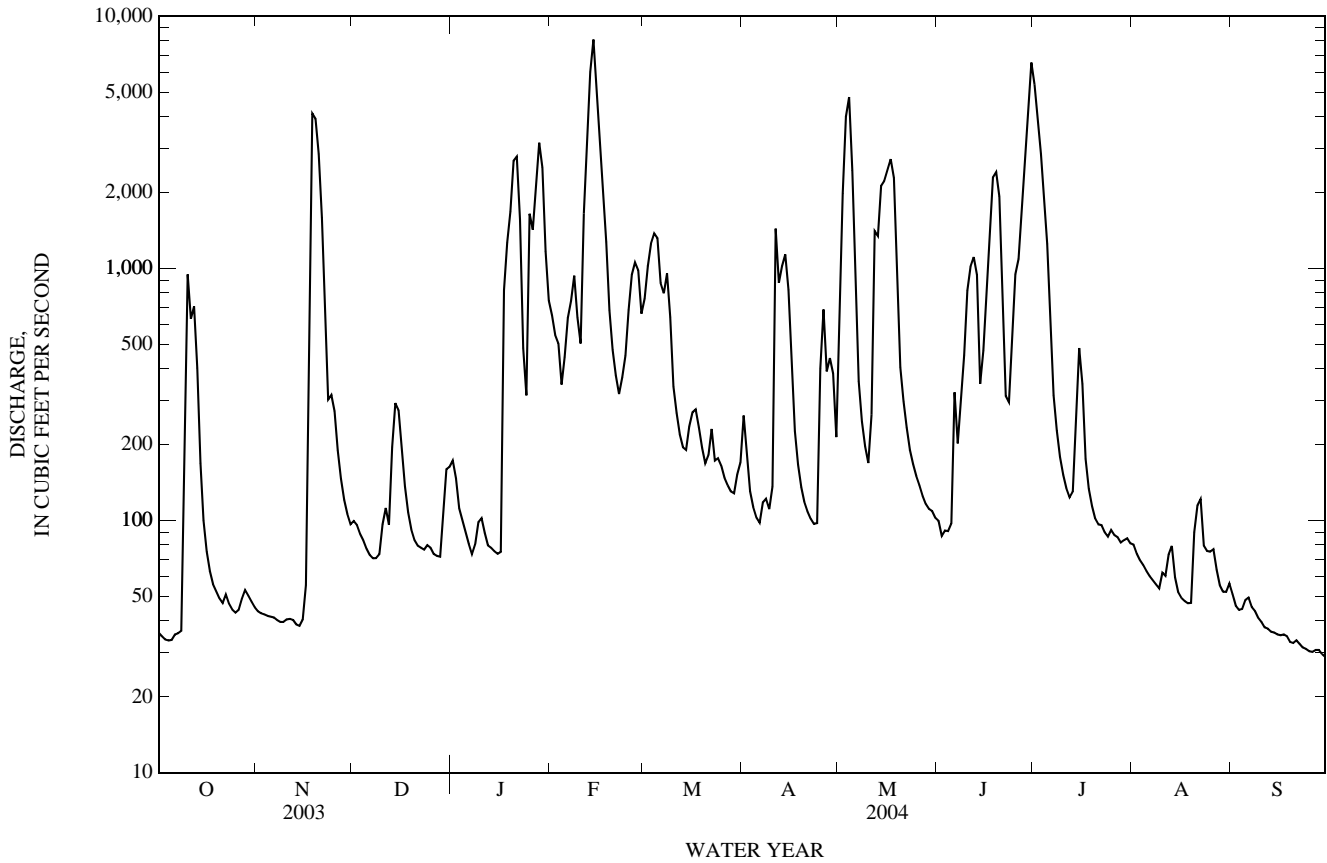
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	44	100	173	653	760	261	505	100	5,350	80	51
2	35	43	96	147	545	1,020	180	1,980	87	3,800	74	46
3	34	42	89	112	504	1,250	131	4,000	91	2,840	70	44
4	33	42	83	100	347	1,380	113	4,780	91	1,850	67	45
5	34	42	77	90	445	1,320	103	2,450	97	1,250	63	48
6	35	41	73	81	637	876	98	764	322	633	60	49
7	36	40	71	74	743	797	118	357	202	314	58	45
8	37	40	71	80	937	955	122	247	313	228	56	44
9	348	40	73	98	639	641	111	197	453	179	54	41
10	947	41	97	102	504	340	136	169	817	152	62	40
11	632	41	112	89	1,650	267	1,440	262	1,020	134	60	38
12	707	40	96	80	2,800	219	877	1,410	1,110	124	73	37
13	403	39	196	78	6,010	195	1,020	1,350	944	130	79	36
14	169	38	293	76	8,100	191	1,140	2,130	348	276	60	36
15	100	40	274	74	5,130	236	824	2,230	473	484	52	35
16	75	55	191	75	3,120	269	390	2,460	839	349	49	35
17	63	1,110	137	820	1,970	276	226	2,710	1,470	176	48	35
18	56	4,120	108	1,270	1,270	234	166	2,290	2,300	134	47	35
19	52	3,930	92	1,680	683	195	136	948	2,410	114	47	33
20	49	2,850	84	2,670	475	169	119	406	1,930	102	90	33
21	47	1,590	80	2,780	376	182	109	298	685	97	115	33
22	51	626	78	1,570	317	231	102	234	312	96	121	32
23	47	302	77	484	370	173	97	191	295	90	80	31
24	44	315	80	314	451	177	98	167	481	86	76	31
25	43	271	78	1,650	685	165	402	150	948	92	75	30
26	44	190	74	1,430	945	148	688	138	1,090	88	77	30
27	49	147	72	2,130	1,060	138	391	125	1,640	86	64	31
28	53	121	72	3,150	986	131	441	116	2,340	82	55	31
29	50	106	101	2,510	662	128	383	111	3,650	84	52	30
30	48	97	160	1,170	---	153	214	109	6,560	85	52	29
31	45	---	163	746	---	170	---	103	---	81	56	---
TOTAL	4,402	16,443	3,448	25,903	43,014	13,386	10,636	33,387	33,418	19,586	2,072	1,114
MEAN	142	548	111	836	1,483	432	355	1,077	1,114	632	66.8	37.1
MAX	947	4,120	293	3,150	8,100	1,380	1,440	4,780	6,560	5,350	121	51
MIN	33	38	71	74	317	128	97	103	87	81	47	29
AC-FT	8,730	32,610	6,840	51,380	85,320	26,550	21,100	66,220	66,280	38,850	4,110	2,210
CFSM	0.37	1.41	0.29	2.15	3.82	1.11	0.91	2.78	2.87	1.63	0.17	0.10
IN.	0.42	1.58	0.33	2.48	4.12	1.28	1.02	3.20	3.20	1.88	0.20	0.11

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2004, BY WATER YEAR (WY)

MEAN	335	393	431	542	551	480	310	302	403	157	43.1	64.2
MAX	2,843	2,892	1,229	1,857	1,557	1,142	958	1,330	1,596	849	189	186
(WY)	(1995)	(1999)	(2002)	(1998)	(1992)	(2001)	(1991)	(1989)	(1986)	(1989)	(1995)	(1996)
MIN	15.7	20.6	31.2	41.0	40.7	40.8	68.8	38.5	28.5	18.0	14.5	17.6
(WY)	(1989)	(1991)	(1990)	(2000)	(2000)	(2000)	(1986)	(2002)	(1996)	(1998)	(2000)	(1988)

08070200 East Fork San Jacinto River near New Caney, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1984 - 2004	
ANNUAL TOTAL	79,811		206,809			
ANNUAL MEAN	219		565		334	
HIGHEST ANNUAL MEAN					660	1995
LOWEST ANNUAL MEAN					53.9	2000
HIGHEST DAILY MEAN	4,220	Feb 24	8,100	Feb 14	46,600	Oct 19, 1994
LOWEST DAILY MEAN	29	Aug 7	29	Sep 30	9.5	Sep 8, 2000
ANNUAL SEVEN-DAY MINIMUM	30	Aug 4	30	Sep 24	10	Oct 29, 1990
MAXIMUM PEAK FLOW			9,160	Feb 14	74,100	Oct 19, 1994
MAXIMUM PEAK STAGE			21.55	Feb 14	33.00	Oct 19, 1994
ANNUAL RUNOFF (AC-FT)	158,300		410,200		241,800	
ANNUAL RUNOFF (CFSM)	0.564		1.46		0.860	
ANNUAL RUNOFF (INCHES)	7.65		19.83		11.69	
10 PERCENT EXCEEDS	360		1,640		811	
50 PERCENT EXCEEDS	77		134		85	
90 PERCENT EXCEEDS	37		41		25	













## 08070200 East Fork San Jacinto River near New Caney, TX—Continued

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

Date	Pyrene, water, fltrd, ug/L (34470)	Rox- ithro- mycin, water, fltrd, ug/L (62895)	Sara- flox- acin, water, fltrd, 0.7u GF ug/L (62771)	Sim- azine, water, fltrd, ug/L (04035)	Sulfa- chlor- pyrid- azine, wat flt gf 0.7u ug/L (62774)	Sulfa- diazine water, fltrd, ug/L (62963)	Sulfa- dimeth- oxine, water, fltrd, 0.7u GF ug/L (62776)	Sulfa- mera- zine, water, fltrd, 0.7u GF ug/L (62777)	Sulfa- meth- azine, water, fltrd, ug/L (61762)	Sulfa- methox- azole, water, fltrd, 0.7u GF ug/L (62775)	Sulfa- thi- azole, water, fltrd, 0.7u GF ug/L (62778)	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)
JUN 09...	--	--	--	<.005	--	--	--	--	--	--	--	<.02	<.034
JUN 09-13	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 28...	--	--	--	<.005	--	--	--	--	--	--	--	<.02	<.034
JUL 28...	--	<.01	<.01	<.03	<.01	<.01	<.01	<.01	<.0050	<.01	<.01	--	--
SEP 22...	<.5	--	--	<.005	--	--	--	--	--	--	--	<.02	<.034
SEP 22...	--	--	--	<.03	--	--	--	--	--	--	--	--	--

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

Date	Terbu- fos, water, fltrd 0.7u GF (82675)	Tetra- chloro- ethene, water, fltrd, ug/L (34476)	Tetra- cycline water fltrd 0.7u GF ug/L (62781)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- bromo- methane water, fltrd, ug/L (34288)	Tri- butyl phos- phate, water, fltrd, ug/L (62089)	Triclo- san, water, fltrd, ug/L (62090)	Tri- ethyl citrate water, fltrd, ug/L (62091)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Tri- meth- oprim, water, fltrd, ug/L (62023)	Tri- phenyl phos- phate, water, fltrd, ug/L (62092)	Tris(2- butoxy- ethyl) phos- phate, wat flt ug/L (62093)
JUN 09...	<.02	--	--	<.010	<.002	--	--	--	--	<.009	--	--	--
JUN 09-13	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 28...	<.02	--	--	<.010	<.002	--	--	--	--	<.009	--	--	--
JUL 28...	--	--	<.01	--	--	--	--	--	--	--	<.005	--	--
SEP 22...	<.02	<.5	--	<.010	<.002	<.5	<.5	<.1	<.5	<.009	--	<.5	<.5
SEP 22...	--	--	--	--	--	--	--	--	--	--	--	--	--

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

Date	Tris(2- chloro- ethyl) phos- phate, wat flt ug/L (62087)	Tris(di- chloro- i-Pr) phos- phate, wat flt ug/L (62088)	Tylosin water, fltrd, ug/L (62896)	Vir- ginia- mycin, water, fltrd, ug/L (62897)	Uranium natural water, fltrd, ug/L (22703)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
JUN 09...	--	--	--	--	--	--	--
JUN 09-13	--	--	--	--	.13	70	--
JUL 28...	--	--	--	--	.06	66	14
JUL 28...	--	--	<.01	<.01	--	--	--
SEP 22...	<.5	<.5	--	--	E.03n	69	6.1
SEP 22...	--	--	--	--	--	--	--

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
- k -- Counts outside acceptable range
- n -- Below the LRL and above the LT-MDL
- t -- Below the long-term MDL

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08070500 Caney Creek near Splendora, TX

LOCATION.--Lat 30°15'34", long 95°18'08", Montgomery County, Hydrologic Unit 12040103, on left bank at downstream side of bridge on Farm Road 2090, 4.0 mi downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, and 8.0 mi west of Splendora.

DRAINAGE AREA.--105 mi<sup>2</sup>.

PERIOD OF RECORD.--Jan. 1944 to current year. Monthly discharge only for some periods, published in WSP 1312. Water-quality records: Chemical data: Oct. 1962 to Apr. 1964, Aug. 1983 to Sept. 1999. Biochemical data: Aug. 1983 to Sept. 1999. Pesticide data: Aug. 1983 to Sept. 1990. Sediment data: Feb. 1966, Apr. 1973 to Mar. 1975.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 118.44 ft above NGVD of 1929. Prior to June 17, 1965, at site 170 ft upstream at datum 5.00 ft higher. Satellite telemeter at station.

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

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

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

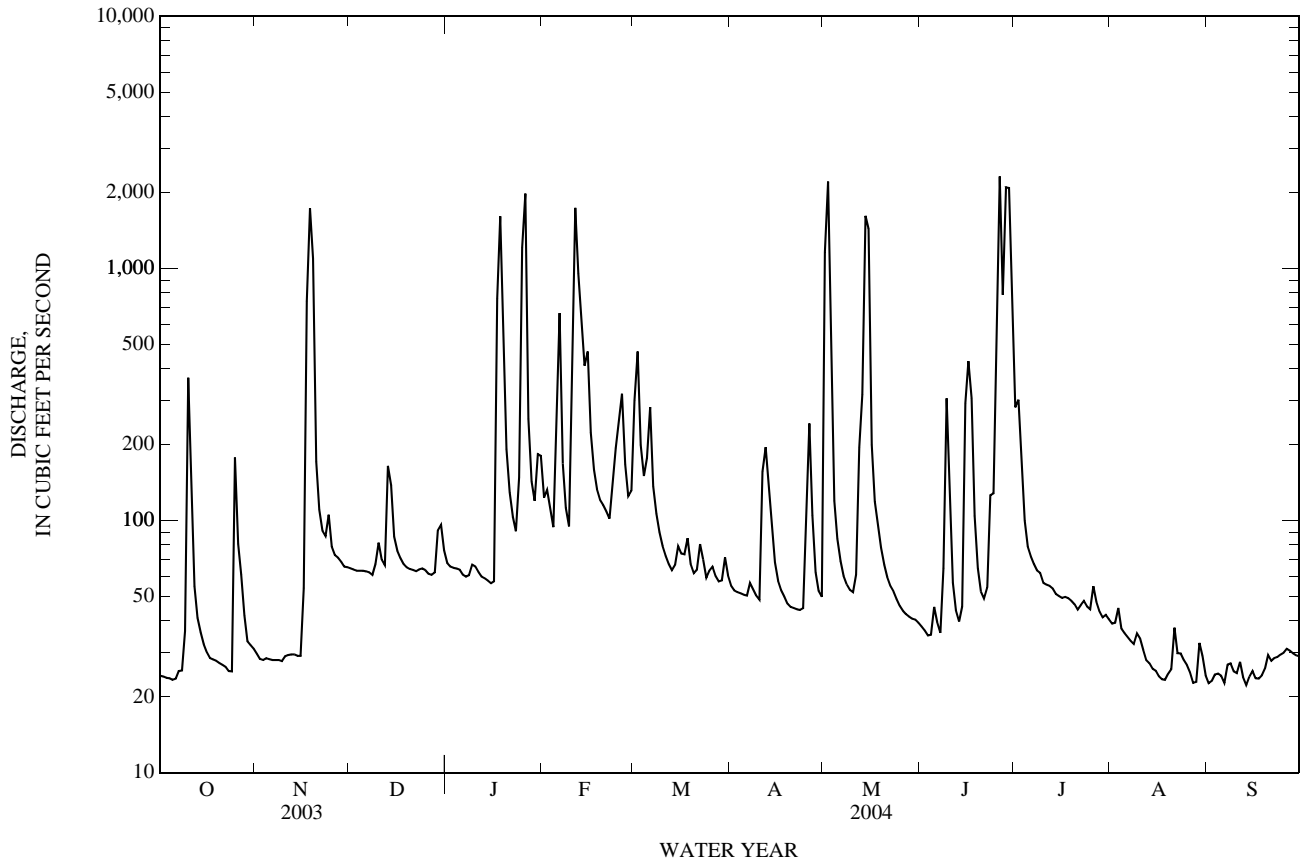
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	30	65	68	123	299	55	1,160	38	281	39	23
2	24	28	64	66	132	469	53	2,210	37	302	39	23
3	24	28	63	65	111	199	52	466	35	191	45	25
4	24	28	63	65	94	150	51	120	35	100	37	25
5	23	28	63	64	219	177	51	85	45	79	36	24
6	24	28	63	61	665	282	50	69	40	72	35	23
7	25	28	62	60	168	137	57	60	36	67	33	27
8	25	28	61	61	112	106	53	56	65	63	32	27
9	36	28	67	67	95	90	50	53	305	62	36	25
10	369	29	82	66	412	79	49	52	126	57	34	25
11	123	29	70	62	1,740	73	156	61	57	56	31	27
12	55	29	66	60	956	67	195	195	44	55	28	24
13	41	29	165	59	623	64	136	316	40	54	27	22
14	36	29	138	58	412	67	94	1,620	46	51	26	24
15	32	29	86	56	469	79	68	1,440	292	50	25	25
16	30	54	76	57	223	74	58	200	429	49	24	24
17	28	741	71	759	159	74	53	119	306	50	23	24
18	28	1,730	67	1,610	133	85	50	95	104	49	23	24
19	28	1,100	65	544	120	67	47	78	65	48	25	26
20	27	171	64	192	115	62	45	67	52	47	26	29
21	27	110	64	129	109	64	45	60	49	44	38	28
22	26	91	63	104	102	81	44	55	54	46	30	28
23	25	87	64	91	145	70	44	52	126	48	30	29
24	25	106	65	149	194	59	45	49	128	46	28	29
25	178	79	64	1,210	251	63	102	46	689	44	27	30
26	81	73	61	1,980	318	66	243	44	2,320	55	25	31
27	61	71	61	253	167	60	105	43	786	48	23	30
28	42	69	62	143	125	57	62	42	2,100	44	23	30
29	33	66	91	120	132	58	53	41	2,090	41	33	29
30	32	65	96	183	---	71	50	40	907	42	29	29
31	31	---	76	181	---	61	---	39	---	41	24	---
TOTAL	1,587	5,041	2,288	8,643	8,624	3,410	2,216	9,033	11,446	2,282	934	789
MEAN	51.2	168	73.8	279	297	110	73.9	291	382	73.6	30.1	26.3
MAX	369	1,730	165	1,980	1,740	469	243	2,210	2,320	302	45	31
MIN	23	28	61	56	94	57	44	39	35	41	23	22
AC-FT	3,150	10,000	4,540	17,140	17,110	6,760	4,400	17,920	22,700	4,530	1,850	1,560
CFSM	0.49	1.60	0.70	2.66	2.83	1.05	0.70	2.78	3.63	0.70	0.29	0.25
IN.	0.56	1.79	0.81	3.06	3.06	1.21	0.79	3.20	4.06	0.81	0.33	0.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2004, BY WATER YEAR (WY)

MEAN	71.6	93.8	90.4	123	124	90.5	104	99.0	110	39.3	27.5	38.1
MAX	895	853	293	497	368	287	606	542	956	190	262	296
(WY)	(1995)	(1999)	(2002)	(1995)	(1961)	(2001)	(1945)	(1983)	(2001)	(1979)	(1983)	(1961)
MIN	6.57	8.20	10.5	10.7	13.6	12.2	13.6	13.8	10.1	7.28	6.69	5.91
(WY)	(1957)	(1957)	(1957)	(1957)	(1971)	(1971)	(1971)	(1956)	(1954)	(1971)	(1956)	(1956)

08070500 Caney Creek near Splendora, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1944 - 2004	
ANNUAL TOTAL	28,973		56,293		83.9	
ANNUAL MEAN	79.4		154		192	
HIGHEST ANNUAL MEAN					1995	
LOWEST ANNUAL MEAN					1971	
HIGHEST DAILY MEAN	3,060	Feb 22	2,320	Jun 26	18,800	Jun 9, 2001
LOWEST DAILY MEAN	16	Jun 10	22	Sep 13	5.4	Sep 21, 1956
ANNUAL SEVEN-DAY MINIMUM	18	May 30	24	Aug 31	5.5	Sep 21, 1956
MAXIMUM PEAK FLOW			3,610	Jun 28	36,500	Jun 9, 2001
MAXIMUM PEAK STAGE			17.15	Jun 28	26.45	Jun 9, 2001
ANNUAL RUNOFF (AC-FT)	57,470		111,700		60,800	
ANNUAL RUNOFF (CFSM)	0.756		1.46		0.799	
ANNUAL RUNOFF (INCHES)	10.26		19.94		10.86	
10 PERCENT EXCEEDS	107		285		116	
50 PERCENT EXCEEDS	39		60		28	
90 PERCENT EXCEEDS	23		26		12	



08071000 Peach Creek at Splendora, TX

LOCATION.--Lat 30°13'57", long 95°10'05", Montgomery County, Hydrologic Unit 12040103, on left bank at downstream side of bridge on Farm Road 2090, about 1500 ft west of depot at Splendora, 2.5 mi upstream from Texas and New Orleans Railroad Co. bridge, 2.5 mi upstream from bridge on U.S. Highway 59, and 9.7 mi upstream from Caney Creek.

DRAINAGE AREA.--117 mi<sup>2</sup>.

PERIOD OF RECORD.--Jan. 1944 to Sept. 1977, Apr. 1999 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 81.61 ft above NGVD of 1929. Prior to Oct. 1, 1965, at datum 5.00 ft higher. 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 1895, occurred Oct. 8, 1949. Flood in Nov. 1940 reached a stage of 22.3 ft, discharge 24,700 ft<sup>3</sup>/s, from information by local resident. Flood of June 12, 1986 reached a stage of 20.92 ft, discharge 15,700 ft<sup>3</sup>/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	24	35	64	74	173	324	59	849	37	253	38	29
2	23	35	62	70	190	644	53	4,070	35	457	36	26
3	23	34	60	69	240	398	50	1,680	33	559	42	29
4	23	33	59	67	147	208	49	421	30	150	38	34
5	22	33	57	64	236	199	47	144	31	106	31	33
6	23	32	54	59	344	200	48	107	60	88	29	30
7	24	31	52	54	187	148	66	87	38	75	28	28
8	27	30	53	57	126	116	70	76	174	69	27	33
9	63	30	60	79	108	100	55	68	656	62	26	30
10	347	30	95	79	250	91	87	65	376	56	26	27
11	215	30	95	65	1,380	85	433	107	127	52	27	25
12	125	30	69	59	2,110	80	228	341	82	66	36	24
13	63	29	189	57	1,560	78	168	423	66	60	31	24
14	51	28	201	57	746	83	109	1,890	59	50	26	24
15	44	28	131	57	612	144	76	1,520	220	44	25	24
16	39	187	91	64	374	135	62	618	741	41	24	29
17	36	1,910	76	935	209	113	54	189	1,660	39	24	26
18	34	5,290	68	1,470	151	96	50	126	1,010	37	24	23
19	32	2,470	64	816	133	86	46	108	206	35	50	22
20	31	653	61	290	124	78	44	90	115	34	99	26
21	29	173	59	143	117	103	42	76	89	33	65	23
22	28	122	59	115	106	100	41	67	86	33	78	22
23	28	118	64	101	121	82	40	60	121	39	57	21
24	27	158	69	113	172	69	44	55	210	46	45	21
25	27	132	64	676	175	74	138	50	258	37	41	21
26	165	97	59	1,420	292	84	270	47	219	36	37	22
27	119	89	58	723	211	75	150	44	392	45	32	23
28	75	78	59	191	134	67	74	41	1,000	39	29	22
29	54	68	110	133	118	74	55	40	907	35	47	21
30	43	64	144	224	---	85	49	40	329	36	39	20
31	38	---	92	240	---	78	---	38	---	40	35	---
TOTAL	1,902	12,077	2,498	8,621	10,846	4,297	2,757	13,537	9,367	2,752	1,192	762
MEAN	61.4	403	80.6	278	374	139	91.9	437	312	88.8	38.5	25.4
MAX	347	5,290	201	1,470	2,110	644	433	4,070	1,660	559	99	34
MIN	22	28	52	54	106	67	40	38	30	33	24	20
AC-FT	3,770	23,950	4,950	17,100	21,510	8,520	5,470	26,850	18,580	5,460	2,360	1,510

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2004h, BY WATER YEAR (WY)

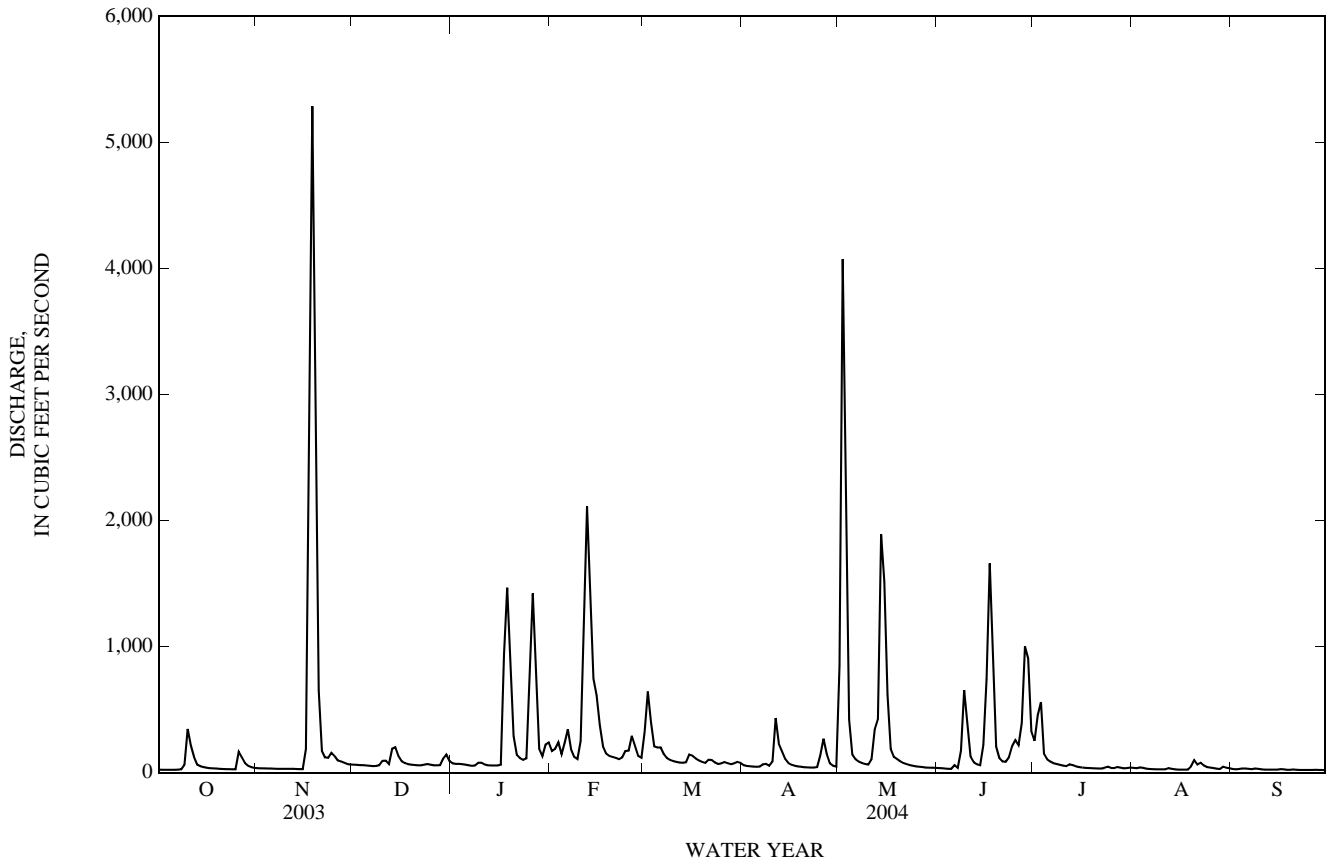
MEAN	63.2	90.8	82.6	114	118	87.9	95.5	93.2	90.1	40.3	23.6	34.8
MAX	908	850	333	629	449	388	488	437	799	271	129	342
(WY)	(1950)	(1947)	(1975)	(1974)	(1961)	(2001)	(1945)	(2004)	(1973)	(1973)	(1945)	(1961)
MIN	2.75	5.54	10.6	10.6	14.3	11.4	9.15	10.9	7.31	3.66	3.12	2.46
(WY)	(1957)	(1957)	(1957)	(1957)	(1971)	(1971)	(1971)	(1956)	(1971)	(1971)	(1956)	(1956)



08071000 Peach Creek at Splendora, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1944 - 2004h	
ANNUAL TOTAL	35,419		70,608			
ANNUAL MEAN	97.0		193		77.5	
HIGHEST ANNUAL MEAN					213	1973
LOWEST ANNUAL MEAN					13.7	1956
HIGHEST DAILY MEAN	5,290	Nov 18	5,290	Nov 18	14,400	Jun 14, 1973
LOWEST DAILY MEAN	18	Aug 8	20	Sep 30	1.1	Sep 29, 1956
ANNUAL SEVEN-DAY MINIMUM	19	Aug 20	21	Sep 24	1.2	Sep 25, 1956
MAXIMUM PEAK FLOW			6,050	Nov 18	28,500	Oct 8, 1949
MAXIMUM PEAK STAGE			18.36	Nov 18	22.73	Oct 8, 1949
ANNUAL RUNOFF (AC-FT)	70,250		140,100		56,130	
10 PERCENT EXCEEDS	135		375		133	
50 PERCENT EXCEEDS	47		64		26	
90 PERCENT EXCEEDS	21		27		8.6	

h see PERIOD OF RECORD paragraph.



08071280 Luce Bayou above Lake Houston near Huffman, TX

LOCATION.--Lat 30°06'34", long 95°03'35", Liberty County, Hydrologic Unit 12040103, on left bank, in Tricontinental Pipeline Co. right-of-way, 1.1 mi upstream from Key Gully, 3.1 mi east of Huffman-Cleveland Road, and 6.3 mi northeast of Huffman.

DRAINAGE AREA.--218 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1970, 1972, 1975 (occasional low-flow measurements, at site 2.2 mi downstream), Feb. to Apr. 1984 (discharge measurements only), May 1984 to current year. Water-quality records: Chemical data: Feb. 1984 to Sept. 1999. Biochemical data: Feb. 1984 to Sept. 1999. Pesticide data: Feb. 1984 to Sept. 1999.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 39.91 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. No known regulation. There are diversions above station for irrigation, but amounts are unknown. 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	5.3	0.02	36	78	385	167	32	599	9.4	1,730	6.9	1.9
2	3.8	0.01	23	65	368	288	17	1,360	9.6	1,980	3.3	1.6
3	3.2	0.00	17	56	347	341	11	1,540	8.7	2,210	2.5	1.9
4	2.6	0.00	14	48	313	341	8.2	2,560	7.9	1,760	2.0	2.2
5	2.7	0.00	12	41	704	273	6.0	2,020	8.6	1,160	1.7	2.2
6	2.6	0.00	8.9	31	1,090	205	5.2	1,270	8.3	463	2.5	1.9
7	2.8	0.00	7.4	20	1,050	160	6.6	598	31	123	3.3	2.0
8	8.2	0.00	6.5	27	835	125	5.4	104	118	96	3.0	1.8
9	359	0.00	7.1	67	478	94	11	75	293	82	3.5	1.7
10	1,160	0.00	13	70	307	75	12	58	294	67	3.4	1.9
11	979	0.00	22	56	1,090	62	168	84	303	56	3.0	1.6
12	954	0.00	37	54	1,710	53	505	383	213	39	2.4	1.2
13	721	0.00	72	46	2,270	44	712	680	113	27	2.0	1.9
14	244	0.00	153	37	2,270	42	645	2,420	79	20	2.2	1.8
15	74	0.00	159	28	1,960	74	271	3,110	78	16	3.0	1.5
16	43	9.0	109	25	1,490	90	102	2,800	233	11	2.9	1.2
17	25	310	56	301	1,160	106	70	2,050	453	10	2.6	1.1
18	8.5	2,400	61	521	748	97	51	1,400	648	9.8	3.4	4.6
19	2.0	4,070	49	620	318	76	32	884	822	8.3	2.3	2.6
20	0.50	4,220	36	756	142	61	17	333	813	6.5	1.9	1.1
21	0.13	2,940	23	655	104	52	11	141	645	5.2	3.0	0.54
22	0.04	1,820	16	266	91	73	8.0	101	224	4.6	42	0.31
23	0.03	1,150	15	78	206	85	5.7	80	235	7.6	58	0.20
24	0.01	490	16	83	234	65	6.5	63	745	7.9	41	0.15
25	0.01	196	16	738	227	49	167	43	1,380	6.3	19	0.16
26	0.01	150	14	1,050	267	38	760	28	2,060	5.5	11	0.14
27	0.01	105	14	1,470	226	32	1,090	20	2,310	13	7.4	0.09
28	0.00	77	13	1,270	153	24	753	17	2,040	16	6.1	0.07
29	0.00	62	53	714	109	17	280	15	1,590	14	6.6	0.05
30	0.00	49	90	396	---	14	104	12	1,320	10	4.5	0.04
31	0.02	---	91	418	---	27	---	9.9	---	17	2.8	---
TOTAL	4,601.46	18,048.03	1,259.9	10,085	20,652	3,250	5,872.6	24,857.9	17,092.5	9,981.7	259.2	39.45
MEAN	148	602	40.6	325	712	105	196	802	570	322	8.36	1.31
MAX	1,160	4,220	159	1,470	2,270	341	1,090	3,110	2,310	2,210	58	4.6
MIN	0.00	0.00	6.5	20	91	14	5.2	9.9	7.9	4.6	1.7	0.04
AC-FT	9,130	35,800	2,500	20,000	40,960	6,450	11,650	49,310	33,900	19,800	514	78
CFSM	0.68	2.76	0.19	1.49	3.27	0.48	0.90	3.68	2.61	1.48	0.04	0.01
IN.	0.79	3.08	0.21	1.72	3.52	0.55	1.00	4.24	2.92	1.70	0.04	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2004, BY WATER YEAR (WY)

MEAN	356	222	260	239	290	299	189	220	321	60.1	9.23	61.1
MAX	2,988	1,416	862	826	980	878	1,047	2,443	1,965	334	103	394
(WY)	(1995)	(1999)	(1998)	(1992)	(1992)	(1993)	(1991)	(1989)	(1993)	(1987)	(1995)	(1996)
MIN	0.01	0.17	1.43	1.06	1.34	1.62	3.06	0.00	0.12	0.01	0.35	0.03
(WY)	(1993)	(1989)	(1989)	(2000)	(2000)	(2000)	(1987)	(2002)	(1998)	(1998)	(1999)	(1992)

SUMMARY STATISTICS

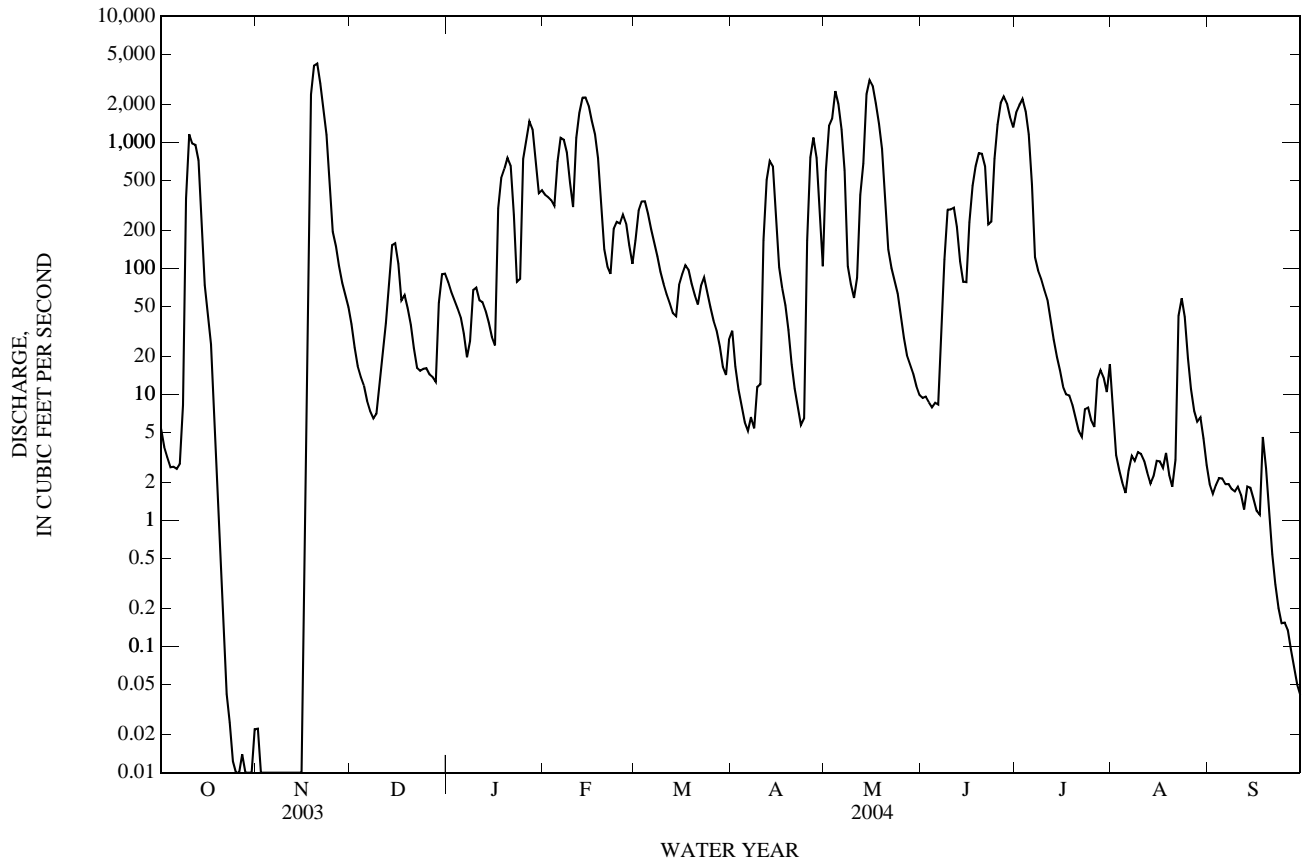
FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1984 - 2004

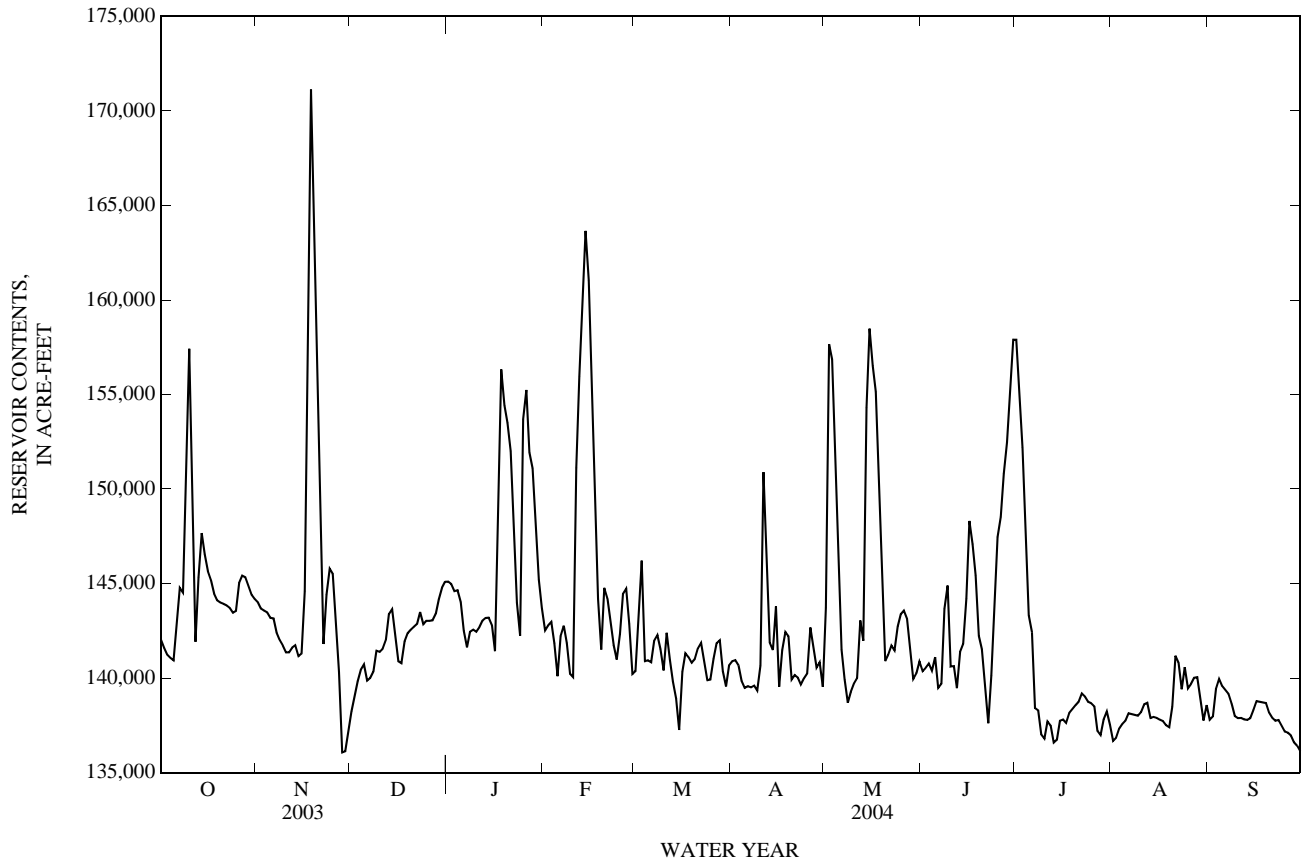
ANNUAL TOTAL	49,334.21	115,999.74	
ANNUAL MEAN	135	317	213
HIGHEST ANNUAL MEAN			453
LOWEST ANNUAL MEAN			13.2
HIGHEST DAILY MEAN	4,220	Nov 20	4,220
LOWEST DAILY MEAN	0.00	Oct 28	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Nov 3	0.00
MAXIMUM PEAK FLOW			4,710
MAXIMUM PEAK STAGE			25.30
ANNUAL RUNOFF (AC-FT)	97,850	230,100	154,000
ANNUAL RUNOFF (CFSM)	0.620	1.45	0.975
ANNUAL RUNOFF (INCHES)	8.42	19.79	13.25
10 PERCENT EXCEEDS	254	1,110	439
50 PERCENT EXCEEDS	17	42	10
90 PERCENT EXCEEDS	0.27	0.53	0.20

08071280 Luce Bayou above Lake Houston near Huffman, TX—Continued





08072000 Lake Houston near Sheldon, TX—Continued





08072000 Lake Houston near Sheldon, TX—Continued

295516095080801 -- LK HOUSTON SITE AC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	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)	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)	Organic nitrogen, water, fltrd, mg/L (00607)
MAR 16...	<.2	7.49	6.9	90	119	<20d	.48	.80	<.04	.33	.35	.019	--
MAR 16-16	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16-16	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	--	41d	.55	.83	.07	.34	.38	.040	.48
JUN 17...	<.2	8.01	5.9	89	96	<10	.49	.75	E.03n	--	.39	E.004n	--
JUN 17-17	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 17-17	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 17...	--	--	--	--	--	19	.52	--	E.03n	--	.42	E.005n	--
SEP 08...	<.2	10.3	6.0	111	134	11	.42	.71	<.04	--	<.06	<.008	--
SEP 08-08	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08-08	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	--	--	--	--	835d	.45	.82	<.04	--	.13	<.008	--

295516095080801 -- LK HOUSTON SITE AC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Organic nitrogen, water, unfltrd mg/L (00605)	Ortho-phosphate, water, fltrd, mg/L (00660)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Biomass phytoplankton, ashfree drymass mg/L (49953)	Biomass plankton, ash wgt mg/L (81353)	Biomass plankton, dry wgt mg/L (81354)	E coli, m-TEC water, col/100 mL (31633)
MAR 16...	--	.110	.04	.050	.115	.83	1.1	12.1	13.4	10.3	460	471	160
MAR 16-16	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16-16	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	.76	.129	.04	.058	.155	.93	1.2	10.8	13.1	11.0	481	492	--
JUN 17...	--	.218	.07	.090	E.180c	.89	1.1	9.7	10.7	19.5	692	711	40
JUN 17-17	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 17-17	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 17...	--	.242	.08	.098	--	.94	--	9.6	12.0	18.5	694	713	--
SEP 08...	--	.163	.05	.073	.135	--	--	8.8	11.8	8.5	334	342	E34k
SEP 08-08	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08-08	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	.218	.07	.098	.154	.57	.95	9.0	11.1	11.7	459	470	--

















08072000 Lake Houston near Sheldon, TX—Continued

295516095080801 -- LK HOUSTON SITE AC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Vir- ginia- mycin, water, fltrd, ug/L (62897)	Uranium natural water, fltrd, ug/L (22703)	Sus- pended sediment concentration mg/L (80154)
MAR 16...	--	.19	21
MAR 16-16	--	--	--
MAR 16-16	--	--	--
16...	--	--	--
16...	--	--	--
16...	--	--	37
JUN 17...	--	.22	10
JUN 17-17	--	--	--
JUN 17-17	<.01	--	--
17...	--	--	20
SEP 08...	--	.15	9
SEP 08-08	--	--	--
SEP 08-08	--	--	--
08...	--	--	--
08...	--	--	--
08...	--	--	16

300158095074601 -- LK HOUSTON SITE EC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Color, water, fltrd, Pt-Co units (00080)	Sam- pling depth, feet (00003)	Trans- parency Secchi disc, meters (00078)	Turbid- ity, wat unfl lab, Hach 2100AN NTU (99872)	UV absorb- ance, 254 nm, wat flt units /cm (50624)	UV absorb- ance, 280 nm, wat flt units /cm (61726)	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 unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
MAR 16...	1410	125d	1.00	.33	22	.536	.399	765	8.3	89	7.0	145	18.9
MAR 16-16	1410	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16-16	1411	--	--	--	--	--	--	--	--	--	--	--	--
16...	1420	--	8.00	--	--	--	--	765	7.5	79	6.9	145	18.1
16...	1430	125d	14.0	--	49	--	--	765	6.8	70	6.7	153	17.1
JUN 17...	1345	150d	1.00	.16	58	.438	.330	765	5.2	64	6.5	60	26.0
JUN 17-17	1345	--	--	--	--	--	--	--	--	--	--	--	--
JUN 17-17	1346	--	--	--	--	--	--	--	--	--	--	--	--
17...	1355	125d	15.0	--	67	--	--	765	5.0	60	6.4	62	25.0
SEP 08...	1230	75d	1.00	.37	38	.233	.169	763	4.1	52	7.3	208	28.3
SEP 08-08	1230	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08-08	1231	--	--	--	--	--	--	--	--	--	--	--	--
08...	1253	--	10.0	--	--	--	--	763	3.7	48	7.2	207	28.4
08...	1302	75d	16.0	--	41	--	--	763	3.6	46	7.2	206	28.3

## SAN JACINTO RIVER BASIN

08072000 Lake Houston near Sheldon, TX—Continued

300158095074601 -- LK HOUSTON SITE EC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	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)
MAR 16...	13	42	13.6	2.05	1.53	.7	9.89	33	30	36	.0	17.2	<.2
MAR 16-16	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16-16	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 17...	6	17	5.35	.927	1.29	.4	3.58	29	12	14	.0	5.54	<.2
JUN 17-17	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 17-17	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	47	15.4	2.18	2.88	1	19.8	46	48	59	.0	25.1	<.2
SEP 08-08	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08-08	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	--	--	--	--	--	--	--	--	--	--	--	--

300158095074601 -- LK HOUSTON SITE EC  
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)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, sus- pended, 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 nitro- gen, water, fltrd, mg/L (00607)	Organic nitro- gen, water, unfltrd mg/L (00605)	Ortho- phos- phate, water, fltrd, mg/L (00660)
MAR 16...	9.79	5.3	78	110	<20d	.55	.74	<.04	.09	E.004n	--	--	--
MAR 16-16	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16-16	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	19d	.48	.60	.04	.17	E.005n	.44	.56	--
JUN 17...	4.86	2.9	32	63	40d	.45	.77	<.04	.10	E.006n	--	--	--
JUN 17-17	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 17-17	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 17...	--	--	--	--	38d	.51	.77	E.04n	.09	E.005n	--	--	--
SEP 08...	11.3	7.0	114	141	34	.40	.79	<.04	.13	<.008	--	--	.147
SEP 08-08	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08-08	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	--	--	--	31	.39	.71	<.04	.12	<.008	--	--	.144

















## SAN JACINTO RIVER BASIN

08072000 Lake Houston near Sheldon, TX—Continued

300158095074601 -- LK HOUSTON SITE EC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Tri-bromo-methane water, fltrd, ug/L (34288)	Tri-butyl phosphate, water, fltrd, ug/L (62089)	Triclosan, water, fltrd, ug/L (62090)	Tri-ethyl citrate water, fltrd, ug/L (62091)	Tri-fluor-alin, water, fltrd, 0.7u GF ug/L (82661)	Tri-meth-oprin, water, fltrd, ug/L (62023)	Tri-phenyl phosphate, water, fltrd, ug/L (62092)	Tris(2-butoxy-ethyl) phosphate, wat flt ug/L (62093)	Tris(2-chloro-ethyl) phosphate, wat flt ug/L (62087)	Tris(di-chloro-i-Pr) phosphate, wat flt ug/L (62088)	Tylosin water, fltrd, ug/L (62896)	Vir-ginia-mycin, water, fltrd, ug/L (62897)	Uranium natural water, fltrd, ug/L (22703)
MAR 16...	--	--	--	--	--	--	--	--	--	--	--	--	.18
MAR 16-16	--	--	--	--	<.009	--	--	--	--	--	--	--	--
MAR 16-16	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	--	.10
JUN 17-17	--	--	--	--	<.009	--	--	--	--	--	--	--	--
JUN 17-17	--	--	--	--	--	<.005	--	--	--	--	.01	<.01	--
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	--	--	--	--	--	--	--	--	--	--	--	.09
SEP 08-08	<.5	E.1t	<1	<.5	<.009	--	<.5	<.5	E.1t	E.1t	--	--	--
SEP 08-08	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	--	--	--	--	--	--	--	--	--	--	--	--

300158095074601 -- LK HOUSTON SITE EC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sus-pended sedi-ment concentration mg/L (80154)
MAR 16...	17
MAR 16-16	--
MAR 16-16	--
MAR 16...	27
MAR 16...	44
JUN 17-17	--
JUN 17-17	--
JUN 17...	50
SEP 08...	26
SEP 08-08	--
SEP 08-08	--
SEP 08...	--
SEP 08...	28





## SAN JACINTO RIVER BASIN

08072000 Lake Houston near Sheldon, TX—Continued

300209095091201 -- LK HOUSTON SITE FC  
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)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, sus- pended, 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)	Organic nitro- gen, water, fltrd, mg/L (00607)	Organic nitro- gen, water, unfltrd mg/L (00605)
MAR 16...	11.6	12.3	180	200	34d	.65	1.2	<.04	1.68	1.72	.037	--	--
MAR 16-16	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16-16 16...	--	--	--	--	52d	.66	1.0	.04	1.59	1.62	.028	.61	.98
JUN 17...	5.81	4.7	58	83	84d	.53	.97	E.02n	.25	.26	.008	--	--
JUN 17-17	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 17-17 17...	--	--	--	--	56d	.57	1.0	E.03n	.25	.26	.008	--	--
SEP 08...	12.0	13.8	189	211	23	.53	1.2	.09	1.48	1.52	.043	.44	1.1
SEP 08-08	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08-08 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	61d	.53	1.2	.10	1.41	1.45	.045	.44	1.1

300209095091201 -- LK HOUSTON SITE FC  
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)	Phos- phorus, water, unfltrd mg/L (00665)	Total nitro- gen, water, fltrd, mg/L (00602)	Total nitro- gen, water, unfltrd mg/L (00600)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Biomass phyto- plank- ton, ashfree drymass mg/L (49953)	Biomass plank- ton, ash wgt mg/L (81353)	Biomass plank- ton, dry wgt mg/L (81354)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)
MAR 16...	.754	.25	.27oc	.43oc	2.4	2.9	9.2	13.7	9.7	356	366	110	270
MAR 16-16	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16-16 16...	.702	.23	.25oc	.38oc	2.3	2.6	9.6	11.5	9.5	364	373	--	--
JUN 17...	.184	.06	.081	E.187c	.79	1.2	11.0	14.5	26.0	742	768	270	850
JUN 17-17	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 17-17 17...	.184	.06	.081	.074	.83	1.3	11.3	14.4	22.0	736	758	--	--
SEP 08...	1.00	.33	.34oc	.49oc	2.1	2.7	5.8	10.6	14.7	483	497	80	88
SEP 08-08	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08-08 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	.944	.31	.31oc	.46oc	2.0	2.6	6.0	9.8	39.3	468	507	--	--

















## SAN JACINTO RIVER BASIN

08072000 Lake Houston near Sheldon, TX—Continued

300209095091201 -- LK HOUSTON SITE FC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Uranium natural water, fltrd, ug/L (22703)	Sus- pended sedi- ment concen- tration mg/L (80154)
MAR		
16...	.37	39
MAR		
16-16	--	--
MAR		
16-16	--	--
16...	--	52
JUN		
17...	.16	98
JUN		
17-17	--	--
JUN		
17-17	--	--
17...	--	145
SEP		
08...	.26	62
SEP		
08-08	--	--
SEP		
08-08	--	--
08...	--	--
08...	--	61

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  
 k -- Counts outside acceptable  
 range  
 n -- Below the LRL and above  
 the LT-MDL  
 o -- Result determined by  
 alternate method  
 t -- Below the long-term MDL

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08072050 San Jacinto River near Sheldon, TX

LOCATION.--Lat 29°52'34", long 95°05'37", Harris County, Hydrologic Unit 12040104, on left bank at U.S. Highway 90 bridge, 0.3 mi downstream from Southern Pacific Railway Co. bridge, 1.5 mi east of Sheldon, 4.6 mi downstream from Lake Houston, and 21 mi northeast of Houston.

DRAINAGE AREA.--2,879 mi<sup>2</sup>.

PERIOD OF RECORD.--Feb. 1970 to Sept. 1972 (elevations only), Oct. 1972 to current year (gage heights only). Water-quality records: Chemical data: Feb. 1970 to Sept. 1972. Biochemical data: Feb. 1970 to Sept. 1972. Pesticide data: May 1971 to Sept. 1972.

GAGE.--Water-stage recorder. Datum of gage is 0.69 ft below NGVD of 1929, adjustment of 1973. Prior to Oct. 1972, datum of gage was NGVD of 1929 (levels by Harris County Flood Control District) unadjusted for land-surface subsidence. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records good. Gage heights reflect tidal fluctuations. Eleven discharge measurements, May 19, 1989 to Oct. 19, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 27.09 ft, Oct. 19, 1994; minimum gage height, -2.52 ft, Oct. 28, 1985. A discharge measurement of 356,000 ft<sup>3</sup>/s was made near the peak of Oct. 19, 1994, gage height, 27.00 ft.

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

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 11.74 ft, Nov. 18; minimum gage height, -1.65 ft, Nov. 28.

GAGE HEIGHT, FEET  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	3.42	1.51	3.34	1.61	2.48	0.76	2.73	1.62	3.52	1.80	3.07	1.57
2	3.64	1.67	3.58	1.90	2.30	0.87	2.69	1.09	3.44	1.18	2.96	0.86
3	3.66	1.55	3.59	1.69	2.70	1.50	2.56	1.04	3.03	0.62	3.58	2.47
4	3.35	1.39	3.21	1.67	2.14	0.65	2.75	1.20	3.96	2.48	3.89	2.77
5	3.18	1.25	2.89	1.71	1.69	-0.25	2.51	-0.06	4.15	2.00	3.65	1.59
6	2.99	1.05	2.76	1.41	1.98	-0.11	1.95	-0.59	3.19	0.78	2.96	1.10
7	3.21	1.35	2.62	1.19	2.60	0.59	2.92	0.90	1.85	0.29	2.20	0.65
8	3.19	1.75	2.81	1.03	2.81	1.10	3.65	1.63	3.20	1.60	2.39	0.75
9	7.26	2.08	2.80	1.00	2.93	0.99	3.19	0.20	3.23	1.63	2.12	0.73
10	7.74	5.16	3.38	1.28	1.59	-1.43	2.08	0.06	2.67	0.86	2.67	0.34
11	5.16	2.76	3.55	1.75	2.42	0.28	2.41	0.95	5.30	2.16	2.60	0.76
12	3.66	1.40	3.38	1.25	4.29	1.83	2.42	1.14	5.43	5.12	2.32	0.26
13	3.35	1.75	2.87	0.65	4.34	1.09	2.40	0.86	7.40	5.39	2.84	0.42
14	3.39	1.13	3.49	1.90	2.14	0.90	2.16	1.11	8.73	7.36	3.35	0.75
15	3.34	2.01	3.59	1.64	3.32	1.79	2.34	1.17	8.51	6.53	2.74	0.57
16	3.59	1.97	3.43	1.90	3.21	-0.29	3.47	1.27	6.54	4.15	2.48	0.48
17	3.40	1.03	7.48	2.78	1.10	-0.54	4.92	3.00	4.15	1.98	2.48	0.56
18	2.71	1.22	11.74	7.48	1.62	0.11	4.95	3.59	2.78	1.16	2.65	1.11
19	3.17	1.50	11.37	6.56	1.48	-0.41	3.61	2.24	2.56	0.74	2.48	1.15
20	3.21	1.29	6.56	4.29	1.99	0.11	3.89	2.70	2.53	0.74	2.70	1.18
21	2.89	1.23	4.31	3.17	2.70	0.62	3.92	2.22	2.24	0.25	2.33	0.70
22	2.51	1.05	3.61	2.25	2.83	1.03	3.20	1.15	3.00	1.68	2.68	1.12
23	2.47	0.80	3.46	1.45	2.80	-0.32	2.34	0.55	2.98	1.59	3.66	1.68
24	3.07	1.22	1.91	-0.95	2.03	-0.28	2.90	1.26	2.92	1.67	3.81	2.13
25	3.24	1.23	3.36	1.25	2.82	1.11	4.73	2.90	3.20	0.89	3.47	1.57
26	2.78	0.26	3.60	1.65	3.26	1.31	4.74	3.99	1.88	0.07	3.39	1.53
27	2.86	0.43	3.62	0.57	2.99	1.48	3.99	2.39	2.68	1.20	3.73	1.79
28	2.91	0.92	0.70	-1.65	3.03	1.27	3.81	2.48	3.43	1.75	3.56	1.82
29	2.92	0.89	1.91	-0.38	2.35	0.49	3.87	2.85	3.48	2.00	2.52	0.85
30	3.47	1.42	2.65	0.85	2.40	0.67	3.23	1.75	---	---	2.25	0.57
31	3.38	1.37	---	---	2.98	1.78	3.32	1.47	---	---	2.32	0.45
MONTH	7.74	0.26	11.74	-1.65	4.34	-1.43	4.95	-0.59	8.73	0.07	3.89	0.26



08072300 Buffalo Bayou near Katy, TX

LOCATION.--Lat 29°44'35", long 95°48'24", Fort Bend County, Hydrologic Unit 12040104, on left bank at bridge on Greenbush Road, 2.5 mi downstream from confluence of Willow Fork and Cane Island Branch of Buffalo Bayou, and 3.1 mi southeast of Katy.

DRAINAGE AREA.--63.3 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1977 to current year. Water-quality records: Chemical data: June 1978 to Sept. 1981. Biochemical data: June 1978 to Sept. 1981.

GAGE.--Water-stage recorder. Datum of gage is 75.02 ft above NGVD of 1929, 1973 adjustment. Gage located at temporary site 250 ft upstream Jan. 18 to Sept. 30, 1985; all records adjusted to original site and datum. Satellite telemeter at station.

REMARKS.-- Records fair. No known regulation or diversions. Stage-discharge relation affected by seasonal vegetation during most years.

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	6.7	2.6	4.9	84	19	3.2	989	12	203	19	2.8
2	5.0	5.6	2.2	3.8	158	26	3.4	1,070	12	126	10	1.8
3	3.3	5.2	1.9	3.0	105	20	5.0	641	11	81	11	1.9
4	2.7	3.6	1.9	2.5	58	15	2.9	385	28	57	8.2	4.7
5	3.7	3.4	2.1	2.1	134	36	2.4	246	50	40	4.8	5.3
6	7.3	5.4	2.0	1.9	90	30	5.9	161	33	73	3.8	3.5
7	10	5.3	1.9	1.7	52	17	5.7	95	27	53	4.0	3.1
8	15	5.4	1.9	13	28	12	4.3	57	116	24	3.2	3.6
9	328	5.3	3.9	8.4	19	7.7	2.9	41	72	16	6.4	5.1
10	611	4.8	2.6	5.0	152	5.7	149	53	42	14	11	4.2
11	e147	4.4	2.2	4.0	770	8.4	852	360	30	24	7.6	3.1
12	e115	3.9	32	3.4	457	10	489	684	24	15	8.6	3.6
13	e72	3.2	176	3.1	220	11	291	539	195	11	17	2.9
14	60	4.4	60	2.7	252	380	139	1,370	177	8.6	9.8	26
15	53	4.5	29	4.1	214	478	69	821	61	7.9	5.3	10
16	42	4.2	16	75	108	220	37	493	38	7.4	3.1	5.6
17	34	613	8.2	869	59	96	21	326	40	7.3	2.2	4.4
18	40	812	4.9	325	37	43	13	343	29	7.9	2.0	3.4
19	24	340	3.6	131	30	24	8.5	243	21	7.8	4.0	5.8
20	15	155	3.0	64	25	16	6.3	155	17	7.0	7.2	3.3
21	18	81	2.5	40	20	73	5.2	88	20	11	18	3.5
22	14	46	2.7	27	16	128	4.3	59	42	11	27	4.1
23	19	30	6.9	28	30	48	9.7	42	157	15	27	3.0
24	18	19	3.4	155	31	24	31	33	913	11	9.7	2.6
25	81	12	2.4	886	74	15	219	26	768	8.0	5.1	4.2
26	64	8.2	2.3	393	54	9.8	537	21	633	6.6	3.1	4.2
27	38	6.0	2.3	173	29	7.4	285	19	510	12	3.6	4.0
28	22	11	4.0	93	19	6.0	165	16	390	8.5	3.1	3.9
29	14	4.8	36	97	16	5.4	89	14	307	15	5.7	3.9
30	10	3.2	14	305	---	4.7	60	14	264	18	4.8	4.3
31	8.3	---	7.6	148	---	4.2	---	13	---	31	4.1	---
TOTAL	1,897.2	2,216.5	442.0	3,872.6	3,341	1,800.3	3,515.7	9,417	5,039	938.0	259.4	141.8
MEAN	61.2	73.9	14.3	125	115	58.1	117	304	168	30.3	8.37	4.73
MAX	611	812	176	886	770	478	852	1,370	913	203	27	26
MIN	2.7	3.2	1.9	1.7	16	4.2	2.4	13	11	6.6	2.0	1.8
AC-FT	3,760	4,400	877	7,680	6,630	3,570	6,970	18,680	9,990	1,860	515	281

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2004, BY WATER YEAR (WY)

MEAN	60.2	68.7	63.0	65.7	69.0	42.1	47.6	64.8	62.0	25.1	24.4	50.2
MAX	247	377	376	224	356	186	330	304	292	136	76.7	320
(WY)	(2003)	(2003)	(1992)	(1979)	(1992)	(2001)	(1991)	(2004)	(1993)	(1981)	(1989)	(1979)
MIN	2.07	3.86	2.17	4.64	2.64	1.57	2.91	2.36	2.73	3.43	4.46	1.90
(WY)	(1988)	(2000)	(1990)	(1986)	(1988)	(1981)	(1987)	(1996)	(1990)	(1994)	(1999)	(1982)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

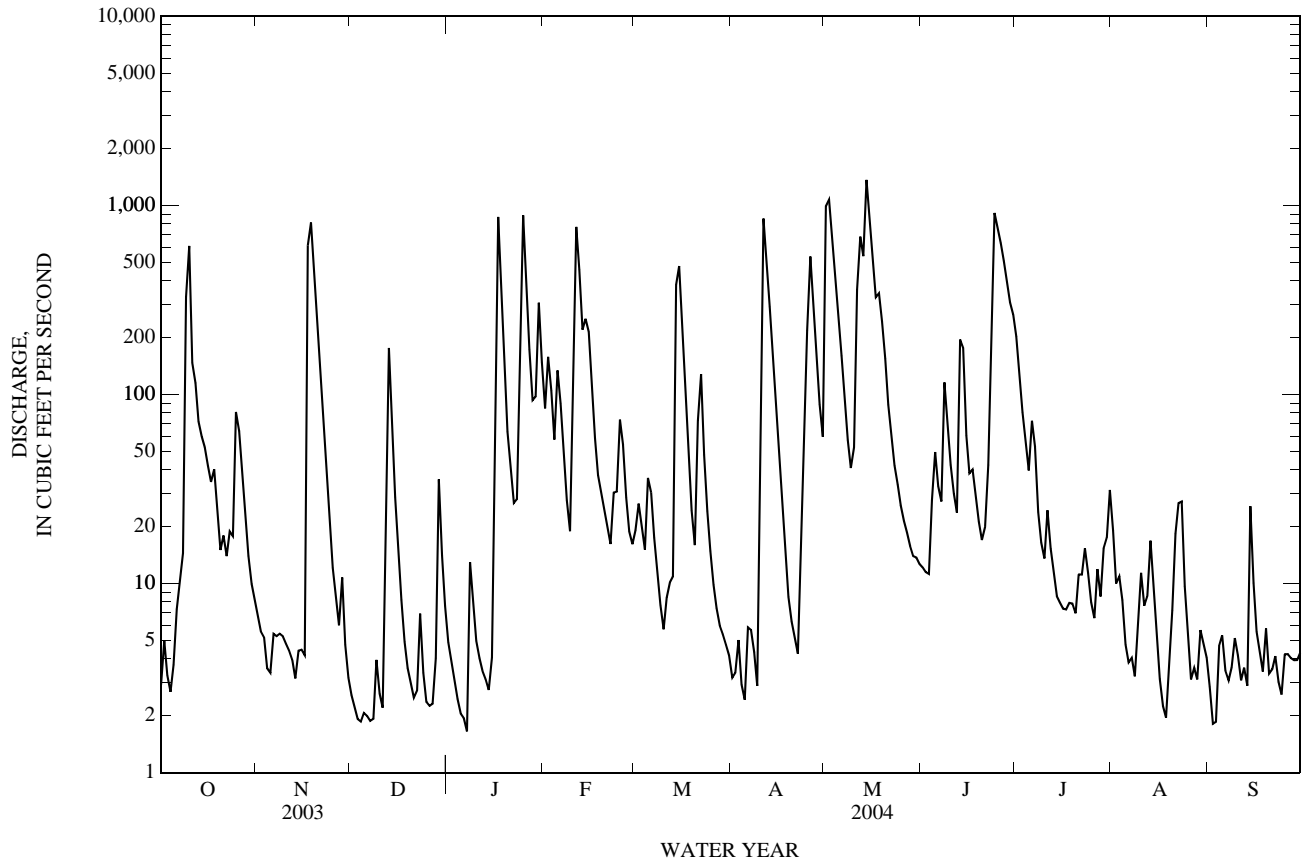
FOR 2004 WATER YEAR

WATER YEARS 1977 - 2004

ANNUAL TOTAL	13,008.36	32,880.5	
ANNUAL MEAN	35.6	89.8	53.6
HIGHEST ANNUAL MEAN			137
LOWEST ANNUAL MEAN			11.9
HIGHEST DAILY MEAN	812	Nov 18	1,370
LOWEST DAILY MEAN	0.68	Apr 12	1.7
ANNUAL SEVEN-DAY MINIMUM	0.89	Apr 11	2.0
MAXIMUM PEAK FLOW			1,980
MAXIMUM PEAK STAGE			30.70
ANNUAL RUNOFF (AC-FT)	25,800		65,220
10 PERCENT EXCEEDS	80		287
50 PERCENT EXCEEDS	8.3		15
90 PERCENT EXCEEDS	2.3		3.1

e Estimated

08072300 Buffalo Bayou near Katy, TX—Continued



## 08072500 Barker Reservoir near Addicks, TX

LOCATION.--Lat 29°46'11", long 95°38'49", Harris County, Hydrologic Unit 12040104, on left bank at dam on Buffalo Bayou, 45 ft upstream from reservoir outlet works, 1,160 ft upstream from Addicks-Howell county road, 1.1 mi south of Addicks, and 1.2 mi upstream from South Mayde Creek.

DRAINAGE AREA.--128 mi<sup>2</sup>. Prior to Aug. 1977, 134 mi<sup>2</sup>. Basin boundary change due to relocation of drainage ditches. During extreme floods, basin may receive and/or lose runoff due to basin interchange.

PERIOD OF RECORD.--Aug. 1945 to current year. Water-quality records: Chemical data: June 1978 to Sept. 1981. Biochemical data: June 1978 to Sept. 1981.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929, 1973 adjustment; unadjusted for land-surface subsidence (since 1973). Prior to Oct. 1, 1980, datum of gage was 0.33 ft below NGVD of 1929, unadjusted for land-surface subsidence. Satellite telemeter at station.

REMARKS.-- Records good. The reservoir is formed by a rolled earthfill dam 71,900 ft long. The dam was completed Feb. 3, 1946, but was used as early as the spring of 1945 for flood control. The reservoir is operated for flood protection for the city of Houston. The controlled outlet works consist of five concrete conduits, 9 x 7 ft wide, each controlled by a vertical slide gate. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	114.7
Ground elevation at ends of dam	106.0
Design flood	105.4
Crest of spillway (invert)	73.2

COOPERATION.--The capacity table, furnished by the U.S. Army Corps of Engineers, is based on extensive releveling survey made in 1974 using NGVD of 1929, 1973 adjustment as base.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 66,780 acre-ft, Mar. 6, 7, 1992, elevation, 95.89 ft; minimum, reservoir dry at times.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 29,110 acre-ft, July 1, elevation, 92.23 ft; minimum contents, 0.11 acre-ft, Nov. 4 and Mar. 11, elevation, 73.63 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	0.13	0.21	575	0.26	5,520	0.34	0.16	1,360	0.23	28,830	0.28	0.14
2	0.13	0.20	37.5	0.23	5,500	0.33	0.16	6,810	0.22	27,910	0.26	0.16
3	0.13	0.19	0.27	0.22	3,800	0.32	0.23	10,660	0.22	25,640	0.22	0.26
4	0.13	0.17	0.22	0.21	2,950	0.30	0.23	11,900	0.93	23,600	0.22	0.23
5	0.14	0.16	0.19	0.21	3,220	0.67	0.20	11,330	82.1	21,860	0.21	1.93
6	0.16	0.16	0.17	0.20	2,230	1.60	0.21	9,720	504	19,960	0.20	0.85
7	0.19	0.16	0.17	0.20	485	0.38	0.34	7,720	513	18,480	0.19	0.29
8	0.18	0.16	0.17	0.34	0.33	0.27	0.27	5,740	647	16,650	0.18	0.23
9	5.85	0.16	0.20	0.52	0.32	0.23	0.21	4,130	3,840	15,530	0.18	0.20
10	1,640	0.17	0.29	0.34	11.8	0.20	2.98	2,380	5,640	14,570	0.20	0.19
11	4,930	0.17	0.23	0.28	1,710	0.17	802	1,350	5,770	13,530	0.22	0.19
12	5,040	0.17	0.22	0.25	5,310	0.17	4,320	4,260	5,510	12,740	0.21	0.19
13	4,500	0.16	20.0	0.22	6,890	0.18	6,070	7,260	5,170	11,060	0.20	0.19
14	3,300	0.16	199	0.21	8,220	28.6	5,700	11,740	5,920	9,060	e0.20	0.19
15	1,100	0.16	124	0.22	7,850	1,570	4,790	15,580	7,160	6,890	e0.20	0.34
16	9.13	0.19	0.42	6.66	6,660	3,640	3,490	16,640	7,940	4,900	0.19	0.30
17	0.32	397	0.31	2,380	4,880	2,790	1,900	17,000	8,630	2,890	0.18	0.23
18	0.28	10,900	0.26	7,320	2,550	1,260	373	17,040	9,300	1,830	0.17	0.19
19	0.27	15,530	0.22	9,320	376	74.3	2.05	15,980	7,920	305	0.18	0.21
20	0.24	15,950	0.20	9,010	0.34	0.33	0.23	14,430	6,220	1.05	0.24	0.21
21	0.22	15,060	0.19	7,180	0.29	0.47	0.21	12,680	4,370	0.29	0.36	0.19
22	0.21	13,780	0.18	5,220	0.28	1.27	0.20	10,800	2,920	0.25	0.76	0.18
23	0.20	12,870	0.30	3,400	2.23	0.85	0.19	8,810	3,990	0.22	3.38	0.17
24	0.22	11,460	0.35	3,500	36.5	0.35	9.84	6,640	7,830	0.22	1.70	0.19
25	4.17	9,400	0.26	4,880	232	0.27	378	4,140	14,760	0.37	0.31	0.18
26	401	8,200	0.21	6,330	108	0.23	1,130	1,550	19,180	8.16	0.23	0.19
27	1,090	7,780	0.20	6,390	0.34	0.20	955	23.3	22,480	2.98	0.19	0.19
28	250	6,600	2.00	5,450	0.31	0.19	697	0.28	24,430	6.46	0.53	0.18
29	5.99	4,490	8.97	4,780	0.27	0.18	879	0.25	25,640	7.89	46.7	0.17
30	0.26	2,350	0.41	5,440	---	0.18	893	0.24	27,140	0.35	85.4	0.17
31	0.22	---	0.31	5,620	---	0.17	---	0.23	---	0.28	0.22	---
MEAN	719	4,490	31.4	2,780	2,360	302	1,080	7,670	7,780	8,910	4.64	0.28
MAX	5,040	15,950	575	9,320	8,220	3,640	6,070	17,040	27,140	28,830	85.4	1.93
MIN	0.13	0.16	0.17	0.20	0.27	0.17	0.16	0.23	0.22	0.22	0.17	0.14
CAL YR	2003	MEAN 560	MAX 15,950	MIN 0.12								
WTR YR	2004	MEAN 3,010	MAX 28,830	MIN 0.13								

e Estimated



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08072730 Bear Creek near Barker, TX

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

DRAINAGE AREA.--21.5 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1977 to current year. Water-quality records: Chemical data: June 1978 to Sept. 1981. Biochemical data: June 1978 to Sept. 1981.

REVISED RECORDS.--WDR TX-88-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 100.00 ft above NGVD of 1929. From Mar. 1, 1984 to Mar. 12, 1985, gage located at temporary site 1,100 ft downstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. No known regulation. Channel was rectified in 1981 and 1987 water years. Considerable diversions and return of irrigation water from area 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	1.3	6.5	1.6	2.0	63	7.5	1.5	735	4.0	180	3.2	1.1
2	1.3	4.0	1.5	2.0	139	6.8	1.5	709	3.7	111	2.0	1.1
3	1.2	3.7	1.4	1.9	66	6.7	1.8	459	3.6	64	1.6	2.3
4	1.3	5.1	1.3	1.7	36	5.4	1.7	286	4.3	33	1.4	5.4
5	1.3	5.7	1.3	1.6	84	24	1.9	161	14	17	1.5	7.4
6	2.1	4.2	1.2	1.2	69	9.1	6.5	105	4.3	11	1.6	2.2
7	2.8	4.1	1.2	1.3	33	5.4	5.8	64	3.9	7.2	1.9	1.9
8	3.0	3.4	1.4	12	15	3.4	2.3	31	358	5.6	2.2	1.3
9	302	3.3	5.5	3.6	11	2.3	1.9	15	208	4.3	1.8	1.1
10	252	3.2	3.5	1.9	93	1.9	414	18	75	3.7	8.1	0.97
11	129	3.8	2.1	1.8	231	1.7	672	336	36	3.7	4.8	0.96
12	66	3.1	46	1.8	150	1.5	356	621	18	3.4	1.8	1.1
13	32	3.4	108	1.8	101	1.6	178	550	123	3.0	1.5	1.3
14	20	2.4	23	1.6	112	186	71	1,130	264	2.9	1.3	65
15	11	3.5	10	2.1	80	119	27	645	85	2.6	1.4	29
16	7.1	3.9	5.7	52	43	47	10	432	50	2.6	1.6	1.9
17	5.6	625	3.1	352	21	16	5.1	277	148	2.8	1.6	1.3
18	4.0	411	2.4	168	11	6.6	2.9	242	73	2.8	1.7	0.99
19	3.8	166	2.1	99	6.5	3.6	2.6	207	66	2.7	2.7	1.0
20	3.0	98	1.8	48	4.4	2.3	2.3	128	25	2.7	4.0	1.0
21	3.8	62	1.9	22	3.1	7.3	2.2	69	13	2.8	77	0.92
22	5.6	35	2.0	13	3.2	3.0	2.4	39	69	3.8	68	0.96
23	7.4	20	4.8	8.6	20	2.2	2.4	23	173	3.3	30	0.97
24	7.5	14	2.4	95	9.9	1.9	45	16	558	2.8	6.5	0.94
25	141	11	1.7	363	30	1.8	89	11	653	60	2.6	0.95
26	100	6.0	1.7	171	18	1.7	112	7.4	390	42	1.6	1.4
27	37	4.0	1.8	105	8.1	1.5	43	5.4	380	4.6	1.3	1.2
28	20	3.1	2.7	56	4.4	1.7	14	5.0	423	42	2.9	0.97
29	13	2.6	21	77	4.6	1.7	5.9	4.4	319	15	2.8	0.88
30	11	2.1	3.7	202	---	1.6	3.8	4.2	235	4.0	1.6	0.98
31	7.0	---	2.3	103	---	1.4	---	4.2	---	3.0	1.2	---
TOTAL	1,203.1	1,523.1	270.1	1,972.9	1,470.2	483.6	2,085.5	7,339.6	4,779.8	649.3	243.2	138.49
MEAN	38.8	50.8	8.71	63.6	50.7	15.6	69.5	237	159	20.9	7.85	4.62
MAX	302	625	108	363	231	186	672	1,130	653	180	77	65
MIN	1.2	2.1	1.2	1.2	3.1	1.4	1.5	4.2	3.6	2.6	1.2	0.88
AC-FT	2,390	3,020	536	3,910	2,920	959	4,140	14,560	9,480	1,290	482	275

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2004, BY WATER YEAR (WY)

MEAN	34.3	34.4	24.4	24.2	24.2	17.3	18.8	32.1	32.8	10.1	13.2	22.9
MAX	257	250	131	91.0	120	106	119	237	159	45.3	65.2	128
(WY)	(1999)	(1999)	(1992)	(1979)	(1992)	(2001)	(1991)	(2004)	(2004)	(1983)	(2002)	(1979)
MIN	0.01	0.03	0.10	0.75	0.61	0.26	0.03	0.51	0.89	0.64	0.70	0.10
(WY)	(1989)	(1989)	(1990)	(1986)	(1988)	(1982)	(1987)	(1996)	(1998)	(1998)	(2000)	(1990)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

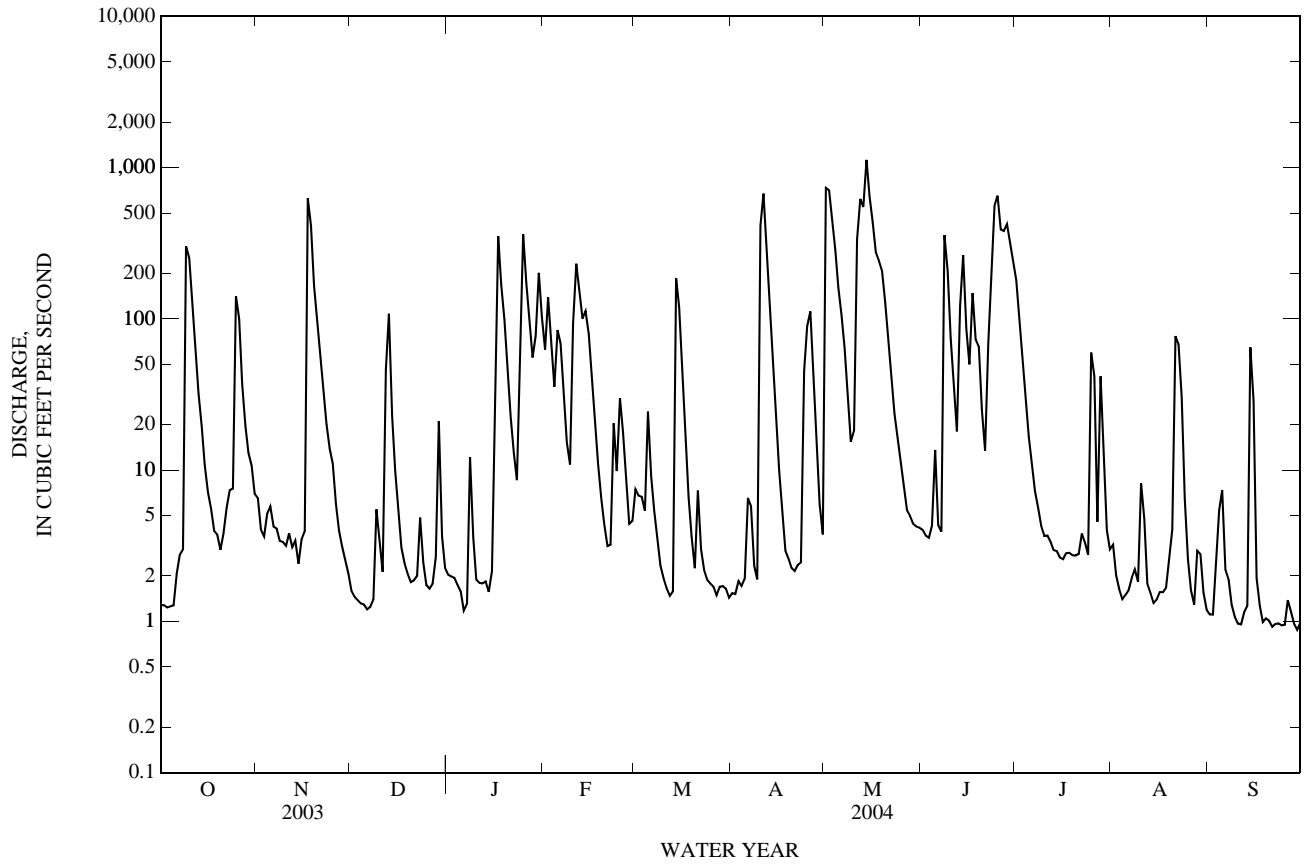
FOR 2004 WATER YEAR

WATER YEARS 1977 - 2004

ANNUAL TOTAL	7,273.19	22,158.89	
ANNUAL MEAN	19.9	60.5	24.1
HIGHEST ANNUAL MEAN			60.5
LOWEST ANNUAL MEAN			4.45
HIGHEST DAILY MEAN	625	Nov 17	1,130
LOWEST DAILY MEAN	0.02	Jun 26	0.88
ANNUAL SEVEN-DAY MINIMUM	0.04	Jun 24	0.96
MAXIMUM PEAK FLOW			3,620
MAXIMUM PEAK STAGE			10.66
ANNUAL RUNOFF (AC-FT)	14,430	43,950	17,470
10 PERCENT EXCEEDS	51	179	56
50 PERCENT EXCEEDS	3.1	4.8	2.0
90 PERCENT EXCEEDS	0.67	1.4	0.08

bb Occurred prior to channel rectification.

08072730 Bear Creek near Barker, TX—Continued



08072760 Langham Creek at West Little York Road near Addicks, TX

LOCATION.--Lat 29°52'01", long 95°38'47", Harris County, Hydrologic Unit 12040104, on left bank at bridge on West Little York Road, 2.1 mi downstream from Dinners Creek, and 5.7 mi north of Addicks.

DRAINAGE AREA.--24.6 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1977 to Sept. 1980, Dec. 2001 to current year. Oct. 1980 to Sept. 1982 (peak discharges greater than base discharge and annual maximum), Oct. 1982 to Sept. 1989 (annual maximum), Oct. 1989 to Nov. 2001 (peak discharges greater than base discharge).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 90.00 ft above NGVD of 1929, 1973 adjustment. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records poor. No known regulation or diversion. Major channel rectification completed in the summer of 1998 and again in the summer of 2000.

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	4.5	7.7	4.1	4.9	31	18	2.5	443	3.5	152	4.1	4.3
2	5.5	7.2	3.6	3.6	96	7.5	2.5	247	3.7	88	4.1	4.3
3	6.1	5.7	3.4	2.9	35	6.8	3.2	185	3.6	48	3.9	6.3
4	9.2	4.8	3.0	2.4	22	8.0	3.2	102	6.6	25	3.9	9.3
5	9.6	4.2	2.6	2.4	58	31	3.2	44	8.2	14	4.0	6.5
6	37	4.0	3.0	2.4	47	10	16	25	3.7	17	3.9	4.7
7	9.8	3.5	2.8	2.2	25	6.3	6.9	16	4.2	11	3.9	4.6
8	6.5	4.1	2.7	37	14	4.8	3.4	12	314	6.0	3.9	4.6
9	505	4.6	24	13	8.9	4.0	2.8	8.5	112	4.5	7.4	4.2
10	307	4.7	7.3	5.2	85	3.6	480	14	24	4.1	11	4.5
11	133	4.1	3.5	3.8	159	3.5	589	127	8.9	3.5	5.2	4.6
12	56	4.4	70	3.2	81	3.0	191	210	5.6	3.0	4.1	4.6
13	33	4.0	137	2.6	51	3.7	105	271	39	2.8	4.0	4.6
14	20	4.3	43	2.3	65	132	50	593	68	2.5	4.0	230
15	12	11	23	4.2	44	53	27	262	26	2.6	4.1	76
16	8.4	8.5	13	149	29	18	17	189	33	2.9	4.2	14
17	7.9	970	7.7	485	20	8.7	10	115	44	3.1	4.1	6.4
18	5.3	529	5.4	99	13	5.4	6.2	99	74	3.2	4.0	4.4
19	4.8	211	4.8	54	9.7	4.2	4.5	63	168	3.2	6.0	4.0
20	4.4	125	4.0	34	7.7	3.6	3.6	34	48	3.5	5.0	3.9
21	4.8	66	3.6	21	6.1	14	3.7	20	17	3.4	80	3.8
22	5.2	44	3.6	13	8.3	4.6	4.0	15	58	3.5	51	4.4
23	4.8	34	20	9.2	26	3.0	4.3	10	118	4.1	20	3.9
24	5.0	26	5.3	88	13	2.8	4.5	8.5	708	6.1	6.9	3.6
25	145	17	3.0	331	28	2.7	43	6.3	671	70	5.3	5.0
26	115	12	2.5	100	17	3.1	55	4.8	311	22	4.7	4.4
27	53	9.1	2.5	52	9.6	3.2	24	4.0	309	4.5	4.5	4.3
28	32	5.8	7.5	31	7.2	3.3	10	3.6	499	18	7.4	3.7
29	20	5.0	40	56	15	3.9	6.0	3.4	330	6.8	6.3	3.9
30	13	4.7	11	143	---	3.1	5.3	3.2	220	4.4	4.8	3.9
31	9.7	---	6.6	48	---	2.7	---	3.4	---	4.1	4.3	---
TOTAL	1,592.5	2,145.4	473.5	1,805.3	1,031.5	381.5	1,727.3	3,141.7	4,239.0	546.8	290.0	446.7
MEAN	51.4	71.5	15.3	58.2	35.6	12.3	57.6	101	141	17.6	9.35	14.9
MAX	505	970	137	485	159	132	589	593	708	152	80	230
MIN	4.4	3.5	2.5	2.2	6.1	2.7	2.5	3.2	3.5	2.5	3.9	3.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2004h, BY WATER YEAR (WY)

MEAN	40.9	61.4	25.0	49.1	28.9	9.93	24.2	27.6	40.7	17.7	18.6	48.2
MAX	140	145	42.5	81.2	52.3	15.2	57.6	101	141	28.9	80.2	140
(WY)	(2003)	(2003)	(2003)	(1979)	(1979)	(1980)	(2004)	(2004)	(2004)	(2002)	(2002)	(1979)
MIN	0.99	1.20	1.52	4.87	3.89	1.50	0.03	0.64	3.07	4.60	1.52	5.09
(WY)	(1978)	(1978)	(1978)	(2002)	(2002)	(1978)	(1978)	(1978)	(1979)	(1980)	(1980)	(1977)

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

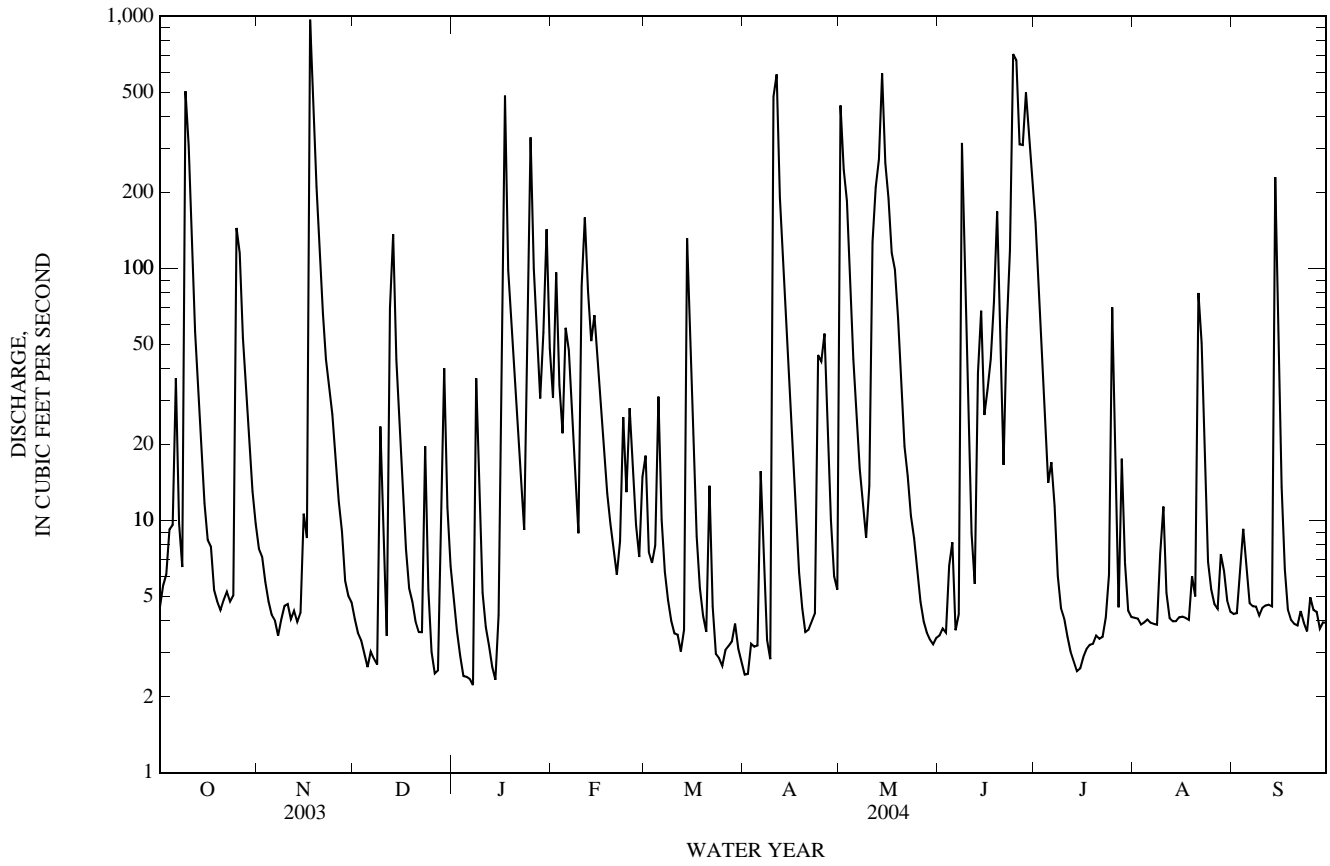
## WATER YEARS 1977 - 2004h

ANNUAL TOTAL	10,288.14		17,821.2			
ANNUAL MEAN	28.2		48.7		33.8	
HIGHEST ANNUAL MEAN					48.7	
LOWEST ANNUAL MEAN					17.7	
HIGHEST DAILY MEAN	970	Nov 17	970	Nov 17	1,160	Oct 29, 2002
LOWEST DAILY MEAN	0.95	Sep 19	2.2	Jan 7	0.00	Jul 3, 1977
ANNUAL SEVEN-DAY MINIMUM	1.3	Apr 8	2.9	Jul 12	0.00	Aug 30, 1977
MAXIMUM PEAK FLOW			3,720	Apr 10	6,220	Oct 28, 2002
MAXIMUM PEAK STAGE			20.25	Apr 10	bb24.42	Sep 19, 1979
10 PERCENT EXCEEDS	63		128		81	
50 PERCENT EXCEEDS	5.6		7.2		4.1	
90 PERCENT EXCEEDS	2.5		3.2		0.15	

h See Period of Record paragraph.

bb Occurred prior to channel rectification.

08072760 Langham Creek at West Little York Road near Addicks, TX—Continued



## 08073000 Addicks Reservoir near Addicks, TX

LOCATION.--Lat 29°47'28", long 95°37'24", Harris County, Hydrologic Unit 12040104, on left bank at dam on South Mayde Creek, 65 ft upstream from reservoir outlet works, 2,700 ft upstream from U.S. Highway 90 and Interstate Highway 10, 1.2 mi east of Addicks, and 1.4 mi upstream from mouth.

DRAINAGE AREA.--136 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1948 to current year. Water-quality records: Chemical data: June 1978 to Sept. 1981. Biochemical data: June 1978 to Sept. 1981.

REVISED RECORDS.--WDR TX-77-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929, 1973 adjustment; unadjusted for land-surface subsidence (since 1973). Prior to Oct. 1, 1980, datum of gage was unadjusted for land-surface subsidence that occurred prior to that date. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily contents, which are fair. The reservoir is formed by a rolled earthfill dam 61,166 ft long. The dam was completed in Dec. 1948. The reservoir is operated for flood protection for the city of Houston. The outlet works consist of five concrete conduits 8 x 6 ft wide, each controlled by a vertical slide gate. Runoff in excess of maximum design capacity will be discharged around both ends of dam. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	122.7
Design flood	112.7
Ground elevation at ends of dam	112.0
Crest of spillway (invert)	71.1

COOPERATION.--The capacity table, furnished by the U.S. Army Corps of Engineers, was based on extensive releveling survey in 1974, using NGVD of 1929, 1973 adjustment.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 57,950 acre-ft, Mar. 9, 1992, elevation, 100.58 ft; minimum, reservoir dry at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Dec. 1935 reached a stage of 89.9 ft, former datum, at bridge on U.S. Highway 90, 2,700 ft downstream from gage, from information by the U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 29,130 acre-ft, July 1, elevation, 96.51 ft; minimum contents, 0.15 acre-ft, Oct. 1, elevation, 71.34 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	0.39	0.61	1,640	0.71	6,080	6.3	0.57	607	0.68	28,860	0.72	e0.41
2	0.43	0.59	264	0.63	6,030	1.9	0.56	5,790	0.66	28,200	0.56	e0.45
3	0.42	0.55	0.96	0.58	4,930	1.2	0.60	8,270	0.66	26,700	0.49	0.74
4	0.49	0.52	0.71	0.56	4,310	1.2	0.61	8,360	8.8	25,560	0.49	0.71
5	0.44	0.51	0.59	0.54	4,420	17	0.61	7,480	95	24,030	0.49	1.7
6	1.1	0.46	0.53	0.49	3,140	8.1	1.1	6,080	170	22,180	0.49	0.65
7	0.92	0.45	0.55	0.48	1,150	1.2	1.9	4,670	174	19,780	0.50	0.60
8	0.51	0.45	0.57	7.2	37	0.94	0.91	3,380	468	18,390	0.49	0.53
9	49	0.46	1.3	7.1	1.1	0.79	0.71	2,570	3,270	17,480	0.50	0.49
10	3,760	0.49	2.2	0.95	51	0.67	20	1,740	4,820	16,600	1.0	0.48
11	6,160	0.48	0.81	0.69	2,090	0.62	3,980	1,310	4,880	16,360	0.94	0.48
12	5,090	0.48	0.70	0.64	4,980	0.59	8,590	3,080	4,580	13,910	0.69	0.51
13	3,570	0.46	388	0.59	5,800	0.58	9,040	5,140	4,240	11,880	0.56	0.52
14	1,910	0.44	1,000	0.55	6,460	230	7,760	8,960	4,580	9,730	0.52	4.5
15	783	0.46	686	0.55	6,390	3,000	6,220	12,900	4,840	7,510	0.54	121
16	88	0.81	13	20	5,650	4,200	4,440	13,580	5,220	5,060	0.56	149
17	0.81	757	1.0	4,260	4,620	3,010	2,230	13,720	5,780	2,680	0.50	11
18	0.67	14,380	0.80	8,890	3,080	1,360	331	13,650	6,280	1,490	0.50	0.62
19	0.64	18,110	0.62	9,760	1,210	105	7.4	13,090	6,130	218	0.59	0.75
20	0.60	18,220	0.57	8,680	45	0.80	1.2	11,770	5,880	0.54	0.94	0.55
21	0.50	16,850	0.53	7,120	0.84	19	1.0	10,340	5,180	0.44	52	0.50
22	0.49	15,040	0.52	5,300	0.78	24	0.97	8,840	3,950	0.49	182	0.52
23	0.49	14,100	1.4	3,920	21	1.1	0.94	7,340	4,990	0.61	251	0.52
24	0.53	12,390	1.1	4,150	67	0.82	61	5,840	7,490	17	91	0.52
25	49	10,570	0.67	6,300	245	0.71	490	4,300	13,780	37	1.1	0.51
26	1,020	9,560	0.55	7,760	182	0.64	1,010	2,400	19,060	428	0.92	0.63
27	1,580	8,990	0.52	6,470	1.3	0.63	516	544	21,850	231	0.81	0.55
28	492	7,210	20	4,980	1.2	0.64	463	0.98	23,760	52	6.0	0.49
29	32	5,380	95	4,380	1.3	0.68	532	0.78	25,900	3.4	119	0.47
30	0.98	3,570	1.5	5,390	---	0.81	365	0.71	27,520	0.86	135	0.47
31	0.71	---	0.89	6,110	---	0.60	---	0.67	---	0.63	e0.42	---
MEAN	793	5,170	133	3,020	2,450	387	1,540	5,990	7,160	9,590	27	10
MAX	6,160	18,220	1,640	9,760	6,460	4,200	9,040	13,720	27,520	28,860	251	149
MIN	0.39	0.44	0.52	0.48	0.78	0.58	0.56	0.67	0.66	0.44	0.42	0.41

CAL YR 2003 MEAN 689 MAX 18,220 MIN 0.38  
WTR YR 2004 MEAN 3,020 MAX 28,860 MIN 0.39

e Estimated

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08073500 Buffalo Bayou near Addicks, TX

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

DRAINAGE AREA.--293 mi<sup>2</sup>.

PERIOD OF RECORD.--Aug. 1945 to current year. Water-quality records: Chemical data: Oct. 1962 to Mar. 1963, Aug. 1970 to Sept. 1982. Biochemical data: Aug. 1970 to Sept. 1982. Pesticide data: Aug. 1970 to Sept. 1982.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1.40 ft below NGVD of 1929; records unadjusted for land-surface subsidence. Prior to Feb. 2, 1948, water-stage recorder at bridge on natural channel 1,200 ft to right at same datum. Feb. 2 to May 21, 1948, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in Aug. 1945, at least 10% of contributing drainage area has been regulated. No known diversions. Extreme low flow is sustained by drainage from irrigated lands, and from minor wastewater effluent. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1896, 85.6 ft in Dec. 1935, adjusted to former site from floodmark 0.5 mi downstream, on basis of slope of flood of Aug. 29, 1945, 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	93	1,300	99	536	287	65	908	72	743	149	64
2	45	84	750	86	922	218	65	585	64	1,710	128	52
3	45	75	129	78	1,600	174	87	1,340	75	2,030	114	98
4	51	68	84	73	587	163	92	1,260	68	1,980	102	87
5	47	62	66	69	526	288	79	1,860	33	1,910	95	240
6	106	55	55	61	1,630	315	166	1,860	21	1,880	88	168
7	112	51	53	56	1,590	194	225	1,790	279	1,740	85	93
8	69	52	57	223	500	134	125	1,420	376	1,750	78	61
9	514	53	105	273	184	108	87	1,130	189	1,360	76	51
10	414	56	185	147	345	87	342	1,090	193	1,540	119	46
11	835	55	97	99	615	78	511	792	468	1,230	124	44
12	1,580	55	205	86	849	75	389	473	449	1,700	98	44
13	1,500	50	659	72	410	80	1,360	631	728	1,850	77	45
14	1,450	48	718	64	533	456	1,760	882	881	1,920	78	90
15	1,410	63	922	72	1,300	223	1,700	1,340	356	1,930	75	340
16	618	103	384	210	1,460	799	1,710	1,550	79	1,850	65	349
17	145	1,680	158	1,020	1,710	1,590	1,670	1,140	279	1,400	55	150
18	110	1,620	116	282	1,700	1,530	1,190	1,190	731	787	51	61
19	102	1,090	86	683	1,500	853	201	1,700	1,280	1,030	97	74
20	91	1,590	76	1,610	445	187	113	1,800	1,220	132	138	56
21	74	1,780	68	1,870	147	301	93	1,760	1,480	72	397	47
22	68	1,720	66	1,840	196	379	83	1,750	1,020	90	504	45
23	63	1,070	184	1,060	421	248	81	1,720	496	106	537	46
24	72	1,680	179	176	177	178	184	1,740	957	268	421	48
25	200	1,740	102	799	122	133	149	1,770	715	409	135	52
26	340	850	75	1,480	521	108	664	1,760	455	398	87	62
27	770	739	67	1,810	202	100	1,110	1,100	254	580	59	50
28	1,140	1,620	83	1,600	149	96	712	153	440	633	111	46
29	405	1,730	371	699	164	93	399	96	572	422	49	42
30	165	1,650	252	492	---	106	409	80	429	189	344	41
31	113	---	138	882	---	85	---	73	---	145	112	---
TOTAL	12,697	21,582	7,790	18,071	21,041	9,666	15,821	36,743	14,659	33,784	4,648	2,692
MEAN	410	719	251	583	726	312	527	1,185	489	1,090	150	89.7
MAX	1,580	1,780	1,300	1,870	1,710	1,590	1,760	1,860	1,480	2,030	537	349
MIN	43	48	53	56	122	75	65	73	21	72	49	41
AC-FT	25,180	42,810	15,450	35,840	41,730	19,170	31,380	72,880	29,080	67,010	9,220	5,340

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

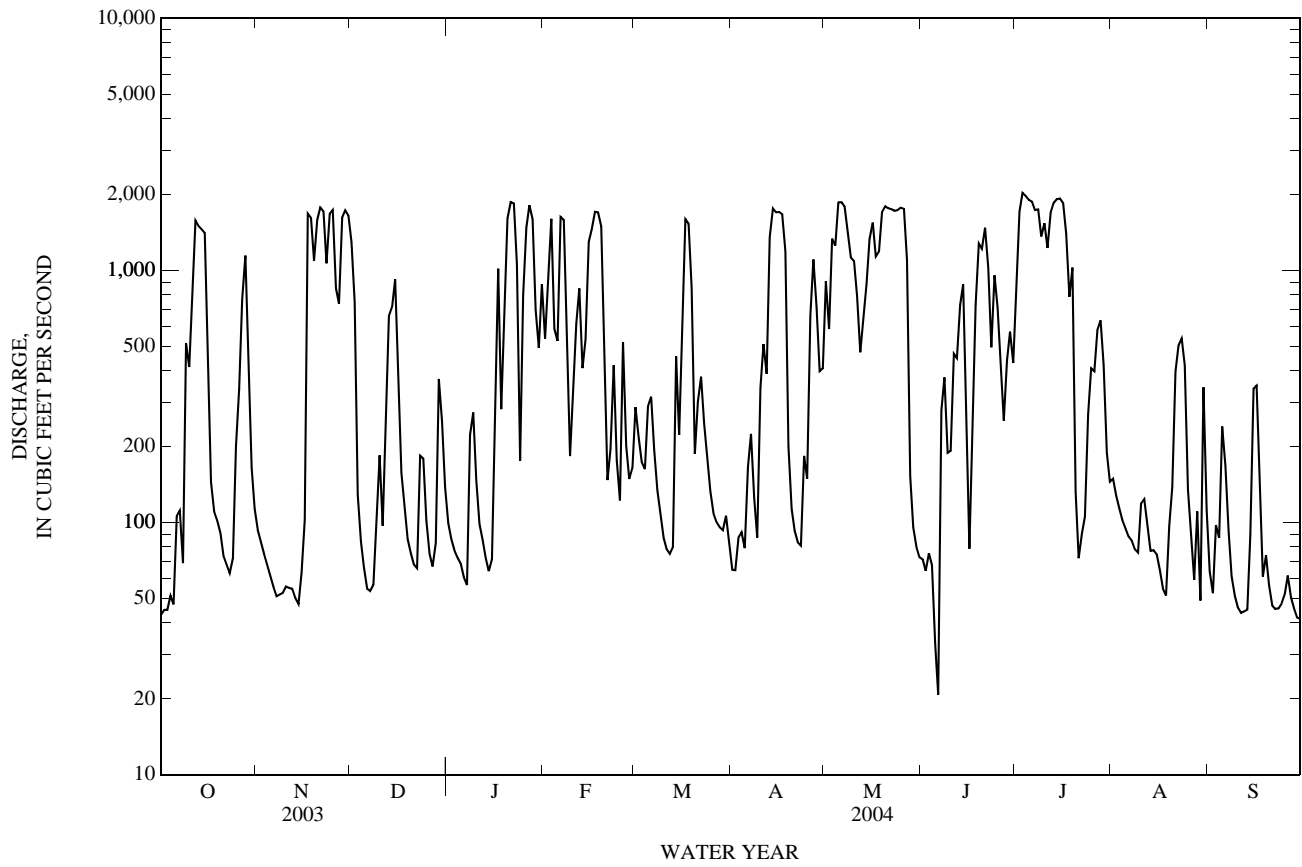
MEAN	249	305	285	274	312	208	231	299	308	201	133	232
MAX	1,177	1,807	1,113	1,107	1,508	1,563	1,438	1,599	1,135	1,090	664	1,186
(WY)	(1999)	(2003)	(1999)	(1992)	(1992)	(1992)	(1992)	(1968)	(1992)	(2004)	(1983)	(1981)
MIN	2.05	0.48	1.35	2.00	3.84	0.91	2.63	4.54	4.42	1.78	1.61	12.1
(WY)	(1957)	(1956)	(1949)	(1957)	(1951)	(1956)	(1955)	(1951)	(1954)	(1956)	(1948)	(1948)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1945 - 2004
ANNUAL TOTAL	100,815	199,194	
ANNUAL MEAN	276	544	253
HIGHEST ANNUAL MEAN			784
LOWEST ANNUAL MEAN			23.3
HIGHEST DAILY MEAN	1,780	Nov 21	2,030
LOWEST DAILY MEAN	13	Jan 9	21
ANNUAL SEVEN-DAY MINIMUM	25	Apr 24	49
MAXIMUM PEAK FLOW			4,220
MAXIMUM PEAK STAGE			71.29
ANNUAL RUNOFF (AC-FT)	200,000	395,100	183,100
10 PERCENT EXCEEDS	796	1,680	821
50 PERCENT EXCEEDS	102	202	54
90 PERCENT EXCEEDS	48	56	6.4



08073500 Buffalo Bayou near Addicks, TX—Continued



08073600 Buffalo Bayou at West Belt Drive, Houston, TX

LOCATION.--Lat 29°45'43", long 95°33'27", Harris County, Hydrologic Unit 12040104, at downstream side of bridge on West Belt Drive in west Houston, 100 ft downstream from Rummel Creek, 3.5 mi downstream from Buffalo Bayou near Addicks (station 08073500), and 3.7 mi upstream from Buffalo Bayou at Piney Point (station 08073700).

DRAINAGE AREA.--307 mi<sup>2</sup>.unadjusted for basin boundary changes.

PERIOD OF RECORD.--Sept. 1971 to current year. Water-quality records: Chemical data: June 1978 to Sept. 1998. Biochemical data: June 1978 to Aug. 1986. Pesticide data: June 1978 to Mar. 1983. Sediment data: May 1979 to Aug. 1986.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 0.67 ft below NGVD of 1929. Satellite telemeter at station.

REMARKS.-- Records good. Since installation of gage in Sept. 1971, at least 10% of contributing drainage area has been regulated. Stage-discharge relation is affected by seasonal vegetal growth during most years. No known diversions. Low flow is mostly sustained by wastewater effluent.

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	100	135	1,630	129	655	421	88	1,620	88	761	157	112
2	104	123	983	109	838	281	87	751	82	1,670	126	90
3	104	110	204	99	1,790	225	103	1,340	144	2,050	109	143
4	107	108	133	94	790	213	106	1,440	155	2,030	98	158
5	103	100	109	95	522	388	96	2,010	83	1,970	92	342
6	149	95	98	88	1,690	409	307	2,090	39	1,950	91	262
7	177	90	93	84	1,770	255	275	2,070	306	1,860	86	149
8	124	90	86	339	710	181	151	1,820	781	1,790	81	101
9	904	91	190	349	217	143	104	1,400	294	1,510	81	89
10	789	93	234	193	549	122	452	1,330	191	1,590	118	81
11	733	90	142	131	1,130	112	1,110	1,450	540	1,360	131	76
12	1,630	86	314	114	898	107	423	637	519	1,680	116	79
13	1,570	87	871	102	560	108	1,360	1,130	759	1,860	91	81
14	1,500	84	770	96	e530	786	1,890	1,530	1,070	1,920	88	157
15	1,490	151	954	108	e1,230	335	1,840	1,540	496	1,960	88	420
16	781	205	541	231	e1,410	709	1,820	1,970	284	1,940	83	447
17	191	2,450	205	1,680	e1,540	1,700	1,830	1,560	672	1,600	77	237
18	166	3,410	157	362	1,840	1,650	1,430	1,480	757	822	73	102
19	153	1,170	123	614	1,730	1,080	264	1,760	1,500	1,220	108	112
20	140	1,670	109	1,620	615	219	146	1,950	1,340	209	169	93
21	122	1,890	102	1,950	178	343	108	1,940	1,500	109	672	78
22	112	1,950	100	1,960	335	445	103	1,890	1,440	174	609	83
23	108	1,230	254	1,370	595	293	98	1,850	1,160	153	625	78
24	115	1,760	228	332	278	203	329	1,850	1,520	331	546	77
25	341	2,000	138	1,120	152	150	259	1,900	1,030	693	205	139
26	433	1,110	105	1,490	593	119	594	1,900	625	508	136	107
27	692	749	95	1,890	280	107	1,230	1,370	363	658	107	84
28	1,290	1,750	143	1,830	194	103	800	208	482	708	325	76
29	492	1,970	429	931	271	102	444	94	673	536	127	70
30	207	1,910	333	484	---	110	475	77	597	239	407	69
31	156	---	184	935	---	94	---	78	---	177	212	---
TOTAL	15,083	26,757	10,057	20,929	23,890	11,513	18,322	44,035	19,490	36,038	6,034	4,192
MEAN	487	892	324	675	824	371	611	1,420	650	1,163	195	140
MAX	1,630	3,410	1,630	1,960	1,840	1,700	1,890	2,090	1,520	2,050	672	447
MIN	100	84	86	84	152	94	87	77	39	109	73	69
AC-FT	29,920	53,070	19,950	41,510	47,390	22,840	36,340	87,340	38,660	71,480	11,970	8,310

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2004, BY WATER YEAR (WY)

MEAN	342	441	408	389	397	328	335	383	436	283	202	346
MAX	1,288	1,829	1,214	1,133	1,619	1,701	1,639	1,420	1,129	1,163	784	1,278
(WY)	(1999)	(2003)	(1999)	(1992)	(1992)	(1992)	(1992)	(2004)	(1973)	(2004)	(1983)	(1981)
MIN	58.5	38.4	62.4	84.8	36.2	39.6	46.0	54.5	60.3	63.1	65.4	59.4
(WY)	(1979)	(1972)	(1990)	(1986)	(1976)	(1976)	(1978)	(1996)	(1998)	(1996)	(1999)	(1999)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

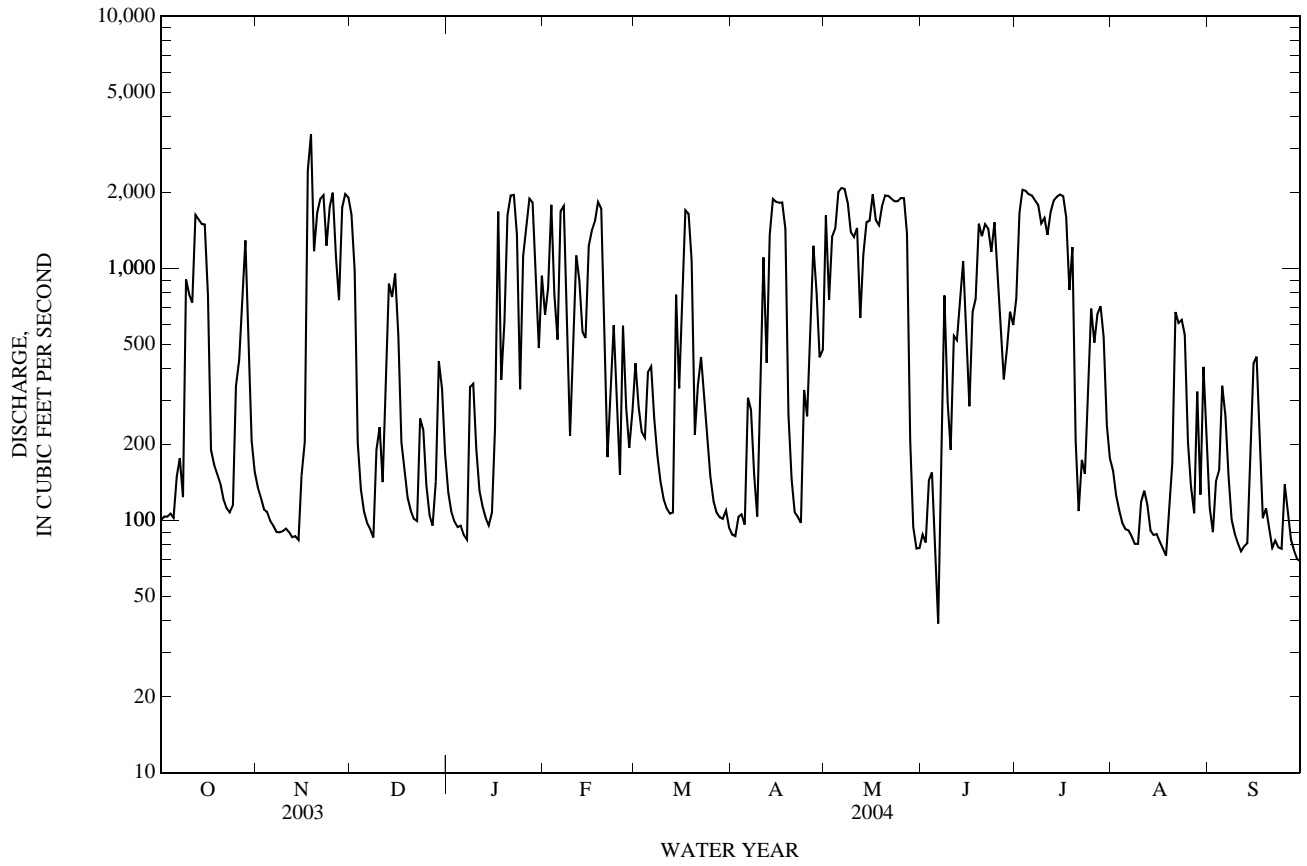
FOR 2004 WATER YEAR

WATER YEARS 1971 - 2004

ANNUAL TOTAL	127,378	236,340	
ANNUAL MEAN	349	646	357
HIGHEST ANNUAL MEAN			854
LOWEST ANNUAL MEAN			142
HIGHEST DAILY MEAN	3,410	Nov 18	3,820
LOWEST DAILY MEAN	51	Apr 27	16
ANNUAL SEVEN-DAY MINIMUM	66	May 25	19
MAXIMUM PEAK FLOW			7,290
MAXIMUM PEAK STAGE			68.30
ANNUAL RUNOFF (AC-FT)	252,700	468,800	258,500
10 PERCENT EXCEEDS	975	1,820	1,080
50 PERCENT EXCEEDS	146	306	112
90 PERCENT EXCEEDS	72	90	47

e Estimated

08073600 Buffalo Bayou at West Belt Drive, Houston, TX—Continued



## 08073700 Buffalo Bayou at Piney Point, TX

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

DRAINAGE AREA.--317 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1963 to Sept. 1976 and Oct. 1984 to current. Oct. 1976 to Sept. 1984 (gage heights only). Water-quality records: Chemical data: Oct. 1970 to Sept. 1978. Biochemical data: Oct. 1970 to Sept. 1978. Pesticide data: Oct. 1970 to Sept. 1978.

GAGE.--Water-stage recorder. Datum of gage is 1.35 ft below NGVD of 1929. Satellite telemeter at station.

REMARKS.-- Records good. Since installation of gage in Oct. 1963, at least 10% of contributing drainage area has been regulated. No known diversions. Low flow is mostly sustained by wastewater effluent.

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	82	128	1,700	141	692	411	95	1,700	114	708	153	119
2	81	116	935	125	709	266	92	807	108	1,660	131	100
3	80	108	222	115	1,870	208	111	1,150	154	2,120	119	135
4	85	104	133	110	895	201	115	1,370	195	2,120	108	177
5	81	98	112	111	448	349	105	1,910	142	2,060	103	291
6	116	93	99	100	1,660	377	345	2,010	65	2,040	102	230
7	160	85	97	96	1,830	235	254	1,970	261	1,990	97	153
8	112	85	97	345	796	170	155	1,740	878	1,880	92	113
9	881	86	212	341	221	140	115	1,230	331	1,620	92	99
10	982	90	224	196	537	122	358	1,200	170	1,590	120	93
11	569	93	145	141	1,340	113	1,370	1,560	484	1,420	139	87
12	1,490	e94	285	126	807	107	367	606	466	1,670	128	90
13	1,440	e91	944	115	591	110	1,200	1,090	634	1,940	106	91
14	1,370	e89	717	105	536	822	1,850	1,600	1,120	2,010	104	146
15	1,380	157	870	118	1,290	357	1,800	1,370	562	2,050	105	342
16	798	278	585	172	1,510	561	1,760	1,870	422	2,050	98	386
17	177	1,910	198	1,920	1,640	1,650	1,780	1,470	835	1,750	94	235
18	143	4,180	161	383	1,860	1,600	1,450	1,320	641	778	90	120
19	134	1,180	130	519	1,790	1,120	304	1,790	1,570	1,240	109	122
20	123	1,690	115	1,610	682	210	144	2,000	1,340	245	167	107
21	110	1,970	107	2,020	188	295	123	1,980	e1,520	128	682	94
22	102	2,060	104	2,050	329	401	113	1,950	e1,480	172	555	105
23	99	1,260	249	1,570	632	270	108	1,920	1,430	157	543	98
24	105	1,770	226	376	301	193	364	1,910	1,840	283	486	92
25	333	2,100	146	1,220	129	151	278	1,960	1,190	796	195	189
26	415	1,210	117	1,460	514	125	474	1,970	623	535	134	121
27	537	629	106	1,950	292	113	1,190	1,480	372	601	113	100
28	1,220	1,700	147	1,940	184	109	772	283	464	631	408	93
29	492	2,030	403	1,030	235	107	396	139	647	505	154	87
30	192	1,970	340	430	---	115	439	125	552	222	356	85
31	148	---	185	894	---	101	---	118	---	183	231	---
TOTAL	14,037	27,454	10,111	21,829	24,508	11,109	18,027	43,598	20,610	37,154	6,114	4,300
MEAN	453	915	326	704	845	358	601	1,406	687	1,199	197	143
MAX	1,490	4,180	1,700	2,050	1,870	1,650	1,850	2,010	1,840	2,120	682	386
MIN	80	85	97	96	129	101	92	118	65	128	90	85
AC-FT	27,840	54,460	20,060	43,300	48,610	22,030	35,760	86,480	40,880	73,690	12,130	8,530

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004h, BY WATER YEAR (WY)

MEAN	340	434	361	342	373	361	339	431	450	267	202	299
MAX	1,301	1,827	1,233	1,156	1,673	1,804	1,708	1,584	1,296	1,199	612	958
(WY)	(1999)	(2003)	(1999)	(1992)	(1992)	(1992)	(1992)	(1968)	(1992)	(2004)	(2002)	(1998)
MIN	30.4	11.2	31.5	28.3	29.9	13.8	22.6	37.9	30.9	58.5	61.8	70.5
(WY)	(1964)	(1967)	(1971)	(1971)	(1967)	(1967)	(1965)	(1964)	(1965)	(1965)	(1967)	(1988)

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

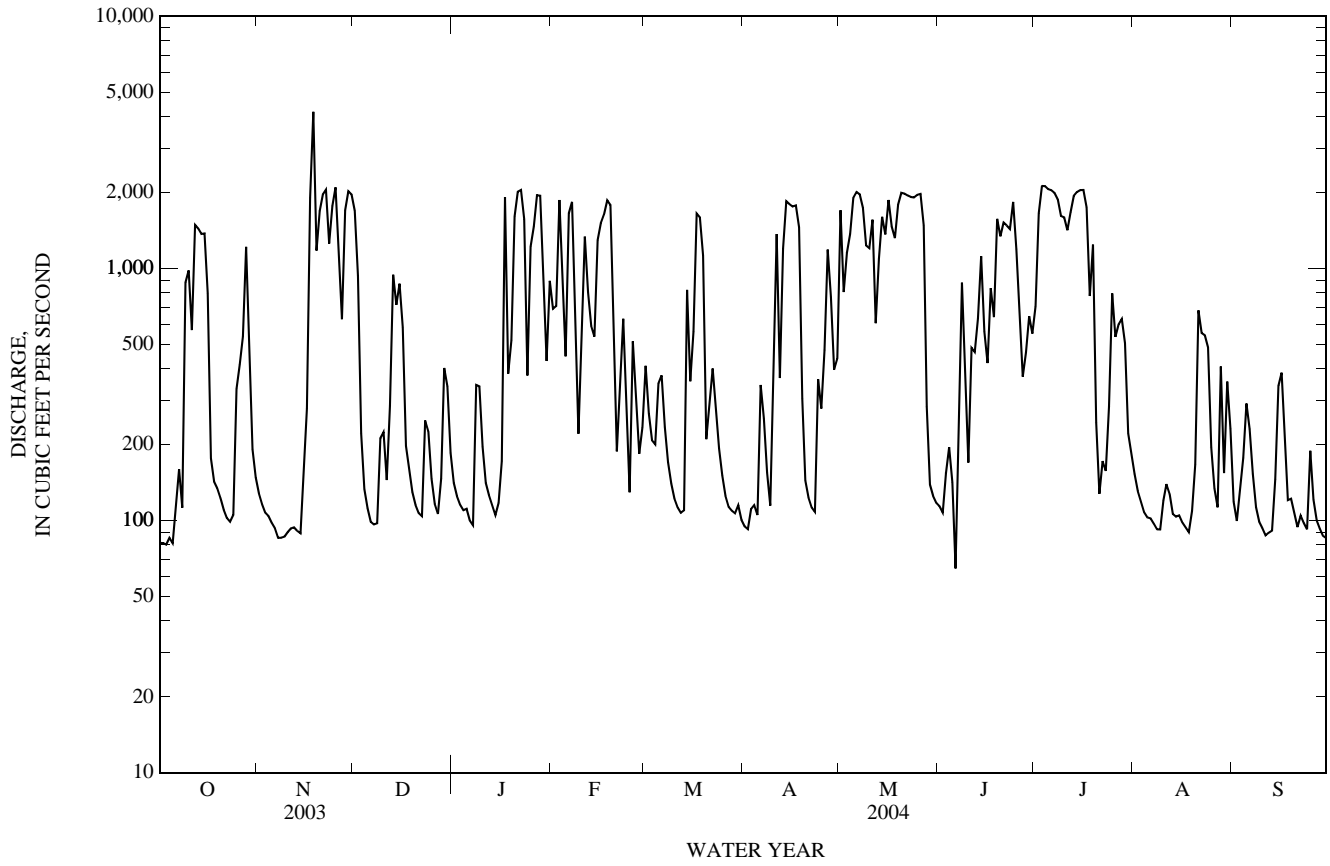
## WATER YEARS 1964 - 2004h

ANNUAL TOTAL	125,261	238,851	
ANNUAL MEAN	343	653	348
HIGHEST ANNUAL MEAN			907
LOWEST ANNUAL MEAN			77.5
HIGHEST DAILY MEAN	4,180	Nov 18	4,740
LOWEST DAILY MEAN	46	Apr 27	65
ANNUAL SEVEN-DAY MINIMUM	61	Apr 25	89
MAXIMUM PEAK FLOW			5,970
MAXIMUM PEAK STAGE			57.02
ANNUAL RUNOFF (AC-FT)	248,500	473,800	252,400
10 PERCENT EXCEEDS	967	1,840	1,060
50 PERCENT EXCEEDS	151	298	112
90 PERCENT EXCEEDS	76	98	35

h See Period of Record paragraph.

e Estimated

08073700 Buffalo Bayou at Piney Point, TX—Continued



08074000 Buffalo Bayou at Houston, TX

LOCATION.--Lat 29°45'36", long 95°24'30", Harris County, Hydrologic Unit 12040104, on right bank at downstream side of bridge on Shepherd Drive in Houston and 0.8 mi upstream from Waugh Drive.

DRAINAGE AREA.--358 mi<sup>2</sup>.unadjusted for basin boundary changes.

PERIOD OF RECORD.--May 1936 to Sept. 1957 (daily mean discharge), Oct. 1957 to Dec. 1961 (high-water records and discharge measurements), Jan. 1962 to Sept. 1975 (daily mean discharge), Oct. 1975 to current year. Water-quality records: Chemical data: Oct. 1968 to July 1981, Apr. 1986 to Sept. 2000. Biochemical data: Oct. 1968 to July 1981. Pesticide data: Feb. 1969 to July 1981. Specific conductance: Apr. 1996 to Sept. 2000. pH: June 1998 to Sept. 2000. Water temperature: Apr. 1986 to Sept. 2000. Dissolved oxygen: Apr. 1986 to Sept. 2000.

REVISED RECORDS.--WSP 1732: Drainage area (former site).

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1.36 ft below NGVD of 1929, 1973 adjustment; records unadjusted for land-surface subsidence. Prior to June 19, 1936, nonrecording gage, and June 19, 1936, to Jan. 16, 1962, water-stage recorder at site 0.8 mi downstream at datum 4.08 ft lower. Jan. 17, 1962, to Sept. 30, 1973, auxiliary water-stage recorder 0.8 mi downstream. Water-stage recorder at Whiteoak Bayou at Main Street (station 08074598) used as auxiliary gage after Sept. 30, 1993. Satellite telemeter at station.

REMARKS.--Records fair. Since water year 1944, flood flows are regulated (72 percent) by Barker and Addicks Reservoirs (stations 08072500 and 08073000), 26.3 and 26.8 mi upstream, flood peaks from the urbanized areas below these reservoirs are often independent of the regulation. Daily mean discharge is computed using a stage-fall-discharge relation for all storms that produce peak discharges above 2,000 ft<sup>3</sup>/s. Daily mean discharge below 1,000 ft<sup>3</sup>/s is computed or estimated following designated storm periods only. Low flow is mostly sustained by wastewater effluent from Houston suburbs. Gage heights are affected by tides, backwater from Whiteoak Bayou, and other streams.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--8 years (water years 1936-44), 272 ft<sup>3</sup>/s (197,100 acre-ft/yr).

AVERAGE DISCHARGE FOR REGULATED PERIOD.--26 years (water years 1945-57, 1962-75), 274 ft<sup>3</sup>/s (198,500 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft<sup>3</sup>/s, June 9, 2001, gage height, 36.58 ft; maximum gage height, 40.00 ft, June 9, 2001; minimum daily, 1.3 ft<sup>3</sup>/s, May 24, 1939, Nov. 5, 1950, occurred prior to urban development and accompanying wastewater effluent releases.

EXTREMES OUTSIDE PERIOD OF RECORD.--All flood data at site 0.8 mi downstream at present datum. Maximum gage height since at least 1835, 49.0 ft Dec. 9, 1935 (discharge, 40,000 ft<sup>3</sup>/s); furnished by engineer for Harris County. Flood of May 31, 1929, reached a gage height of 43.5 ft (discharge, 19,000 ft<sup>3</sup>/s), at bridge on Capitol Avenue, affected by bridge; furnished by city of Houston.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,100 ft<sup>3</sup>/s, Nov. 17 at 2215 hours (gage height, 29.08 ft); maximum gage height, 29.19 ft, Nov. 17 at 2145 hours (discharge, 9,940 ft<sup>3</sup>/s); minimum discharges not determined (affected by tides).

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	---	---	2,150	---	---	---	---	2,560	---	---	---	---
2	---	---	1,440	---	---	---	---	2,070	---	1,570	---	---
3	---	---	---	---	e2,160	---	---	1,200	---	2,300	---	---
4	---	---	---	---	1,640	---	---	1,800	---	2,390	---	---
5	---	---	---	---	---	---	---	2,060	---	2,330	---	---
6	---	---	---	---	1,640	---	---	2,370	---	2,330	---	---
7	---	---	---	---	e2,140	---	---	2,330	---	2,340	---	---
8	---	---	---	---	e1,480	---	---	2,230	1,380	2,110	---	---
9	1,480	---	---	---	---	---	---	1,570	869	2,040	---	---
10	2,870	---	---	---	---	---	---	1,520	---	1,670	---	---
11	---	---	---	---	2,590	---	3,090	2,490	---	1,800	---	---
12	---	---	---	---	1,050	---	---	1,690	---	1,610	---	---
13	---	---	e1,870	---	---	---	1,130	1,580	---	2,090	---	---
14	---	---	e1,060	---	---	1,300	2,100	3,140	---	2,200	---	---
15	---	---	1,080	---	1,400	1,060	2,170	1,500	---	2,230	---	---
16	---	---	1,150	---	1,810	---	2,120	2,120	---	2,320	---	---
17	---	1,700	---	3,360	1,880	1,890	2,160	1,940	1,170	2,090	---	---
18	---	7,670	---	867	2,150	1,990	2,010	1,490	701	1,120	---	---
19	---	2,360	---	---	2,170	1,800	---	1,870	1,990	---	---	---
20	---	1,890	---	1,750	1,380	---	---	2,220	1,740	---	---	---
21	---	2,190	---	2,290	---	---	---	2,260	1,600	---	---	---
22	---	2,330	---	2,400	---	---	---	2,200	2,260	---	---	---
23	---	1,840	---	2,270	1,320	---	---	2,170	3,000	---	---	---
24	---	e1,940	---	905	---	---	---	2,130	4,040	---	---	---
25	---	e2,460	---	2,330	---	---	---	2,210	2,570	893	---	---
26	---	1,980	---	1,630	---	---	---	2,240	1,140	1,270	---	---
27	---	812	---	e2,220	---	---	---	1,980	---	---	---	---
28	---	e1,730	---	e2,400	---	---	---	---	---	---	---	---
29	---	e2,360	---	1,830	---	---	---	---	---	---	---	---
30	---	2,330	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

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## SAN JACINTO RIVER BASIN

08074020 Whiteoak Bayou at Alabonson Road, Houston, TX

LOCATION.--Lat 29°52'14", long 95°28'49", Harris County, Hydrologic Unit 12040104, on downstream side of bridge at Alabonson Road in northwest Houston, 1.0 mi upstream from Vogel Creek, and 2.5 mi upstream from Cole Creek.

DRAINAGE AREA.--34.5 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1984 to Sept. 2001 (annual maximum discharge), Oct. 2001 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 30.00 ft above NGVD of 1929, 1978 adjustment; unadjusted for land-surface subsidence. Radio telemeter at station. Satellite telemeter at station.

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

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	15	34	19	23	46	134	20	1,150	16	184	21	25
2	15	24	20	20	170	53	20	403	15	70	21	61
3	16	22	18	21	54	37	21	76	35	44	21	186
4	16	21	17	20	41	38	21	35	21	36	23	56
5	28	19	18	19	96	94	21	24	23	33	21	34
6	153	19	19	19	45	47	43	21	17	76	20	28
7	35	19	20	21	35	30	41	19	15	88	19	27
8	37	18	21	93	29	27	23	18	869	60	18	27
9	644	18	73	47	28	24	20	17	375	37	22	29
10	518	19	39	27	241	23	551	32	67	37	30	24
11	74	18	24	24	562	24	1,790	237	33	31	27	24
12	36	18	109	22	119	23	239	167	23	31	19	24
13	26	17	394	19	63	23	87	413	55	30	19	27
14	25	17	58	19	139	545	45	947	166	28	23	57
15	22	37	34	20	62	164	30	168	316	28	24	92
16	20	52	29	83	42	55	25	68	136	26	25	37
17	24	3,160	25	1,580	35	36	20	75	264	26	24	30
18	20	2,030	23	139	31	29	18	95	123	25	24	26
19	20	211	20	63	29	25	19	63	44	25	58	26
20	19	86	20	42	28	24	17	37	26	24	54	27
21	20	46	19	33	25	95	18	28	38	44	445	29
22	19	32	20	28	67	46	18	25	164	60	95	50
23	19	32	70	25	97	31	18	22	392	270	77	31
24	19	24	31	178	39	28	109	22	1,090	715	42	24
25	386	22	20	907	79	25	117	22	1,450	93	38	22
26	198	21	18	111	37	24	76	20	483	66	31	23
27	52	21	19	54	28	23	29	21	321	33	29	23
28	33	17	60	37	26	23	19	19	120	29	37	24
29	26	17	133	97	69	43	16	18	107	26	56	20
30	23	18	38	270	---	31	15	17	199	33	32	19
31	25	---	28	71	---	21	---	16	---	23	26	---
TOTAL	2,583	6,109	1,456	4,132	2,362	1,845	3,506	4,295	7,003	2,331	1,421	1,132
MEAN	83.3	204	47.0	133	81.4	59.5	117	139	233	75.2	45.8	37.7
MAX	644	3,160	394	1,580	562	545	1,790	1,150	1,450	715	445	186
MIN	15	17	17	19	25	21	15	16	15	23	18	19
AC-FT	5,120	12,120	2,890	8,200	4,690	3,660	6,950	8,520	13,890	4,620	2,820	2,250

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

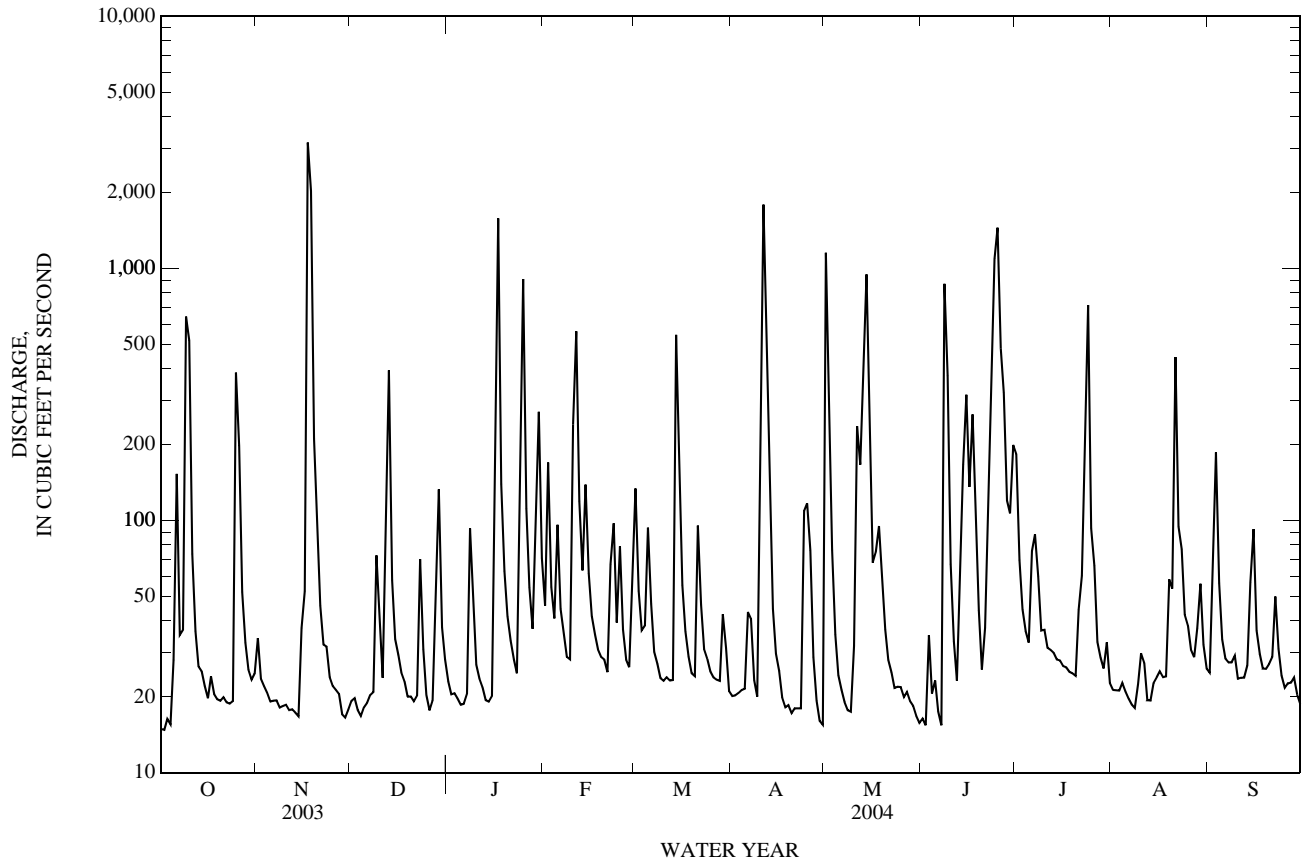
MEAN	181	122	81.9	70.2	60.9	42.0	74.4	58.6	114	54.7	54.5	71.2
MAX	279	204	106	133	81.4	59.5	117	139	233	75.2	66.1	117
(WY)	(2003)	(2004)	(2002)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2002)	(2003)
MIN	83.3	30.5	47.0	25.9	21.8	26.2	28.2	17.7	33.9	40.5	45.8	37.7
(WY)	(2004)	(2002)	(2004)	(2002)	(2002)	(2002)	(2003)	(2003)	(2002)	(2002)	(2004)	(2004)

## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2002 - 2004	
ANNUAL TOTAL	25,398		38,175			
ANNUAL MEAN	69.6		104		94.2	
HIGHEST ANNUAL MEAN					104	2004
LOWEST ANNUAL MEAN					84.2	2003
HIGHEST DAILY MEAN	3,160	Nov 17	3,160	Nov 17	4,290	Oct 29, 2002
LOWEST DAILY MEAN	15	May 22	15	Oct 1	7.3	Jul 23, 2002
ANNUAL SEVEN-DAY MINIMUM	15	May 20	17	May 27	13	Jun 1, 2002
MAXIMUM PEAK FLOW			8,360	Nov 17	13,400	Jun 9, 2001
MAXIMUM PEAK STAGE			46.72	Nov 17	51.11	Jun 9, 2001
ANNUAL RUNOFF (AC-FT)	50,380		75,720		68,280	
10 PERCENT EXCEEDS	113		185		167	
50 PERCENT EXCEEDS	24		29		27	
90 PERCENT EXCEEDS	17		19		18	



08074020 Whiteoak Bayou at Alabonson Road, Houston, TX—Continued



08074150 Cole Creek at Deihl Road, Houston, TX

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

DRAINAGE AREA.--7.50 mi<sup>2</sup>.

PERIOD OF RECORD.--Apr. 1964 to Sept. 1986 (daily mean discharge), Oct. 1986 to Sept. 1992 (annual maximum discharge), Oct. 1992 to current year (peak discharges greater than base discharge).

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929, 1957 adjustment; unadjusted for land-surface subsidence. Radio telemeter at station. Satellite telemeter at station.

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

AVERAGE DISCHARGE.--22 years (water years 1965-86), 8.08 ft<sup>3</sup>/s, (5,850 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,300 ft<sup>3</sup>/s, June 9, 2001, gage height, 81.59 ft; no flow at times.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 9	1745	1,100	75.24	Apr 10	2030	1,520	76.68
Nov 17	1515	*2,560	*79.53	Jun 25	0900	1,370	76.20

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08074250 Brickhouse Gulley at Costa Rica Street, Houston, TX

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

DRAINAGE AREA.--11.4 mi<sup>2</sup>.

PERIOD OF RECORD.--Aug. 1964 to Sept. 1981 (daily mean discharge), Oct. 1982 to Sept. 1983 (peak discharges greater than base discharge), Oct. 1983 to Sept. 1992 (annual maximum), Oct. 1992 to current year (peak discharges greater than base discharge). Water-quality records: Chemical data: Oct. 1981 to Sept. 1982. Biochemical data: Oct. 1981 to Sept. 1982.

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

GAGE.--Water-stage recorder and crest-stage gage. Low-water concrete control since Dec. 9, 1970. Datum of gage is NGVD of 1929; unadjusted for land-surface subsidence. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records poor. Low flow is partially sustained by wastewater effluent. No known regulation or diversions.

AVERAGE DISCHARGE.--17 years (1965-1981), 14.0 ft<sup>3</sup>/s (10,140 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft<sup>3</sup>/s, June 9, 2001, gage height, 73.00 ft (from indirect measurement of peak flow); no flow at times.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 9	1745	3,200	65.06	Mar 14	1215	3,170	65.02
Nov 17	1600	*9,460	*71.22	Apr 10	2115	3,260	65.16
Nov 17	2345	2,560	63.64	May 1	1115	2,860	64.40
Jan 17	0000	2,590	63.73	Jun 23	2100	3,030	64.80

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## 08074500 Whiteoak Bayou at Houston, TX

LOCATION.--Lat 29°46'30", long 95°23'49", Harris County, Hydrologic Unit 12040104, on right bank at downstream side of downstream bridge on Heights Boulevard in Houston, 560 ft downstream from Texas and New Orleans Railroad Co. bridge, 2.4 mi upstream from Little Whiteoak Bayou, and 4.0 mi upstream from mouth.

DRAINAGE AREA.--86.3 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1936 to current year. Water-quality records: Chemical data: Oct. 1968 to Sept. 1998. Biochemical data: Oct. 1968 to Sept. 1998. Pesticide data: Feb. 1969 to Sept. 1998.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.35 ft below NGVD of 1929, adjustment of 1973; unadjusted for land-surface subsidence. Prior to June 17, 1936, nonrecording gage, and June 17, 1936, to Apr. 28, 1965, water-stage recorder at site 480 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. No known regulation or diversions. Low flow is sustained by wastewater effluent.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1919, 51.5 ft Dec. 9, 1935, prior to channel rectification, present site and datum (discharge, 14,750 ft<sup>3</sup>/s), furnished by the engineer for Harris County. The flood of May 31, 1929, reached a stage of 47.0 ft, prior to channel rectification, present site and datum (discharge, 9,360 ft<sup>3</sup>/s) computed on basis of current-meter measurement at stage 1.0 ft below crest, furnished by city of Houston.

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	35	56	44	60	84	455	59	2,500	64	457	139	37
2	33	45	42	49	442	153	52	793	63	117	52	163
3	33	44	45	47	116	104	45	196	118	79	48	525
4	32	50	47	50	79	116	47	102	78	64	57	125
5	40	48	44	52	428	336	44	73	169	62	54	68
6	360	42	41	43	130	152	351	66	121	575	47	41
7	76	40	41	44	90	92	118	61	61	324	50	39
8	66	41	42	416	59	78	55	61	1,600	203	47	38
9	1,860	41	281	126	59	71	47	59	748	89	49	44
10	981	41	94	59	712	67	1,080	107	184	95	61	42
11	172	41	50	51	1,710	67	3,020	1,210	99	73	90	37
12	79	41	410	49	367	75	709	523	69	66	63	37
13	57	40	802	59	176	68	268	1,250	467	69	46	74
14	54	37	131	62	547	1,770	144	1,930	388	64	46	53
15	47	184	70	67	175	598	97	406	633	66	51	172
16	48	708	56	196	106	205	70	183	449	63	48	53
17	46	6,250	51	2,810	85	125	58	168	597	62	52	43
18	40	4,010	50	321	72	89	59	223	382	59	49	41
19	40	494	47	128	72	76	53	168	135	65	66	40
20	43	199	44	78	68	68	57	89	232	62	153	39
21	40	113	44	58	65	278	59	79	110	104	1,200	41
22	39	77	47	51	394	143	58	69	960	153	192	162
23	38	94	242	47	470	76	56	64	1,970	157	105	51
24	39	69	67	528	167	73	580	67	2,270	1,040	57	44
25	909	51	44	1,870	192	73	423	66	2,750	515	80	159
26	464	53	41	243	102	62	242	65	1,350	144	41	76
27	105	49	46	101	80	59	92	63	732	71	41	48
28	61	41	157	69	68	67	66	61	274	184	172	38
29	48	45	377	239	195	85	59	60	242	74	109	39
30	46	43	84	590	---	82	56	57	397	96	46	39
31	49	---	57	139	---	54	---	58	---	71	38	---
TOTAL	5,980	13,087	3,638	8,702	7,310	5,817	8,124	10,877	17,712	5,323	3,349	2,408
MEAN	193	436	117	281	252	188	271	351	590	172	108	80.3
MAX	1,860	6,250	802	2,810	1,710	1,770	3,020	2,500	2,750	1,040	1,200	525
MIN	32	37	41	43	59	54	44	57	61	59	38	37
AC-FT	11,860	25,960	7,220	17,260	14,500	11,540	16,110	21,570	35,130	10,560	6,640	4,780

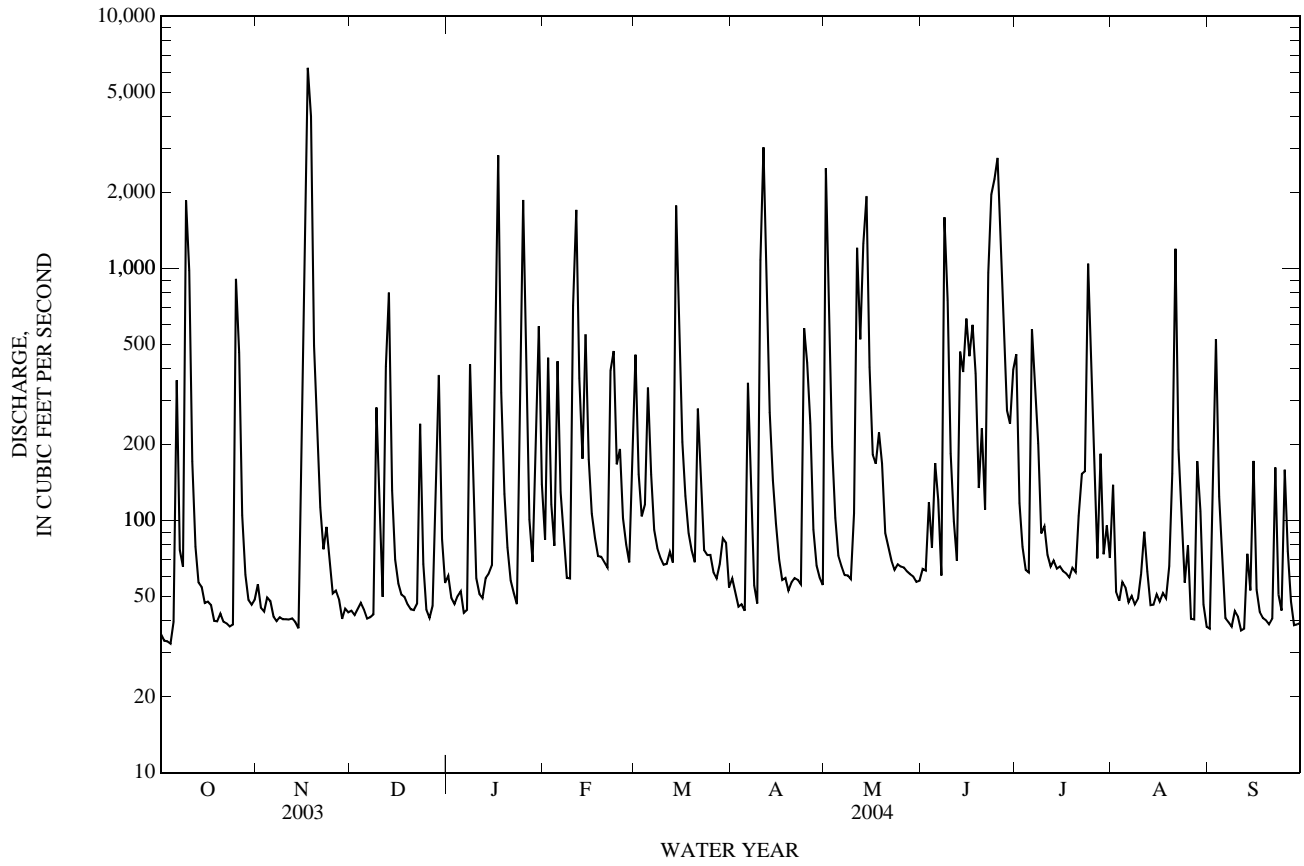
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2004, BY WATER YEAR (WY)

MEAN	104	122	106	118	117	103	98.1	132	140	82.3	79.6	105
MAX	560	774	378	437	472	517	436	558	995	439	535	684
(WY)	(1995)	(1947)	(1992)	(1944)	(1992)	(1992)	(1997)	(1989)	(2001)	(1942)	(1983)	(1998)
MIN	0.71	0.93	2.22	1.70	5.12	1.10	1.35	0.75	2.93	2.19	0.61	1.07
(WY)	(1949)	(1940)	(1949)	(1940)	(1951)	(1940)	(1939)	(1937)	(1954)	(1944)	(1940)	(1948)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1936 - 2004	
ANNUAL TOTAL	62,753	92,327		
ANNUAL MEAN	172	252	109	
HIGHEST ANNUAL MEAN			267	1992
LOWEST ANNUAL MEAN			10.9	1951
HIGHEST DAILY MEAN	6,250	Nov 17	19,100	Jun 9, 2001
LOWEST DAILY MEAN	32	Oct 4	0.20	Aug 7, 1940
ANNUAL SEVEN-DAY MINIMUM	36	May 8	0.26	Aug 12, 1951
MAXIMUM PEAK FLOW			18,100	Nov 17
MAXIMUM PEAK STAGE			44.32	Nov 17
ANNUAL RUNOFF (AC-FT)	124,500	183,100	79,040	
10 PERCENT EXCEEDS	372	555	221	
50 PERCENT EXCEEDS	53	69	32	
90 PERCENT EXCEEDS	38	41	2.4	

08074500 Whiteoak Bayou at Houston, TX—Continued



08074598 Whiteoak Bayou at Main Street, Houston, TX

LOCATION.--Lat 29°45'59", long 95°21'30", Harris County, Hydrologic Unit 12040104, on right bank at Main street bridge, 700 ft upstream from Buffalo Bayou and 3.0 mi downstream from Whiteoak Bayou at Houston (station 08074500).

DRAINAGE AREA.--127 mi<sup>2</sup>.

PERIOD OF RECORD.--Nov. 1992 to current year. Water-quality records: Specific conductance: May 1992 to Sept. 1997. Water temperature: May 1992 to Sept. 1997. Dissolved oxygen: May 1992 to Sept. 1997.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929, 1978 adjustment, unadjusted for land-surface subsidence. Satellite telemeter at station.

REMARKS.--Records good. No known regulation or diversions. Stage is affected by tidal fluctuations and local runoff.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height 38.59 ft, June 9, 2001; minimum gage height, -1.57 ft, Aug. 14, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 26.14 ft, Nov. 17; minimum gage height, 0.44 ft, Dec. 10.

GAGE HEIGHT, FEET  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	5.30	3.26	5.04	3.31	4.66	3.11	4.44	3.33	5.34	3.51	4.80	2.83
2	5.61	3.48	5.31	3.60	4.32	3.11	4.38	2.78	5.12	2.77	4.65	2.73
3	5.57	3.31	5.28	3.30	4.48	3.15	4.30	2.66	5.31	3.04	4.87	3.07
4	5.10	3.14	4.82	3.32	3.89	2.38	4.42	2.58	5.65	4.03	5.44	3.74
5	4.89	2.91	4.46	3.44	3.53	1.61	4.22	1.67	5.87	3.33	4.84	3.08
6	4.73	2.86	4.43	3.06	3.74	1.60	3.90	1.20	4.53	2.42	4.38	2.42
7	4.91	3.14	4.36	2.97	4.30	2.36	4.76	2.76	3.89	2.47	3.78	2.27
8	4.93	3.58	4.61	2.79	4.54	2.75	5.73	3.64	4.78	3.33	4.00	2.10
9	14.25	3.83	4.61	2.79	5.02	3.00	4.92	2.04	4.83	3.07	3.36	2.10
10	10.65	4.34	5.08	2.97	3.50	0.44	3.91	1.82	8.60	3.10	4.45	1.66
11	5.05	3.33	5.27	3.45	4.20	2.04	4.20	2.70	9.48	4.63	4.17	2.61
12	5.29	3.73	4.96	2.95	10.16	3.79	4.13	2.86	4.63	2.90	4.11	1.99
13	5.30	3.88	4.53	2.38	9.72	2.84	4.10	2.63	4.27	2.70	4.65	2.14
14	5.33	3.31	5.26	3.69	3.93	2.62	3.83	2.87	4.06	2.84	11.76	2.45
15	5.33	4.12	5.38	3.44	4.96	3.57	4.01	2.90	3.62	1.76	6.12	2.71
16	5.56	3.83	8.16	4.23	5.05	1.55	6.99	2.98	4.28	2.31	4.34	2.30
17	5.16	2.75	26.14	4.54	2.91	1.18	13.45	5.31	4.14	2.42	4.65	2.97
18	4.51	3.04	23.50	7.28	3.40	1.94	5.31	2.28	4.31	2.91	4.77	3.46
19	4.97	3.24	7.28	2.05	3.25	1.39	3.40	0.61	4.64	3.36	4.49	3.41
20	4.93	3.06	4.91	3.05	3.80	1.85	4.82	2.63	4.57	2.55	4.47	2.96
21	4.58	2.93	5.27	4.08	4.46	2.28	4.83	3.12	4.05	1.82	4.24	2.53
22	4.23	2.82	5.25	3.70	4.53	2.62	4.65	2.95	6.65	3.33	4.51	3.01
23	4.15	2.55	5.56	3.27	4.66	1.46	4.42	2.98	6.45	3.40	5.28	3.51
24	4.73	3.02	4.08	1.76	3.78	1.54	5.47	3.48	4.73	3.39	5.43	3.89
25	7.79	2.98	5.50	3.57	4.77	2.87	11.96	3.62	4.46	2.00	5.19	3.30
26	5.31	2.17	5.70	3.66	5.04	3.08	4.54	2.59	3.44	1.30	5.09	3.29
27	4.59	2.23	5.34	2.11	4.71	3.28	3.12	2.32	4.23	2.46	5.46	3.47
28	4.91	3.21	2.44	1.51	4.69	3.00	4.86	2.95	5.09	2.79	5.20	3.52
29	4.87	2.74	4.26	2.44	4.39	2.25	5.22	3.52	5.23	3.49	4.17	2.46
30	5.22	3.12	4.86	3.40	4.44	2.62	4.94	2.70	---	---	4.09	2.31
31	5.15	3.11	---	---	4.76	3.54	5.15	3.03	---	---	3.98	2.19
MONTH	14.25	2.17	26.14	1.51	10.16	0.44	13.45	0.61	9.48	1.30	11.76	1.66





08074620 Buffalo Bayou at Hirsch Sreet, Houston, TX

LOCATION.--Lat 29°45'35", long 95°19'44", Harris County, Hydrologic Unit 12040104, 2.2 miles downstream from Whiteoak Bayou.

DRAINAGE AREA.-- 457 mi<sup>2</sup>.

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1997 to current year.

BIOCHEMICAL DATA: Oct. 1997 to current year.

REMARKS.--Water-quality samples were collected for selected storm events.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
JAN 07...	750	7.4	7.0	116	17.0	5.6	4.6	61,000	65,000
FEB 26...	750	7.5	7.5	167	17.0	4.6	4.4	11,000	10,000
MAR 16...	762	7.8	7.4	205	18.0	8.4	7.0	16,000	44,000
MAR 16...	762	5.8	8.0	208	17.5	5.5	4.5	26,000	55,000
SEP 07...	765	1.4	7.7	1,180	28.5	3.6	3.0	8,700	800
SEP 10...	758	4.0	6.9	837	26.5	2.6	2.1	36,000	2,000
SEP 11...	760	7.1	7.9	84	24.5	2.8	1.7	31,000	11,000
SEP 12...	760	6.0	6.1	120	26.0	2.2	1.1	29,000	13,000

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
OCT 18...	761	7.2	7.5	132	23.5	5.1	2.7	36,000	3,300
NOV 12...	765	7.5	7.8	114	15.5	4.8	4.3	29,000	13,000
NOV 13...	760	6.6	7.1	110	17.5	3.6	3.2	26,000	12,000
NOV 15...	765	9.7	7.3	146	16.0	2.4	1.5	32,000	13,000
DEC 11...	765	10.3	7.8	130	11.2	6.0	5.0	34,000	14,000
MAR 19...	770	6.6	7.8	130	19.0	8.8	8.2	25,000	19,000
MAY 12...	760	9.5	8.2	104	21.0	7.0	5.6	25,000	13,000
JUN 13...	760	6.2	7.6	156	26.0	7.7	6.6	29,000	12,000
JUN 15...	765	7.9	7.8	241	26.5	6.7	3.3	28,000	17,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
APR 02...	761	7.2	7.3	193	21.5	8.7	8.5	32,000	18,000
APR 03...	761	8.2	7.7	160	18.5	6.1	5.3	30,000	17,000
APR 12...	762	8.0	7.8	186	19.1	7.5	5.9	29,000	12,000
MAY 02...	765	8.0	7.6	153	19.5	7.6	5.8	38,000	19,000
MAY 20...	765	6.7	7.1	171	23.0	5.7	4.6	36,000	11,000

08074620 Buffalo Bayou at Hirsch Sreet, Houston, TX—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
NOV 06...	760	6.0	7.7	158	20.0	5.1	3.6	25,000	13,000
18...	768	10.6	7.8	134	10.8	2.7	2.4	14,000	9,700
JAN 11...	764	10.2	7.8	212	10.2	8.5	5.7	14,000	29,000
MAR 14...	764	5.6	7.7	200	15.2	9.2	7.6	16,000	13,000
28...	765	6.7	7.9	130	11.2	8.8	8.2	10,000	12,000
JUN 06...	760	5.3	7.9	113	23.0	4.5	3.4	11,000	17,000
AUG 31...	761	5.3	7.4	158	24.7	3.6	2.4	74,000	50,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
DEC 12...	--	7.7	8.1	84	19.3	6.6	5.0	36,000	16,000
13...	770	8.1	8.4	185	18.5	5.4	5.1	41,000	20,000
APR 08...	750	7.7	7.8	112	17.6	8.0	7.2	35,000	42,000
AUG 15...	--	6.2	7.8	111	23.5	4.1	2.2	38,000	78,000
SEP 20...	--	7.1	8.0	113	25.2	7.1	6.6	72,000	11,000

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
DEC 12...	760	9.4	8.0	140	13.0	7.5	6.9	14,000	14,000
FEB 21...	760	8.6	7.6	196	16.5	5.6	3.8	14,000	13,000

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
NOV 17...	765	7.7	8.0	90	21.5	4.7	3.3	44,000	19,000
MAY 01...	763	7.5	7.3	127	20.0	5.3	4.1	39,000	42,000

08074630 Buffalo Bayou at Lockwood Drive, Houston, TX

LOCATION.--Lat 29°45'21", long 95°19'11", Harris County, Hydrologic Unit 12040104, 3.2 mi downstream from Whiteoak Bayou.

DRAINAGE AREA.-- 460 mi<sup>2</sup>.

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1997 to current year.

BIOCHEMICAL DATA: Oct. 1997 to current year.

REMARKS.--Water-quality samples were collected for selected storm events.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Fecal streptococci KF MF, col/100 mL (31673)
AUG 07...	765	2.6	7.6	1,800	28.5	3.5	2.8	3,900	2,200
SEP 11...	760	8.0	7.9	80	24.5	2.5	1.3	26,000	14,000

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

Date	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Fecal streptococci KF MF, col/100 mL (31673)
NOV 12...	765	7.7	7.9	119	15.5	6.7	5.1	34,000	16,000
NOV 13...	765	7.4	7.1	128	17.5	7.7	7.2	36,000	14,000
NOV 15...	765	9.7	7.3	144	16.0	1.4	.4	30,000	15,000
DEC 11...	765	10.3	7.7	132	11.5	7.2	5.7	29,000	13,000
MAR 19...	770	7.7	7.6	187	19.0	8.8	8.5	18,000	14,000
MAY 12...	760	8.0	8.1	102	21.0	6.7	4.9	34,000	17,000
JUN 13...	760	6.1	7.8	157	26.0	6.7	6.4	39,000	16,000
JUN 15...	765	8.1	8.0	250	26.0	3.8	2.5	31,000	15,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Fecal streptococci KF MF, col/100 mL (31673)
APR 02...	765	6.9	8.1	183	21.0	8.4	8.2	29,000	14,000
MAY 02...	760	7.7	8.1	150	19.6	8.5	7.8	16,000	24,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Date	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Fecal streptococci KF MF, col/100 mL (31673)
MAR 27...	765	6.6	7.8	124	11.2	8.4	8.0	8,700	19,000
JUN 06...	760	6.2	7.7	123	23.0	4.8	3.5	16,000	13,000

08074630 Buffalo Bayou at Lockwood Drive, Houston, TX—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
SEP 19...	762	7.5	7.6	147	24.6	7.5	6.3	120,000	14,000

08074700 Buffalo Bayou at 69th Street, Houston, TX

LOCATION.--Lat 29°45'15", long 95°17'51", Harris County, Hydrologic Unit 12040104, 4.8 mi downstream from Whiteoak Bayou.

DRAINAGE AREA.--476 mi<sup>2</sup>.

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1997 to current year.

BIOCHEMICAL DATA: Oct. 1997 to current year.

REMARKS.--Water-quality samples were collected for selected storms.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Fecal streptococci KF MF, col/100 mL (31673)
FEB 26...	750	7.7	7.5	213	17.5	5.0	4.6	13,000	16,000
AUG 07...	765	2.7	7.5	3,990	30.0	2.0	1.8	3,200	360
SEP 10...	758	3.6	7.4	3,100	27.0	1.8	1.3	28,000	9,700
12...	765	5.8	6.3	125	26.0	3.1	1.6	32,000	12,000

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

Date	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Fecal streptococci KF MF, col/100 mL (31673)
OCT 18...	760	7.6	7.4	130	23.5	6.2	3.3	39,000	13,000
NOV 12...	765	8.6	7.9	119	16.0	8.2	3.7	14,000	15,000
13...	765	6.8	7.0	112	17.5	5.4	2.3	15,000	15,000
15...	765	9.2	7.3	144	16.0	1.6	.6	11,000	13,000
DEC 11...	765	10.2	7.9	123	11.5	6.0	4.5	31,000	11,000
MAR 19...	770	7.9	7.4	171	19.0	9.0	7.5	29,000	16,000
MAY 12...	760	7.8	8.0	118	21.0	7.9	6.0	38,000	14,000
JUN 13...	760	5.7	7.5	174	26.0	7.2	7.0	34,000	15,000
15...	765	8.0	7.6	212	26.5	5.1	3.0	16,000	13,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Fecal streptococci KF MF, col/100 mL (31673)
APR 02...	765	5.9	7.8	366	21.5	8.7	8.6	28,000	16,000
03...	765	8.4	7.2	178	18.7	8.0	6.9	29,000	55,000
12...	765	7.8	7.8	202	19.0	8.3	7.8	32,000	13,000
MAY 02...	760	6.9	7.2	210	20.0	8.5	8.0	48,000	23,000
20...	763	6.6	7.3	166	22.9	7.9	6.2	41,000	13,000

08074700 Buffalo Bayou at 69th Street, Houston, TX—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
NOV 06...	760	7.2	7.7	173	20.2	6.4	4.3	28,000	14,000
18...	768	10.5	7.9	141	11.1	4.6	3.0	13,000	11,000
JAN 11...	768	10.2	7.7	380	10.1	8.5	5.6	20,000	21,000
MAR 14...	764	6.3	7.6	186	15.5	9.2	7.8	31,000	17,000
27...	765	6.6	7.8	134	11.0	7.5	6.8	26,000	13,000
JUN 06...	760	6.6	7.5	118	23.0	3.8	3.7	30,000	9,700
AUG 31...	761	6.3	7.4	162	24.8	3.6	2.5	32,000	54,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
DEC 12...	760	9.5	8.0	98	18.7	6.9	5.3	34,000	13,000
13...	770	7.2	7.9	191	18.6	4.5	3.8	14,000	12,000
APR 08...	750	7.5	7.6	153	17.9	7.8	7.2	29,000	34,000
AUG 15...	758	8.1	7.8	118	23.8	5.2	2.6	42,000	31,000
SEP 19...	762	7.0	7.9	131	25.5	7.7	6.9	75,000	12,000

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
DEC 12...	760	9.5	7.8	141	13.2	7.2	6.4	13,000	12,000
FEB 21...	760	7.9	7.6	185	16.6	8.6	6.3	40,000	16,000

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
NOV 17...	765	7.2	8.1	89	21.4	5.4	2.4	49,000	14,000
MAY 01...	763	7.3	7.2	138	20.1	4.2	3.7	36,000	40,000

08074710 Buffalo Bayou at Turning Basin, Houston, TX

LOCATION.--Lat 29°44'57", long 95°17'27", Harris County, Hydrologic Unit 12040104, on left bank at Wharf No. 5 at end of private road, 1.8 mi upstream from Brays Bayou, and 4.9 mi east of downtown Houston.

DRAINAGE AREA.--476 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Jan. 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929, 1978 adjustment, unadjusted for land-surface subsidence. Satellite telemeter at station.

REMARKS.--Records good. Only very large storms or hurricane surge produces elevations above normal tidal fluctuations.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 9.6 ft, from floodmark, June 9, 2001; minimum, -3.1 ft, Mar. 6, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 4.8 ft, Nov. 18; minimum elevation, -2.0 ft, Nov. 28.

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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3.0	1.0	2.2	2.8	1.1	2.1	2.0	0.4	1.2	2.2	1.1	1.7
2	3.2	1.2	2.4	3.0	1.4	2.4	1.8	0.6	1.2	2.1	0.6	1.4
3	3.2	1.1	2.4	2.9	1.1	2.1	2.2	1.0	1.6	2.0	0.4	1.4
4	2.8	0.8	2.0	2.5	1.1	1.9	1.6	0.2	1.0	2.2	0.5	1.5
5	2.6	0.6	1.9	2.2	1.2	1.7	1.3	-0.6	0.4	1.9	-0.6	0.6
6	2.4	0.6	1.8	2.1	0.9	1.6	1.5	-0.6	0.2	1.6	-1.0	0.1
7	2.6	0.9	1.9	2.0	0.7	1.3	2.0	0.1	1.2	2.5	0.5	1.5
8	2.6	1.3	2.0	2.3	0.5	1.3	2.2	0.6	1.5	3.2	1.2	2.3
9	4.4	1.6	2.9	2.2	0.5	1.5	2.4	0.4	1.7	2.6	-0.2	1.1
10	3.4	1.6	2.4	2.8	0.8	1.8	1.1	-1.9	-0.7	1.6	-0.4	0.7
11	2.6	1.1	1.9	3.0	1.2	2.2	1.9	-0.2	0.7	1.9	0.5	1.4
12	2.7	1.0	1.9	2.7	0.7	1.7	4.1	1.5	2.3	1.9	0.7	1.4
13	2.7	1.2	2.0	2.2	0.3	1.5	3.4	0.3	1.8	1.8	0.4	1.1
14	2.8	0.6	1.7	3.0	1.5	2.3	1.7	0.2	0.9	1.6	0.6	1.1
15	2.8	1.6	2.2	3.1	1.2	2.3	2.6	1.2	2.0	1.8	0.7	1.3
16	3.1	1.5	2.5	2.9	1.3	2.2	2.6	-0.8	0.8	3.0	0.8	1.8
17	2.9	0.6	1.9	4.6	2.1	3.1	0.5	-1.1	-0.4	3.6	1.6	2.5
18	2.3	0.9	1.6	4.8	0.7	3.0	1.1	-0.3	0.4	2.4	-0.1	0.9
19	2.8	1.1	2.1	0.8	-0.7	0.0	1.0	-0.8	0.2	1.1	-1.7	-0.5
20	2.7	0.9	2.0	2.3	0.4	1.4	1.5	-0.4	0.6	2.2	-0.1	1.1
21	2.4	0.7	1.7	2.7	1.3	2.0	2.2	0.1	1.3	2.2	-0.1	1.3
22	2.0	0.7	1.3	2.6	0.7	1.7	2.3	0.5	1.5	1.8	-0.4	0.9
23	1.9	0.4	1.3	3.0	0.5	1.9	2.3	-0.9	0.7	1.7	-0.2	0.9
24	2.4	0.8	1.5	1.4	-1.5	-0.3	1.5	-0.7	0.4	2.3	0.7	1.5
25	2.6	0.8	1.8	2.8	0.5	1.6	2.5	0.7	1.5	3.0	0.7	1.8
26	2.1	-0.3	1.0	3.1	1.1	2.2	2.8	0.9	1.9	2.0	-0.4	0.9
27	2.2	-0.1	1.0	3.1	-0.1	1.7	2.4	1.1	1.9	0.1	-1.2	-0.6
28	2.4	0.4	1.6	0.0	-2.0	-1.0	2.4	0.7	1.7	2.1	-0.3	1.0
29	2.4	0.4	1.5	1.5	-0.5	0.8	1.8	0.0	0.7	2.4	0.9	1.7
30	2.9	0.9	2.1	2.2	0.5	1.5	2.2	0.3	1.1	2.1	0.2	1.2
31	2.8	0.9	2.0	---	---	---	2.4	1.3	1.9	2.8	0.5	1.5
MONTH	4.4	-0.3	1.9	4.8	-2.0	1.6	4.1	-1.9	1.1	3.6	-1.7	1.2





08074710 Buffalo Bayou at Turning Basin, Houston, TX—Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Apr. 1986 to current year.

pH: Oct. 1998 to current year.

WATER TEMPERATURE: Apr. 1986 to current year.

DISSOLVED OXYGEN: Apr. 1986 to current year.

## INSTRUMENTATION.--Water-quality monitor since Apr. 1986.

REMARKS.--Records for specific conductance, water temperature and pH are good. Record for dissolved oxygen poor. Water-quality monitor data have been collected one ft below the water surface since Feb. 3, 1998. From Apr. 1986 to Jan. 1987 data were collected at a fixed elevation of 6.5 ft below sea level using a submersible pump. From Feb. 1987 to Jan. 1988 data were collected at a fixed elevation of 5.5 ft below sea level using a submersible pump. Dissolved oxygen data are not corrected for salinity. Prior to Sept. 1995, the upper limit of the specific conductance instrument was 20,000 microsiemens/cm. Due to tidal effects, location of probe units, and channel morphology, the water-quality data collected at this location may not be representative of the entire flow through the cross-section.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum,

pH: Maximum, 8.6 standard units, June 9, 2001; minimum, 6.3 standard units, Feb. 25, 26, 2003.

WATER TEMPERATURE: Maximum, 36.5°C, Aug. 21, 1990; minimum, 7.0°C, on Jan. 13, 14, 1997. DISSOLVED OXYGEN: Maximum, 20.0 mg/L, June 6, 1996; minimum, 0.0 mg/L, on several days during 1987-88 water year.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 14,400 microsiemens/cm, Sept. 8; minimum, 147 microsiemens/cm, June 24.

pH: Maximum, 7.7 standard units, July 20, Aug. 8; minimum, 6.3 standard units, Jan. 9, 10, 17, 18.

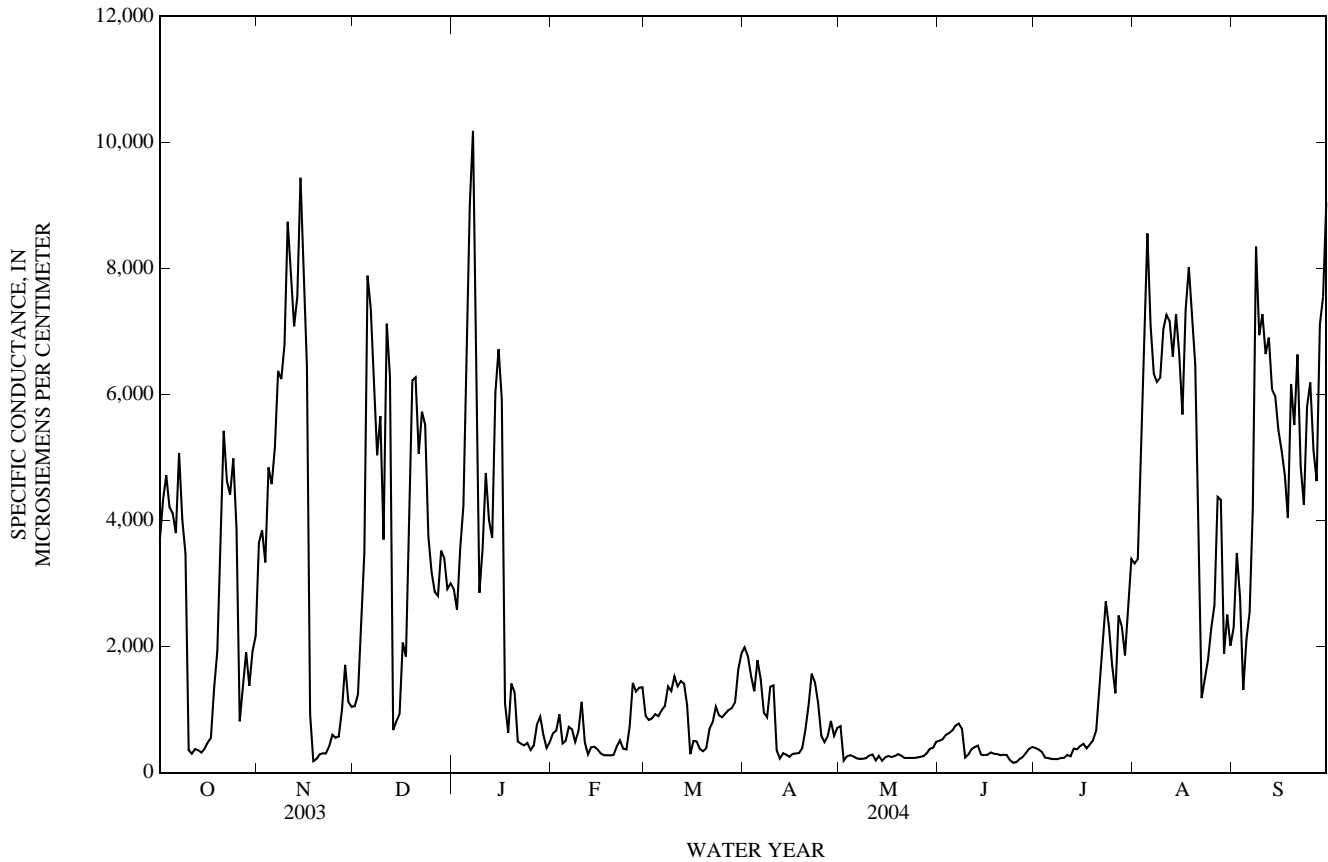
WATER TEMPERATURE: Maximum, 32.9°C, Aug. 3; minimum, 11.4°C, Feb. 16.

DISSOLVED OXYGEN: Maximum, 13.5 mg/L, Aug. 8; minimum, 0.5 mg/L, Oct. 21.

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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	4,910	2,420	3,700	5,340	2,380	3,650	1,440	735	1,050	4,910	1,840	2,910
2	5,880	2,650	4,330	5,580	2,480	3,840	3,100	551	1,240	5,430	1,550	2,580
3	5,920	3,470	4,720	4,030	2,470	3,340	5,300	1,290	2,280	5,980	2,440	3,550
4	6,280	2,950	4,210	6,700	2,750	4,840	6,670	2,210	3,490	7,560	2,200	4,230
5	5,610	2,490	4,120	6,880	3,480	4,580	13,700	4,160	7,890	12,500	4,530	6,320
6	6,180	2,850	3,800	8,190	3,220	5,170	10,600	3,920	7,370	11,500	5,900	9,010
7	6,160	3,860	5,070	9,950	4,340	6,370	9,070	3,550	6,150	12,800	7,990	10,200
8	6,990	2,870	4,020	10,800	4,160	6,240	8,060	3,820	5,040	11,700	2,580	6,220
9	4,830	707	3,470	9,810	4,430	6,790	7,740	4,150	5,650	3,570	1,970	2,850
10	980	198	358	11,200	6,130	8,740	4,700	2,730	3,700	5,040	2,400	3,560
11	354	222	302	11,400	5,760	7,950	12,800	4,310	7,120	6,750	3,380	4,750
12	432	319	373	9,460	4,900	7,080	9,040	2,370	6,280	5,640	2,500	4,000
13	444	261	354	11,100	5,730	7,550	2,370	414	676	5,210	2,600	3,730
14	448	242	317	11,100	7,050	9,440	3,660	459	811	8,080	3,800	6,040
15	464	294	375	11,100	4,710	7,820	1,290	553	926	9,430	4,620	6,720
16	576	294	477	10,000	841	6,450	3,440	1,030	2,060	8,390	4,500	5,920
17	732	391	553	2,730	219	926	4,160	979	1,840	6,900	266	1,100
18	1,800	546	1,340	242	170	182	11,400	1,800	4,220	1,510	320	636
19	2,850	1,220	1,930	296	195	219	9,360	3,200	6,230	2,320	749	1,420
20	6,040	2,170	4,030	308	264	291	9,690	3,640	6,270	2,320	504	1,280
21	6,310	3,930	5,420	313	290	306	7,120	3,050	5,060	653	330	494
22	6,070	3,580	4,630	323	286	306	8,370	3,890	5,730	580	312	458
23	6,300	3,090	4,410	713	315	416	8,560	2,590	5,520	533	323	433
24	6,140	3,760	4,990	727	509	600	5,470	2,250	3,750	619	344	471
25	5,690	796	3,870	703	412	554	5,830	2,470	3,180	701	221	360
26	1,380	514	815	763	432	573	4,020	2,110	2,870	877	224	431
27	2,950	835	1,400	1,480	571	995	3,340	2,520	2,800	880	505	764
28	2,900	567	1,910	2,140	1,020	1,710	4,670	2,700	3,520	928	831	886
29	2,000	853	1,380	1,320	774	1,120	4,650	1,950	3,410	931	271	598
30	3,500	1,260	1,920	1,360	715	1,050	5,770	1,870	2,910	483	324	391
31	2,890	1,720	2,170	---	---	---	4,570	2,000	3,000	765	331	484
MONTH	6,990	198	2,610	11,400	170	3,640	13,700	414	3,940	12,800	221	2,990





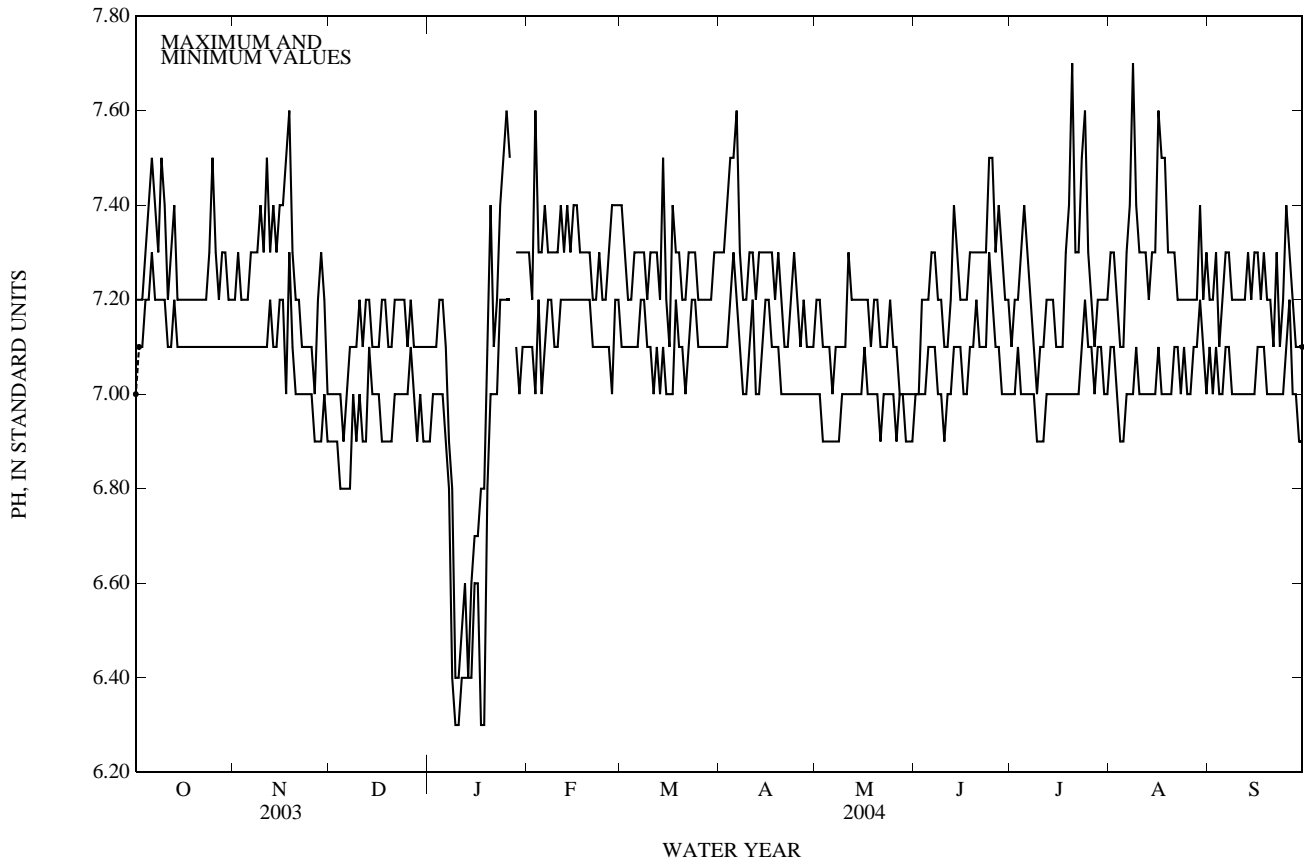
PH, WATER, UNFILTERED, FIELD, STANDARD UNITS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.2	7.0	7.2	7.1	7.0	6.9	7.1	6.9	7.3	7.1	7.4	7.1
2	7.2	7.1	7.3	7.1	7.0	6.9	7.1	7.0	7.2	7.1	7.3	7.1
3	7.2	7.1	7.2	7.1	7.0	6.9	7.1	7.0	7.6	7.0	7.2	7.1
4	7.3	7.2	7.2	7.1	7.0	6.8	7.2	7.0	7.3	7.2	7.2	7.1
5	7.4	7.2	7.2	7.1	6.9	6.8	7.2	7.0	7.3	7.0	7.3	7.1
6	7.5	7.3	7.3	7.1	7.0	6.8	7.1	6.9	7.4	7.1	7.3	7.1
7	7.4	7.2	7.3	7.1	7.1	6.8	6.9	6.8	7.3	7.2	7.3	7.2
8	7.3	7.2	7.3	7.1	7.1	7.0	6.8	6.4	7.3	7.2	7.3	7.2
9	7.5	7.2	7.4	7.1	7.1	6.9	6.4	6.3	7.3	7.1	7.2	7.1
10	7.4	7.2	7.3	7.1	7.2	7.0	6.4	6.3	7.3	7.1	7.3	7.1
11	7.2	7.1	7.5	7.1	7.1	6.9	6.5	6.4	7.4	7.2	7.3	7.0
12	7.3	7.1	7.3	7.2	7.2	6.9	6.6	6.4	7.3	7.2	7.3	7.1
13	7.4	7.2	7.4	7.1	7.2	7.1	6.4	6.4	7.4	7.2	7.2	7.0
14	7.2	7.1	7.3	7.1	7.1	7.0	6.6	6.4	7.3	7.2	7.5	7.1
15	7.2	7.1	7.4	7.2	7.1	7.0	6.7	6.6	7.4	7.2	7.2	7.0
16	7.2	7.1	7.4	7.2	7.1	7.0	6.7	6.6	7.4	7.2	7.1	7.0
17	7.2	7.1	7.5	7.0	7.2	6.9	6.8	6.3	7.3	7.2	7.4	7.0
18	7.2	7.1	7.6	7.3	7.2	6.9	6.8	6.3	7.3	7.2	7.3	7.2
19	7.2	7.1	7.3	7.1	7.1	6.9	7.2	6.8	7.3	7.2	7.3	7.1
20	7.2	7.1	7.2	7.0	7.1	6.9	7.4	7.0	7.3	7.2	7.2	7.1
21	7.2	7.1	7.2	7.0	7.2	7.0	7.1	7.0	7.2	7.1	7.2	7.0
22	7.2	7.1	7.1	7.0	7.2	7.0	7.2	7.0	7.2	7.1	7.3	7.1
23	7.2	7.1	7.1	7.0	7.2	7.0	7.4	7.2	7.3	7.1	7.3	7.2
24	7.3	7.1	7.1	7.0	7.2	7.0	7.5	7.2	7.2	7.1	7.3	7.2
25	7.5	7.1	7.1	7.0	7.1	7.0	7.6	7.2	7.2	7.1	7.2	7.1
26	7.3	7.1	7.0	6.9	7.2	7.1	7.5	7.2	7.3	7.1	7.2	7.1
27	7.2	7.1	7.2	6.9	7.1	7.0	---	---	7.4	7.0	7.2	7.1
28	7.3	7.1	7.3	6.9	7.1	6.9	7.3	7.1	7.4	7.2	7.2	7.1
29	7.3	7.1	7.2	7.0	7.1	7.0	7.3	7.0	7.4	7.2	7.2	7.1
30	7.2	7.1	7.0	6.9	7.1	6.9	7.3	7.1	---	---	7.3	7.1
31	7.2	7.1	---	---	7.1	6.9	7.3	7.1	---	---	7.3	7.1
MONTH	7.5	7.0	7.6	6.9	7.2	6.8			7.6	7.0	7.5	7.0

08074710 Buffalo Bayou at Turning Basin, Houston, TX—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.3	7.1	7.2	7.0	7.0	7.0	7.1	7.0	7.3	7.1	7.2	7.1
2	7.3	7.1	7.2	7.0	7.0	7.0	7.2	7.0	7.3	7.1	7.2	7.0
3	7.4	7.1	7.1	6.9	7.2	7.0	7.2	7.1	7.2	7.0	7.3	7.1
4	7.5	7.2	7.1	6.9	7.2	7.0	7.3	7.0	7.1	6.9	7.1	7.0
5	7.5	7.3	7.1	6.9	7.2	7.1	7.4	7.0	7.1	6.9	7.2	7.0
6	7.6	7.2	7.0	6.9	7.3	7.1	7.3	7.0	7.3	7.0	7.3	7.1
7	7.3	7.1	7.1	6.9	7.3	7.1	7.2	7.0	7.4	7.0	7.3	7.1
8	7.2	7.0	7.1	6.9	7.2	7.0	7.1	7.0	7.7	7.0	7.2	7.0
9	7.2	7.0	7.1	7.0	7.2	7.0	7.0	6.9	7.4	7.1	7.2	7.0
10	7.3	7.1	7.1	7.0	7.1	6.9	7.1	6.9	7.3	7.0	7.2	7.0
11	7.3	7.2	7.3	7.0	7.1	7.0	7.1	6.9	7.3	7.0	7.2	7.0
12	7.2	7.0	7.2	7.0	7.2	7.0	7.2	7.0	7.3	7.0	7.2	7.0
13	7.3	7.0	7.2	7.0	7.4	7.1	7.2	7.0	7.2	7.0	7.3	7.0
14	7.3	7.1	7.2	7.0	7.3	7.1	7.2	7.0	7.3	7.0	7.2	7.0
15	7.3	7.2	7.2	7.0	7.2	7.1	7.1	7.0	7.3	7.0	7.3	7.0
16	7.3	7.2	7.2	7.1	7.2	7.0	7.1	7.0	7.6	7.1	7.3	7.1
17	7.3	7.1	7.2	7.0	7.2	7.0	7.1	7.0	7.5	7.0	7.2	7.1
18	7.2	7.1	7.1	7.0	7.3	7.1	7.3	7.0	7.5	7.0	7.3	7.1
19	7.3	7.1	7.2	7.0	7.3	7.1	7.4	7.0	7.3	7.0	7.2	7.0
20	7.2	7.0	7.2	7.0	7.3	7.2	7.7	7.0	7.3	7.0	7.2	7.0
21	7.1	7.0	7.1	6.9	7.3	7.1	7.3	7.0	7.3	7.1	7.1	7.0
22	7.1	7.0	7.1	7.0	7.3	7.1	7.3	7.0	7.2	7.1	7.3	7.0
23	7.2	7.0	7.1	7.0	7.3	7.1	7.5	7.1	7.2	7.0	7.1	7.0
24	7.3	7.0	7.2	7.0	7.5	7.3	7.6	7.2	7.2	7.1	7.2	7.0
25	7.2	7.0	7.1	7.0	7.5	7.2	7.3	7.1	7.2	7.0	7.4	7.1
26	7.1	7.0	7.1	6.9	7.3	7.1	7.2	7.1	7.2	7.0	7.3	7.2
27	7.2	7.0	7.0	7.0	7.4	7.1	7.1	7.0	7.2	7.1	7.2	7.0
28	7.1	7.0	7.0	7.0	7.3	7.0	7.2	7.1	7.2	7.1	7.1	7.0
29	7.1	7.0	7.0	6.9	7.2	7.0	7.2	7.1	7.4	7.2	7.1	6.9
30	7.1	7.0	7.0	6.9	7.2	7.0	7.2	7.0	7.2	7.1	7.1	6.9
31	---	---	7.0	6.9	---	---	7.2	7.0	7.3	7.0	---	---
MONTH	7.6	7.0	7.3	6.9	7.5	6.9	7.7	6.9	7.7	6.9	7.4	6.9
YEAR												



## 08074710 Buffalo Bayou at Turning Basin, Houston, TX—Continued

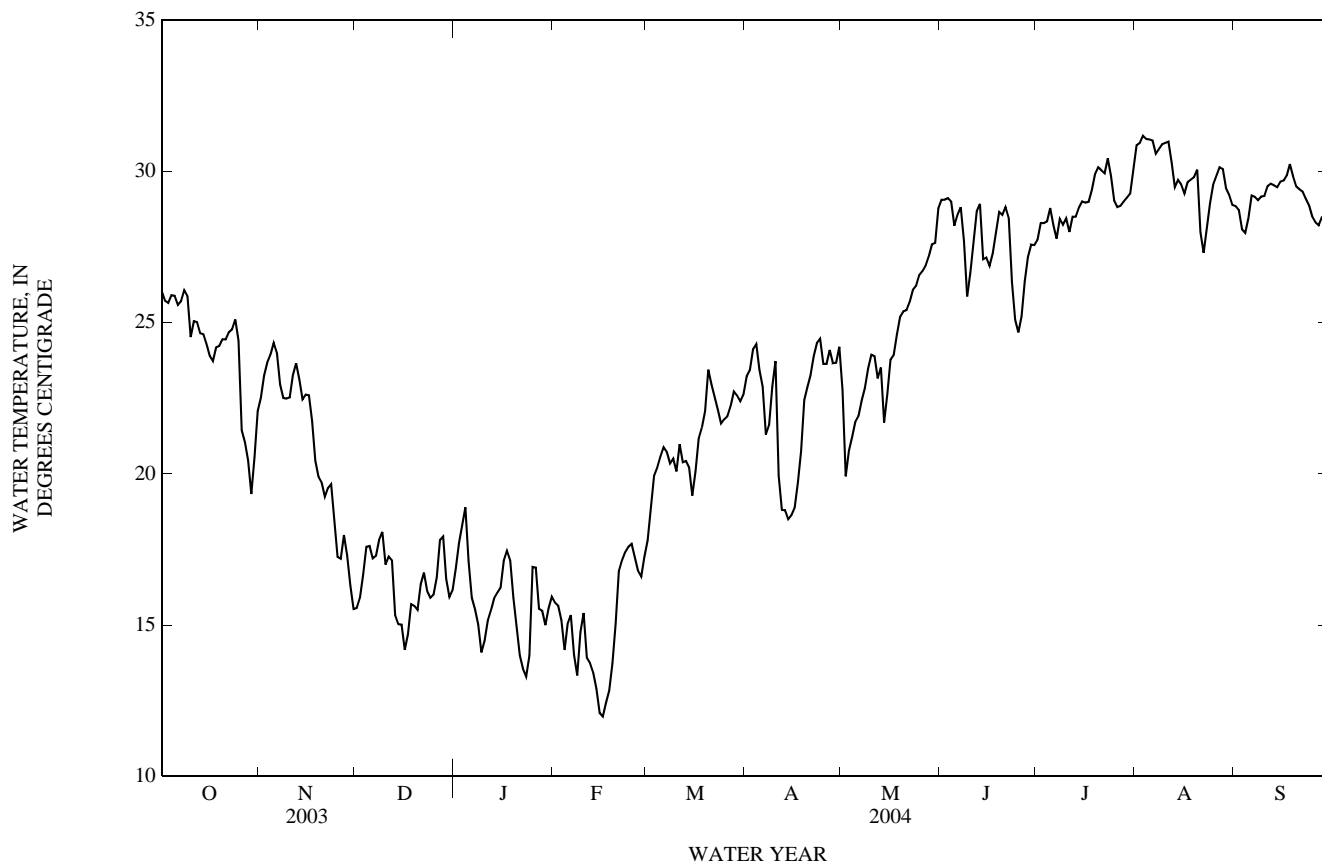
TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	27.0	25.1	26.0	23.5	21.8	22.5	16.1	15.1	15.6	17.5	16.2	16.9
2	26.7	24.6	25.7	24.7	22.4	23.3	16.7	15.3	15.9	18.6	16.4	17.7
3	26.7	24.8	25.7	24.9	22.8	23.7	17.8	16.1	16.7	19.0	17.4	18.3
4	27.0	24.9	25.9	25.3	23.0	23.9	18.4	16.8	17.6	20.2	17.5	18.9
5	26.7	25.2	25.9	25.3	23.5	24.3	18.9	16.9	17.6	18.6	16.0	17.1
6	26.0	25.2	25.6	24.6	23.3	24.0	18.6	16.2	17.2	16.9	15.4	15.9
7	26.8	25.0	25.7	23.8	22.4	23.0	18.0	16.8	17.3	16.6	14.9	15.5
8	27.1	25.4	26.1	23.7	21.8	22.5	18.9	16.6	17.8	16.2	14.4	15.0
9	26.5	24.8	25.9	23.2	21.9	22.5	19.8	17.2	18.1	14.6	13.3	14.1
10	24.9	24.4	24.5	23.0	21.7	22.5	17.9	16.1	17.0	15.1	13.5	14.5
11	26.0	24.5	25.0	24.1	22.5	23.3	18.6	16.2	17.3	16.1	14.3	15.1
12	25.4	24.8	25.0	24.6	23.0	23.7	18.6	15.7	17.1	16.4	14.6	15.5
13	24.8	24.4	24.6	24.3	21.8	23.1	15.8	14.9	15.3	16.6	15.2	15.9
14	24.8	24.4	24.6	23.7	21.1	22.5	15.6	14.6	15.0	17.1	15.2	16.1
15	24.6	23.9	24.3	23.1	22.3	22.6	15.4	14.6	15.0	17.2	15.4	16.2
16	24.1	23.5	23.9	23.0	22.1	22.6	14.9	13.3	14.2	18.0	16.1	17.1
17	24.4	23.2	23.7	22.4	20.6	21.7	16.3	13.8	14.7	17.7	16.4	17.5
18	25.4	23.3	24.2	20.6	20.2	20.4	17.9	14.5	15.7	17.6	16.5	17.1
19	25.6	23.3	24.2	20.2	19.7	19.9	17.2	14.8	15.6	16.6	15.4	15.9
20	25.7	23.8	24.4	20.2	19.4	19.7	17.1	14.5	15.5	16.9	13.6	15.0
21	25.0	23.9	24.4	19.6	19.0	19.2	17.7	14.9	16.4	14.5	13.8	14.0
22	25.8	23.8	24.7	20.0	19.3	19.5	17.8	15.9	16.7	13.9	13.3	13.6
23	26.1	23.9	24.8	19.8	19.4	19.7	17.7	15.3	16.1	13.6	13.1	13.3
24	25.8	24.4	25.1	19.4	18.0	18.5	16.7	15.1	15.9	14.9	13.3	14.0
25	25.1	22.0	24.4	18.0	16.8	17.3	16.7	15.5	16.0	17.4	14.6	16.9
26	22.5	20.8	21.4	17.6	16.9	17.2	18.1	15.4	16.6	17.4	15.5	16.9
27	21.4	20.7	21.0	18.4	17.5	18.0	19.3	16.1	17.8	16.0	14.8	15.5
28	21.8	18.7	20.4	18.0	16.7	17.3	19.0	16.9	17.9	15.9	15.0	15.5
29	19.9	18.8	19.3	17.0	15.4	16.3	17.0	16.0	16.5	15.4	14.7	15.0
30	21.9	19.3	20.6	16.0	15.2	15.5	16.3	15.1	15.9	16.5	14.9	15.6
31	23.3	20.9	22.1	---	---	---	16.7	15.0	16.2	16.7	15.5	15.9
MONTH	27.1	18.7	24.2	25.3	15.2	21.0	19.8	13.3	16.4	20.2	13.1	15.9
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	16.3	14.9	15.7	18.8	17.2	17.8	24.8	22.3	23.2	24.4	20.2	22.8
2	16.2	15.2	15.6	19.7	18.1	18.9	24.5	22.6	23.4	24.0	19.5	19.9
3	15.7	14.6	15.2	20.6	19.0	19.9	25.2	23.1	24.1	22.0	19.9	20.8
4	14.9	13.8	14.2	20.7	19.9	20.2	25.8	23.4	24.3	21.8	20.6	21.2
5	16.0	14.3	15.0	21.1	20.2	20.6	24.0	23.0	23.4	22.6	21.1	21.7
6	16.0	14.7	15.3	22.4	20.4	20.9	23.6	21.5	22.9	22.7	21.4	21.9
7	14.8	13.5	14.0	21.9	20.0	20.7	22.3	20.4	21.3	23.4	21.8	22.4
8	14.0	12.9	13.3	21.7	19.6	20.3	23.5	20.8	21.6	23.4	22.5	22.8
9	15.6	13.0	14.8	21.6	19.7	20.5	25.2	21.5	22.9	24.5	22.9	23.5
10	16.1	14.9	15.4	21.0	19.3	20.1	25.1	22.2	23.7	24.5	23.6	23.9
11	15.6	13.4	13.9	22.6	19.8	21.0	22.5	19.1	19.9	24.3	23.0	23.9
12	14.1	13.4	13.7	20.9	20.1	20.4	19.1	18.6	18.8	24.1	22.6	23.2
13	13.9	13.0	13.4	21.0	20.1	20.4	19.8	18.3	18.8	24.0	22.4	23.5
14	13.5	12.5	12.9	21.2	19.0	20.2	20.5	17.8	18.5	22.4	21.4	21.7
15	12.5	11.7	12.1	20.4	18.9	19.3	19.6	18.2	18.6	23.8	21.9	22.6
16	13.6	11.4	12.0	21.9	19.5	20.1	20.3	18.2	18.9	24.6	22.8	23.8
17	13.0	12.0	12.4	22.3	20.1	21.2	20.6	19.2	19.7	24.5	23.5	23.9
18	13.7	12.3	12.8	22.2	21.0	21.5	21.5	20.2	20.7	25.6	24.0	24.6
19	14.8	13.2	13.7	22.6	21.8	22.1	24.0	21.4	22.4	26.3	24.3	25.2
20	16.0	14.6	15.0	25.0	22.3	23.4	23.5	22.2	22.9	26.5	24.8	25.4
21	18.8	15.2	16.8	23.5	22.3	23.0	23.8	22.6	23.3	26.0	24.9	25.4
22	18.5	15.8	17.1	23.7	21.5	22.5	24.8	23.0	23.9	26.2	25.3	25.7
23	17.8	17.0	17.4	22.5	21.8	22.1	25.2	23.8	24.3	26.8	25.5	26.1
24	18.0	17.3	17.6	22.0	21.3	21.7	24.8	24.1	24.5	26.8	25.9	26.2
25	18.4	16.5	17.7	22.4	21.6	21.8	24.6	23.3	23.6	27.3	26.1	26.6
26	18.5	16.4	17.2	22.3	21.7	21.9	25.0	22.9	23.6	27.3	26.3	26.7
27	18.2	16.0	16.8	22.8	22.0	22.2	25.4	23.3	24.1	27.4	26.5	26.9
28	16.9	16.2	16.6	23.4	22.0	22.7	24.1	23.2	23.7	27.9	26.8	27.2
29	17.7	16.2	17.3	23.2	22.1	22.6	24.0	23.3	23.7	28.6	27.0	27.6
30	---	---	---	23.2	21.9	22.4	24.8	23.8	24.2	28.2	27.3	27.6
31	---	---	---	24.2	21.8	22.6	---	---	---	31.2	27.4	28.8
MONTH	18.8	11.4	15.0	25.0	17.2	21.1	25.8	17.8	22.3	31.2	19.5	24.3

08074710 Buffalo Bayou at Turning Basin, Houston, 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
1	30.2	28.1	29.1	28.9	27.0	27.7	32.8	29.6	30.9	30.1	28.0	28.8
2	30.0	28.5	29.1	29.4	27.5	28.3	32.3	30.0	30.9	29.6	28.1	28.7
3	30.9	28.6	29.1	29.4	27.8	28.3	32.9	30.1	31.2	28.9	27.1	28.1
4	29.8	28.3	29.0	30.4	27.2	28.3	32.6	30.3	31.1	29.7	27.0	28.0
5	28.8	28.0	28.2	30.4	28.0	28.8	32.1	30.3	31.1	30.1	27.4	28.5
6	29.5	27.8	28.6	30.6	27.6	28.2	31.6	30.4	31.0	30.7	28.5	29.2
7	29.4	28.3	28.8	28.7	27.2	27.8	31.8	29.3	30.6	29.9	28.6	29.2
8	28.7	25.6	27.7	29.4	27.9	28.4	32.1	29.5	30.7	29.7	28.6	29.0
9	26.7	25.2	25.9	28.8	27.8	28.2	32.1	30.1	30.9	30.7	27.9	29.2
10	27.4	26.0	26.6	31.2	27.8	28.4	32.1	30.3	30.9	30.5	27.9	29.2
11	28.8	26.7	27.6	28.2	27.8	28.0	32.0	30.0	31.0	30.8	28.4	29.5
12	30.1	27.6	28.7	30.4	27.6	28.5	31.2	29.5	30.3	30.6	28.5	29.6
13	30.2	25.5	28.9	30.3	27.8	28.5	31.1	27.9	29.5	30.0	28.9	29.5
14	28.5	26.1	27.1	29.7	28.2	28.8	31.4	28.5	29.7	30.1	29.0	29.5
15	27.7	26.8	27.2	29.3	28.4	29.0	30.8	28.5	29.6	30.4	28.7	29.7
16	27.1	26.7	26.9	29.8	28.5	29.0	30.7	28.1	29.3	30.6	28.9	29.7
17	28.6	26.3	27.3	29.5	28.6	29.0	31.0	28.3	29.6	31.5	29.2	29.9
18	31.1	26.6	28.0	30.7	29.0	29.4	30.7	28.8	29.7	32.1	29.2	30.2
19	30.1	27.5	28.7	30.9	28.8	29.9	30.4	29.1	29.8	31.2	29.2	29.8
20	30.8	27.3	28.6	31.8	29.2	30.1	30.9	29.3	30.1	30.5	28.8	29.5
21	30.2	27.6	28.8	31.1	29.3	30.0	29.7	26.5	28.0	30.6	28.4	29.4
22	29.1	27.9	28.5	30.7	29.5	29.9	28.5	26.7	27.3	30.0	28.8	29.3
23	27.9	25.9	26.3	32.6	29.4	30.4	29.1	27.2	28.1	30.3	28.2	29.1
24	26.0	24.6	25.1	30.5	28.6	29.8	30.2	28.1	28.9	29.6	28.3	28.9
25	24.9	24.4	24.7	30.6	28.2	29.0	30.7	28.7	29.6	29.7	27.6	28.5
26	25.6	24.7	25.2	29.4	28.3	28.8	31.0	29.0	29.9	29.2	27.5	28.3
27	28.1	25.4	26.4	30.3	27.7	28.9	31.4	29.3	30.1	29.2	27.2	28.2
28	28.8	26.4	27.2	30.0	28.4	29.0	30.9	29.5	30.1	29.6	27.5	28.5
29	28.4	27.1	27.6	30.0	28.4	29.1	30.3	29.1	29.4	29.6	27.6	28.5
30	28.0	27.4	27.6	30.3	28.5	29.3	30.5	28.0	29.2	29.7	27.8	28.7
31	---	---	---	31.8	28.9	30.1	29.7	27.8	28.9	---	---	---
MONTH	31.1	24.4	27.6	32.6	27.0	28.9	32.9	26.5	29.9	32.1	27.0	29.1
YEAR	32.9	11.4	23.0									



## SAN JACINTO RIVER BASIN

08074710 Buffalo Bayou at Turning Basin, Houston, TX—Continued

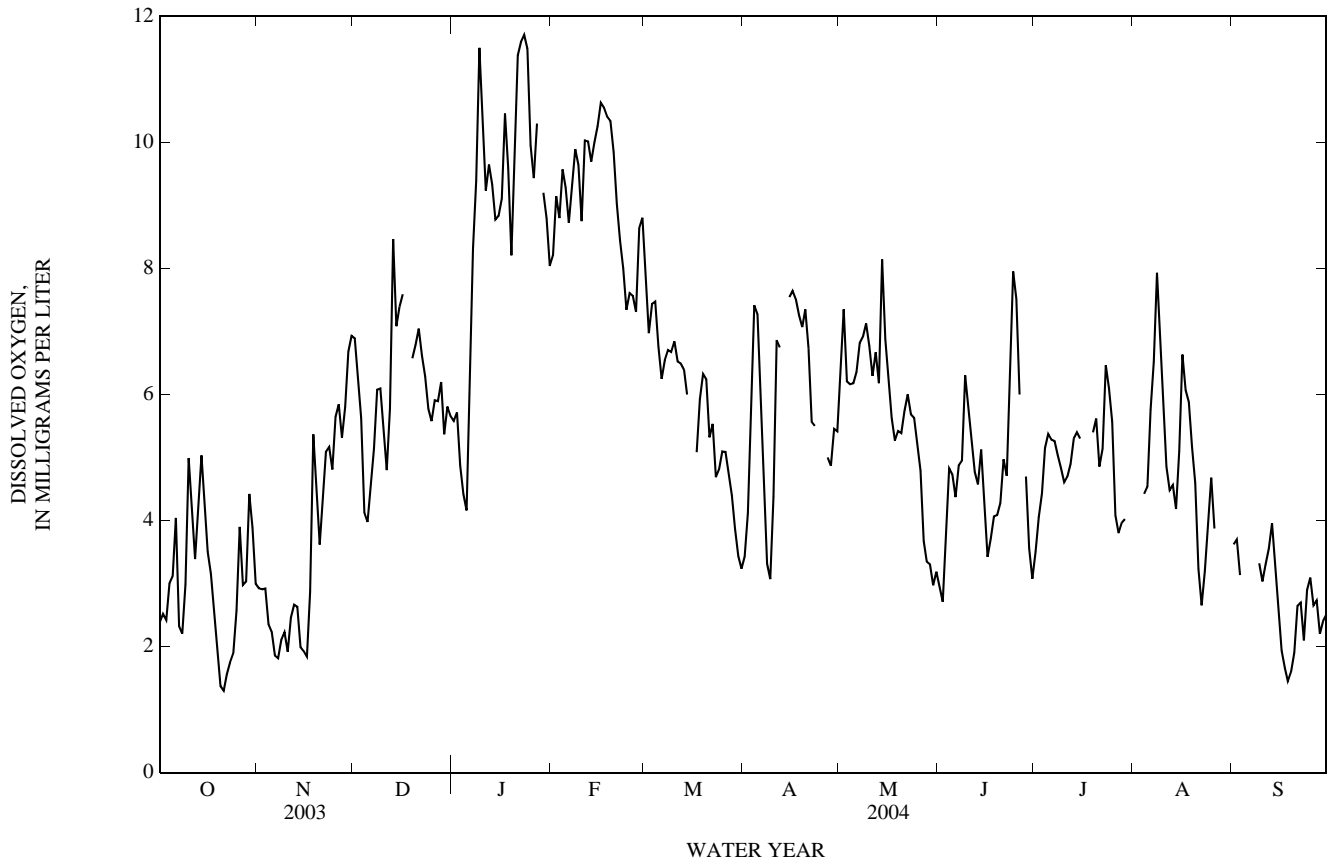
DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	4.2	1.0	2.4	3.6	2.1	2.9	7.9	5.3	6.9	6.3	4.4	5.6
2	4.3	1.0	2.5	3.9	1.9	2.9	7.6	4.0	6.3	6.5	5.0	5.7
3	3.7	1.2	2.4	3.5	2.2	2.9	6.6	3.1	5.6	5.9	3.5	4.9
4	5.0	1.2	3.0	4.4	1.6	2.4	5.8	2.2	4.1	5.2	2.9	4.4
5	5.3	1.1	3.1	3.2	1.6	2.2	5.5	2.2	4.0	6.4	1.4	4.2
6	5.6	2.5	4.0	3.4	1.0	1.9	5.7	3.1	4.5	7.8	2.1	5.7
7	3.5	1.4	2.3	2.7	0.9	1.8	6.2	2.5	5.1	9.7	6.6	8.3
8	3.6	1.4	2.2	3.1	1.0	2.1	7.1	4.8	6.1	11.2	7.8	9.4
9	5.4	1.6	3.0	3.7	1.0	2.2	6.9	4.7	6.1	12.9	10.3	11.5
10	6.3	3.5	5.0	3.6	1.1	1.9	7.0	3.4	5.4	11.4	8.7	10.2
11	6.0	2.6	4.2	3.8	1.3	2.5	6.1	1.8	4.8	10.8	7.6	9.2
12	4.5	2.1	3.4	3.9	1.4	2.7	7.1	4.4	5.8	11.3	8.4	9.6
13	6.2	3.0	4.3	4.0	1.4	2.6	9.3	6.2	8.5	10.4	8.0	9.3
14	5.9	4.0	5.0	2.9	1.4	2.0	8.2	4.5	7.1	10.1	7.8	8.8
15	5.7	3.3	4.3	3.3	1.1	1.9	8.2	6.4	7.4	9.8	7.8	8.8
16	5.1	3.0	3.5	3.5	1.1	1.8	8.9	4.2	7.6	10.1	8.3	9.1
17	3.8	2.6	3.2	5.3	1.4	2.9	---	---	---	11.3	9.0	10.5
18	3.2	1.7	2.6	5.9	4.7	5.4	---	---	---	10.7	8.8	9.6
19	3.2	1.3	2.0	5.1	3.9	4.5	7.9	5.3	6.6	10.4	5.0	8.2
20	2.6	0.6	1.4	4.5	3.0	3.6	7.5	5.7	6.8	12.1	7.6	9.9
21	2.5	0.5	1.3	5.9	2.4	4.4	7.7	6.3	7.0	12.2	10.5	11.4
22	2.8	0.6	1.6	6.6	3.7	5.1	7.4	6.0	6.6	12.6	10.5	11.6
23	2.8	1.1	1.8	6.1	4.3	5.2	7.4	2.6	6.3	12.7	10.7	11.7
24	3.8	0.6	1.9	6.1	2.4	4.8	7.4	2.3	5.8	12.2	10.7	11.5
25	4.6	1.5	2.6	7.0	3.5	5.6	6.5	3.4	5.6	11.8	8.6	10
26	4.8	3.1	3.9	6.6	4.9	5.8	6.4	5.0	5.9	11.4	8.0	9.4
27	3.9	1.8	3.0	6.1	4.2	5.3	7.0	4.1	5.9	11.6	7.6	10.3
28	5.4	1.7	3.0	7.2	4.2	5.8	7.1	3.8	6.2	---	---	---
29	6.3	1.9	4.4	7.4	5.2	6.7	7.1	0.9	5.4	9.4	8.7	9.2
30	5.0	3.0	3.9	7.6	5.5	6.9	6.5	4.0	5.8	9.3	8.2	8.8
31	3.9	1.6	3.0	---	---	---	6.2	5.0	5.7	8.6	7.5	8.0
MONTH	6.3	0.5	3.0	7.6	0.9	3.6						
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	9.5	7.4	8.2	9.0	6.4	7.9	4.5	2.4	3.4	7.5	5.7	6.5
2	9.4	8.8	9.1	7.8	5.2	7.0	5.8	2.8	4.1	7.8	6.8	7.4
3	9.5	8.2	8.8	8.1	5.9	7.4	8.1	3.8	5.9	7.4	4.9	6.2
4	9.8	8.8	9.6	7.8	6.6	7.5	11.0	5.5	7.4	7.6	3.6	6.2
5	9.7	8.2	9.3	8.1	5.0	6.8	9.1	5.8	7.3	7.5	4.7	6.2
6	9.2	8.2	8.7	7.0	5.2	6.2	7.4	5.1	6.0	7.8	3.9	6.4
7	9.8	8.2	9.3	7.2	5.7	6.5	5.8	3.5	4.8	7.8	5.0	6.8
8	10.5	9.0	9.9	7.7	5.5	6.7	5.1	1.8	3.3	8.0	5.1	6.9
9	10.4	8.0	9.6	7.6	5.4	6.7	5.0	1.5	3.1	8.0	4.5	7.1
10	9.3	8.3	8.8	7.8	5.7	6.8	7.2	2.2	4.4	7.7	5.7	6.8
11	10.7	8.5	10.0	8.0	5.0	6.5	7.9	4.0	6.9	7.6	4.9	6.3
12	10.5	8.5	10.0	7.6	5.3	6.5	7.8	5.3	6.7	7.6	5.3	6.7
13	10.5	8.5	9.7	7.3	5.3	6.4	---	---	---	8.0	4.4	6.2
14	10.6	9.3	10.0	7.1	5.1	6.0	---	---	---	8.8	7.3	8.1
15	11.0	9.2	10.3	---	---	---	8.1	6.9	7.5	8.6	5.3	6.9
16	11.3	9.7	10.6	---	---	---	7.9	7.0	7.6	7.6	4.2	6.2
17	11.0	9.7	10.6	5.7	4.4	5.1	7.7	7.2	7.5	6.7	3.5	5.6
18	10.9	9.6	10.4	6.8	4.6	5.9	7.4	7.0	7.3	6.4	3.0	5.3
19	11.0	9.6	10.3	6.7	5.6	6.3	7.4	6.7	7.1	6.6	3.9	5.4
20	10.2	9.4	9.8	7.2	5.4	6.2	8.2	6.3	7.3	7.3	3.0	5.4
21	9.5	8.2	9.0	6.2	4.2	5.3	7.5	6.0	6.7	7.0	3.5	5.7
22	9.0	7.3	8.4	6.8	4.3	5.5	6.1	5.2	5.6	7.2	4.2	6.0
23	9.2	5.6	8.0	5.6	3.4	4.7	5.9	5.3	5.5	7.3	4.1	5.7
24	8.5	5.2	7.3	5.4	4.2	4.8	---	---	---	6.7	4.0	5.6
25	8.1	6.1	7.6	5.9	4.4	5.1	---	---	---	6.4	4.0	5.2
26	8.3	6.2	7.6	5.9	4.4	5.1	---	---	---	5.7	3.5	4.8
27	8.5	5.9	7.3	5.9	3.6	4.8	5.6	4.4	5.0	4.7	2.9	3.7
28	9.2	7.3	8.6	5.5	3.2	4.4	5.8	3.7	4.9	3.9	2.8	3.3
29	9.1	8.2	8.8	4.9	2.5	3.9	5.9	4.9	5.5	4.8	2.4	3.3
30	---	---	---	5.2	2.4	3.4	5.9	4.2	5.4	4.5	2.1	3.0
31	---	---	---	4.1	1.8	3.2	---	---	---	4.9	1.6	3.2
MONTH	11.3	5.2	9.2							8.8	1.6	5.7





08074710 Buffalo Bayou at Turning Basin, Houston, TX—Continued



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08074800 Keegans Bayou at Roark Road near Houston, TX

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

DRAINAGE AREA.--12.7 mi<sup>2</sup>.

PERIOD OF RECORD.--Aug. 1964 to Sept. 1981 (daily mean discharge), Oct. 1981 to Sept. 1992 (annual maximum discharge). Oct. 1992 to current year (peak discharges greater than base discharge).

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929, 1957 adjustment; unadjusted for land-surface subsidence. Radio telemeter at station. Satellite telemeter at station.

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

AVERAGE DISCHARGE.--17 years (water years 1965-81), 12.3 ft<sup>3</sup>/s, (8,910 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,880 ft<sup>3</sup>/s, Mar. 4, 1992, gage height, 75.91 ft; no flow for many days.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 9	1845	2,570	74.13	Jan 17	0030	1,880	72.54
Nov 17	1600	*3,800	*76.43	Jun 17	0900	2,050	72.97
Nov 18	0000	2,240	73.40				

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08074810 Brays Bayou at Gessner Drive, Houston, TX

LOCATION.--Lat 29°40'21", long 95°31'41", Harris County, Hydrologic Unit 12040104, on right bank at downstream side of downstream bridge on Gessner Drive in southwest Houston, 0.10 mile below mouth of Keegans Bayou.

DRAINAGE AREA.--52.5 mi<sup>2</sup>.

PERIOD OF RECORD.--Feb. 1977 to Sept. 2001 (annual maximum), Oct. 2001 to current year.

REVISED RECORDS.--WDR TX-77-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929, 1957 adjustment; unadjusted for land-surface subsidence. Radio telemeter at station. Satellite telemeter at station.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft<sup>3</sup>/s, Mar. 4, 1992, gage height, 65.42 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	70	75	67	76	102	368	81	2,480	97	347	263	73
2	68	70	66	77	169	121	103	715	90	130	115	71
3	70	70	65	85	89	103	139	218	132	87	76	72
4	76	72	67	81	93	109	94	131	113	79	67	79
5	74	77	63	84	390	278	90	107	138	91	71	82
6	89	71	62	74	128	122	465	92	100	87	70	76
7	83	69	64	73	96	89	200	98	100	224	65	79
8	78	72	66	487	86	84	104	93	907	166	67	71
9	2,390	71	272	132	87	82	90	96	327	80	73	68
10	1,270	70	93	78	752	80	362	150	123	74	518	67
11	205	72	66	72	1,750	80	1,310	1,350	99	303	280	71
12	108	71	479	74	363	79	388	685	83	193	95	71
13	91	75	761	67	195	78	178	1,070	178	89	70	68
14	84	73	115	73	569	927	115	1,940	337	74	66	127
15	78	157	85	107	187	382	104	337	206	71	64	111
16	79	345	81	295	130	143	95	170	618	116	65	77
17	79	5,720	74	2,490	101	111	91	163	1,850	85	67	73
18	75	2,600	75	266	91	101	90	151	303	102	66	72
19	75	360	71	131	94	88	93	132	136	89	78	71
20	80	130	68	107	88	92	88	101	85	84	76	68
21	76	87	75	93	84	131	88	101	85	80	452	66
22	71	80	76	83	367	108	93	98	409	176	292	68
23	73	103	166	75	594	90	86	96	2,430	104	162	66
24	78	80	71	378	187	89	533	93	1,990	74	83	64
25	1,010	71	64	1,470	126	90	453	91	1,350	135	73	80
26	500	68	66	184	98	92	252	90	370	116	72	71
27	137	68	71	93	93	93	104	87	206	80	72	66
28	88	66	153	82	90	96	91	88	114	122	614	66
29	78	67	266	254	165	103	90	94	492	141	326	64
30	79	72	84	435	---	93	89	98	553	85	104	65
31	81	---	75	131	---	82	---	99	---	90	91	---
TOTAL	7,493	11,082	3,927	8,207	7,364	4,584	6,159	11,314	14,021	3,774	4,653	2,223
MEAN	242	369	127	265	254	148	205	365	467	122	150	74.1
MAX	2,390	5,720	761	2,490	1,750	927	1,310	2,480	2,430	347	614	127
MIN	68	66	62	67	84	78	81	87	83	71	64	64
AC-FT	14,860	21,980	7,790	16,280	14,610	9,090	12,220	22,440	27,810	7,490	9,230	4,410

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2004, BY WATER YEAR (WY)

MEAN	279	292	173	153	145	169	157	159	287	173	204	190
MAX	395	445	269	265	254	339	228	365	467	246	313	310
(WY)	(2003)	(2001)	(2002)	(2004)	(2004)	(2001)	(2002)	(2004)	(2004)	(2002)	(2002)	(2003)
MIN	201	99.5	105	90.0	68.5	92.9	93.4	63.8	143	99.0	150	74.1
(WY)	(2002)	(2002)	(2001)	(2002)	(2001)	(2002)	(2001)	(2003)	(2002)	(2001)	(2004)	(2004)

SUMMARY STATISTICS

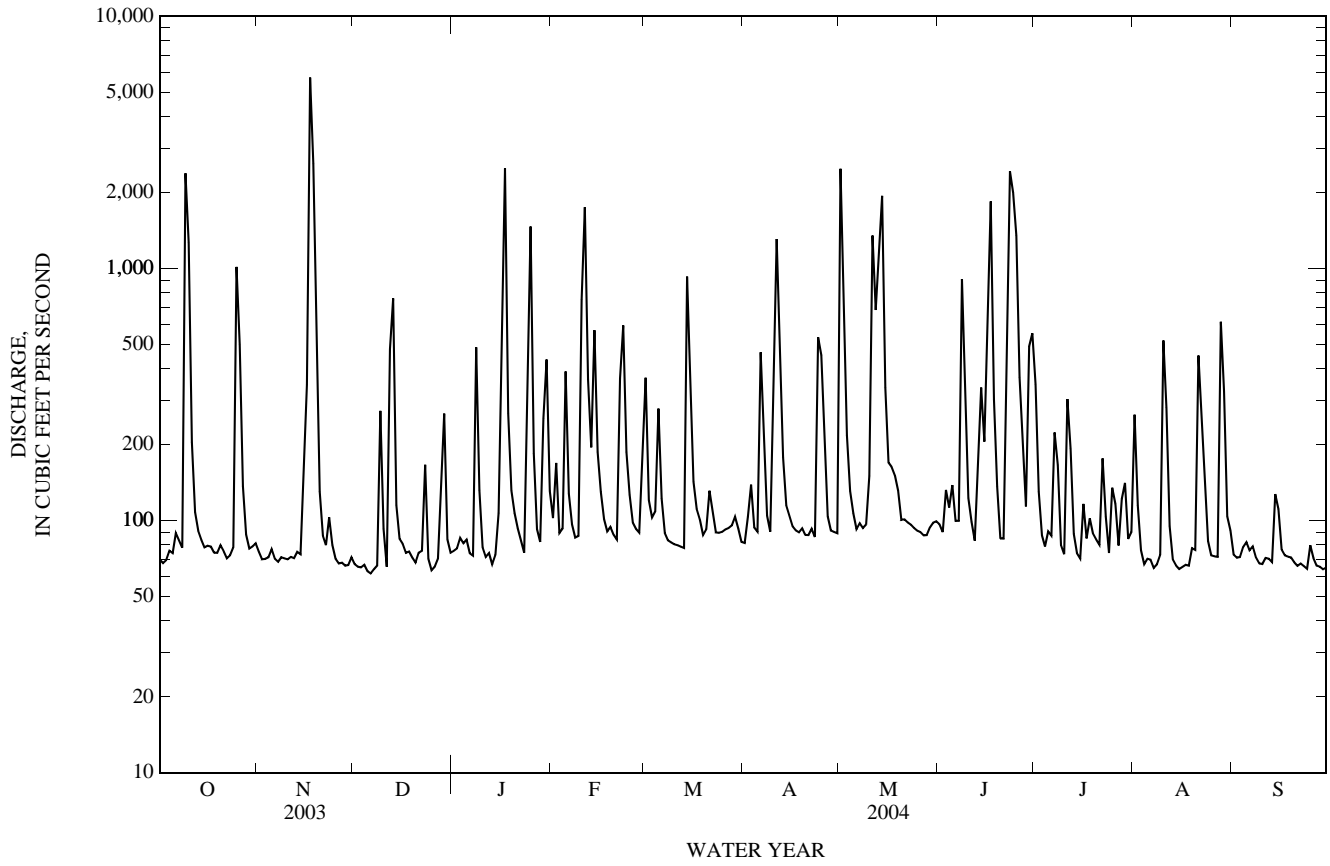
FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2001 - 2004

ANNUAL TOTAL	64,263	84,801	
ANNUAL MEAN	176	232	196
HIGHEST ANNUAL MEAN			232
LOWEST ANNUAL MEAN			172
HIGHEST DAILY MEAN	5,720	Nov 17	5,720
LOWEST DAILY MEAN	59	Jan 23	62
ANNUAL SEVEN-DAY MINIMUM	62	May 13	65
MAXIMUM PEAK FLOW			16,400
MAXIMUM PEAK STAGE			65.05
ANNUAL RUNOFF (AC-FT)	127,500	168,200	142,100
10 PERCENT EXCEEDS	353	452	391
50 PERCENT EXCEEDS	78	91	82
90 PERCENT EXCEEDS	63	68	64

08074810 Brays Bayou at Gessner Drive, Houston, TX—Continued



## 08075000 Brays Bayou at Houston, TX

LOCATION.--Lat 29°41'49", long 95°24'43", Harris County, Hydrologic Unit 12040104, near right bank at downstream side of Main Street Bridge in southwest Houston, 1.6 mi upstream from Harris Gully, and 11.6 mi upstream from Buffalo Bayou.

DRAINAGE AREA.--94.9 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1936 to current year. Water-quality records: Chemical data: Oct. 1968 to Sept. 1998. Biochemical data: Oct. 1968 to Sept. 1998. Pesticide data: Oct. 1968 to Sept. 1998.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.16 ft below NGVD of 1929, 1973 adjustment; unadjusted for land-surface subsidence. Prior to June 20, 1936, nonrecording gage, and June 20, 1936, to Nov. 25, 1959, water-stage recorder at site 0.8 mi downstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. No known regulation or diversions. Low flow is sustained mostly from wastewater effluent.

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

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	110	124	122	126	182	539	170	4,350	135	435	420	119
2	108	119	118	124	357	205	177	1,010	126	199	239	125
3	107	121	118	128	172	173	283	301	350	142	116	202
4	113	122	119	129	178	188	186	192	266	126	106	246
5	115	129	116	131	784	400	179	155	231	144	106	160
6	184	120	111	115	234	217	1,010	136	135	143	109	120
7	160	112	114	114	160	165	345	141	128	380	107	125
8	130	114	117	856	144	159	185	135	1,480	299	105	114
9	4,220	115	589	226	141	150	162	140	463	139	143	110
10	2,090	113	170	138	1,340	152	701	268	183	118	668	112
11	315	114	115	125	2,920	149	2,160	2,310	146	348	488	119
12	175	114	1,090	124	494	149	602	985	125	285	152	124
13	143	113	1,500	118	304	153	291	2,340	497	141	117	123
14	130	115	232	118	896	1,480	196	3,400	445	118	111	189
15	122	224	160	164	294	559	172	476	267	113	111	195
16	122	603	155	320	209	238	163	254	829	142	112	132
17	124	8,660	125	4,230	178	190	153	230	2,160	113	112	125
18	119	4,700	123	385	156	179	153	218	400	151	121	125
19	117	493	120	205	160	159	153	196	219	115	141	126
20	120	232	114	170	151	171	150	151	145	112	135	122
21	115	164	120	148	143	232	150	142	183	157	989	119
22	111	149	124	139	562	192	163	142	720	212	403	149
23	112	227	289	127	841	164	151	138	4,370	149	269	120
24	117	151	127	472	377	160	965	134	4,140	172	143	115
25	1,570	124	111	2,870	233	159	645	134	3,040	437	129	189
26	762	144	114	313	170	169	380	133	592	178	132	125
27	221	126	121	172	154	166	174	135	312	112	122	112
28	146	116	242	144	145	191	145	132	186	171	1,100	107
29	132	123	503	453	271	188	146	134	549	198	490	108
30	125	129	150	727	---	184	140	136	657	125	163	108
31	135	---	134	232	---	162	---	134	---	125	343	---
TOTAL	12,370	18,010	7,463	13,843	12,350	7,742	10,650	18,882	23,479	5,799	8,002	4,065
MEAN	399	600	241	447	426	250	355	609	783	187	258	136
MAX	4,220	8,660	1,500	4,230	2,920	1,480	2,160	4,350	4,370	437	1,100	246
MIN	107	112	111	114	141	149	140	132	125	112	105	107
AC-FT	24,540	35,720	14,800	27,460	24,500	15,360	21,120	37,450	46,570	11,500	15,870	8,060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2004, BY WATER YEAR (WY)

	173	189	167	194	185	150	162	193	227	139	149	188
MEAN	173	189	167	194	185	150	162	193	227	139	149	188
MAX	1,029	836	626	760	893	627	713	636	1,058	519	880	857
(WY)	(1995)	(2001)	(1992)	(1991)	(1992)	(1997)	(1991)	(1997)	(2001)	(1942)	(1983)	(1979)
MIN	0.58	0.68	5.98	1.90	9.72	1.36	1.40	0.95	3.78	1.72	0.74	1.12
(WY)	(1939)	(1939)	(1951)	(1940)	(1947)	(1940)	(1939)	(1937)	(1937)	(1937)	(1940)	(1939)

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

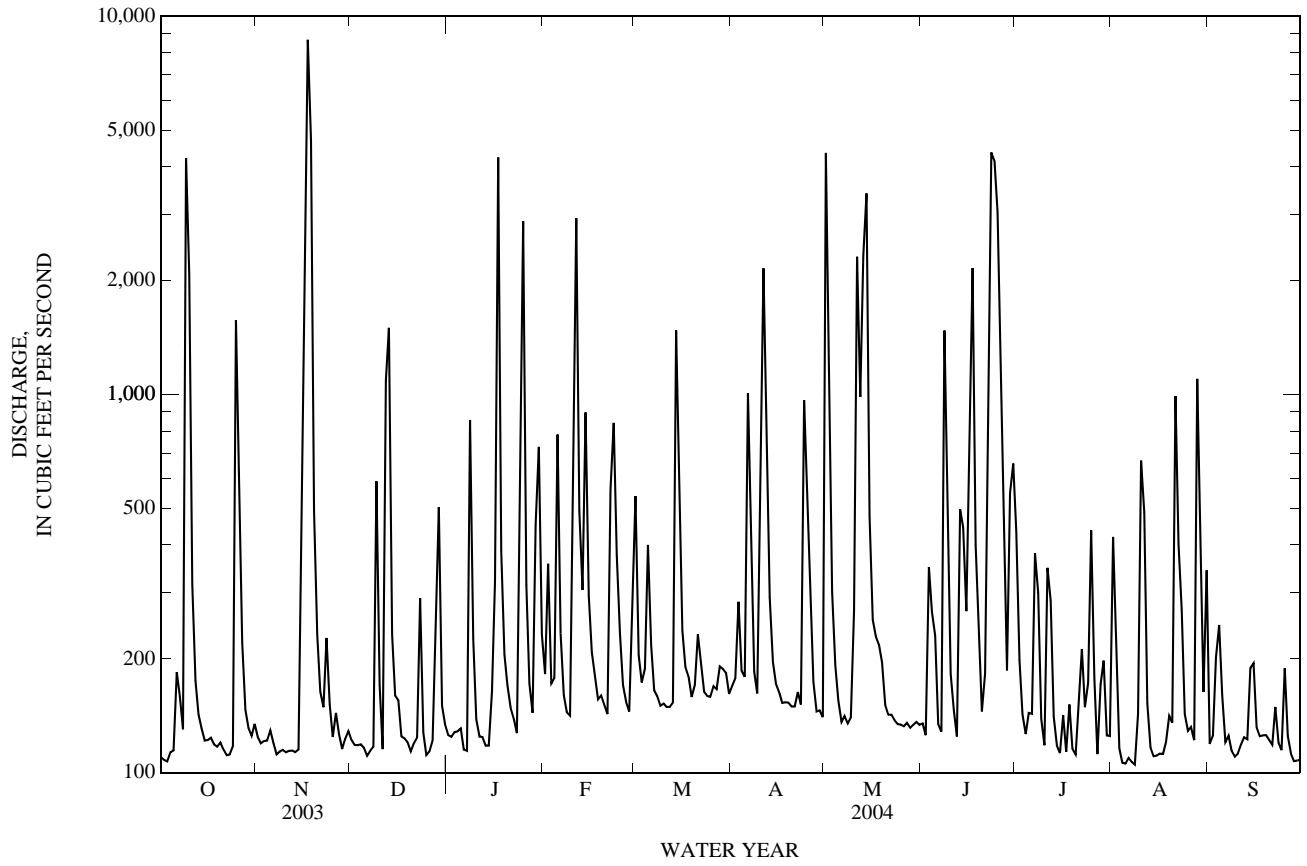
## FOR 2004 WATER YEAR

## WATER YEARS 1936 - 2004

ANNUAL TOTAL	109,951	142,655	
ANNUAL MEAN	301	390	177
HIGHEST ANNUAL MEAN			430
LOWEST ANNUAL MEAN			15.1
HIGHEST DAILY MEAN	8,660	Nov 17	16,300
LOWEST DAILY MEAN	100	May 25	0.10
ANNUAL SEVEN-DAY MINIMUM	103	May 19	0.19
MAXIMUM PEAK FLOW			33,000
MAXIMUM PEAK STAGE			54.13
ANNUAL RUNOFF (AC-FT)	218,100	283,000	128,100
10 PERCENT EXCEEDS	606	707	316
50 PERCENT EXCEEDS	132	153	83
90 PERCENT EXCEEDS	108	114	6.0



08075000 Brays Bayou at Houston, TX—Continued



08075110 Brays Bayou at Calhoun Sreet, Houston, TX

LOCATION.--Lat 29°42'50", long 95°20'21", Harris County, Hydrologic Unit 12040104, 5.8 mi upstream from Buffalo Bayou.

DRAINAGE AREA.--135 mi<sup>2</sup>.

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1997 to current year.

BIOCHEMICAL DATA: Oct. 1997 to current year.

REMARKS.--Water-quality samples were collected for selected storm events.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	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)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coliform, M-FC col/100 mL (31625)	Fecal streptococci KF MF, col/100 mL (31673)
OCT 09...	765	7.7	6.6	124	23.9	1.9	1.7	--	--
JAN 22...	760	16.8	8.2	196	18.0	4.6	3.3	30,000	14,000
FEB 26...	750	8.1	7.6	302	19.0	5.8	5.2	29,000	13,000
MAR 16...	760	8.4	7.5	255	18.5	6.5	5.3	15,000	61,000
AUG 07...	765	2.9	7.7	520	28.5	8.2	8.1	9,300	14,000
SEP 10...	758	6.4	7.1	454	25.5	2.9	2.1	72,000	10,000
11...	760	6.9	7.7	105	25.0	2.1	1.4	42,000	16,000
12...	765	7.4	7.5	265	27.0	2.8	1.6	48,000	11,000

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

Date	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)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coliform, M-FC col/100 mL (31625)	Fecal streptococci KF MF, col/100 mL (31673)
OCT 18...	760	8.4	7.3	119	24.0	2.8	2.3	48,000	9,000
NOV 12...	765	9.5	7.6	133	15.5	2.9	2.4	26,000	23,000
14...	760	10.9	7.4	116	16.1	2.7	1.1	15,000	21,000
15...	765	10.0	7.2	286	17.5	2.4	1.4	29,000	34,000
DEC 11...	765	10.8	7.9	109	11.0	4.2	3.5	32,000	42,000
MAY 12...	760	9.5	8.4	102	21.5	4.7	3.4	31,000	44,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	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)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coliform, M-FC col/100 mL (31625)	Fecal streptococci KF MF, col/100 mL (31673)
MAR 15...	765	7.1	8.1	300	21.5	8.9	6.7	5,100	34,000
APR 02...	765	7.6	8.1	290	21.0	8.1	6.1	25,000	24,000
12...	765	8.5	7.6	162	19.0	7.4	5.8	28,000	23,000
MAY 02...	760	8.6	7.7	167	20.0	7.8	6.5	30,000	40,000

## 08075110 Brays Bayou at Calhoun Sreet, Houston, TX—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF col/ 100 mL (31673)
NOV									
12...	762	8.6	8.3	77	20.5	5.7	4.5	18,000	20,000
18...	768	11.1	7.7	141	11.2	2.2	1.7	11,000	13,000
24...	760	8.6	8.1	132	18.9	4.7	3.3	31,000	38,000
JAN									
11...	768	11.0	7.9	146	10.5	8.7	5.1	13,000	22,000
16...	763	9.8	7.6	276	13.5	7.3	4.9	8,300	11,000
MAR									
28...	765	6.4	8.0	95	11.9	8.2	6.8	9,300	29,000
JUN									
05...	762	7.5	8.1	89	23.2	4.3	3.9	8,300	36,000
07...	761	8.0	8.3	76	23.7	3.9	3.0	26,000	85,000
09...	761	6.3	7.7	70	25.3	7.5	5.8	10,000	10,000
AUG									
31...	761	7.3	7.5	161	24.7	3.4	2.6	75,000	46,000
SEP									
01...	763	7.7	8.5	168	24.5	2.8	1.7	44,000	30,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF col/ 100 mL (31673)
OCT									
13...	768	8.2	7.6	150	28.9	3.4	2.8	49,000	39,000
DEC									
12...	770	8.4	8.1	103	19.1	4.9	4.7	29,000	35,000
APR									
08...	750	8.2	7.9	750	17.9	7.2	5.5	26,000	42,000
JUL									
13...	760	7.1	7.0	113	25.9	2.4	2.0	13,000	29,000
16...	765	6.4	7.8	250	26.8	3.1	2.1	45,000	25,000
AUG									
15...	758	9.6	8.0	81	23.8	4.1	2.8	36,000	46,000

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF col/ 100 mL (31673)
OCT									
24...	767	8.2	7.6	171	21.1	4.8	3.4	36,000	41,000
27...	760	7.9	7.6	250	21.8	3.9	2.9	15,000	19,000
28...	760	8.0	7.7	119	22.1	4.1	2.7	40,000	52,000
NOV									
04...	760	9.0	7.7	164	16.4	4.8	3.0	11,000	21,000
FEB									
21...	760	8.8	7.8	151	16.5	9.2	6.3	29,000	13,000
SEP									
21...	761	7.5	7.7	158	24.3	4.1	3.0	41,000	15,000

## SAN JACINTO RIVER BASIN

08075110 Brays Bayou at Calhoun Sreet, Houston, TX—Continued

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat un- f uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
OCT 09...	759	6.8	8.1	83	24.8	3.4	2.9	17,000	42,000
DEC 13...	761	8.8	7.7	199	15.6	8.4	5.0	14,000	15,000
JAN 25...	767	6.3	7.9	190	18.0	5.3	3.2	31,000	29,000
FEB 05...	760	9.1	7.8	371	14.8	7.9	5.4	15,000	20,000
10...	765	5.4	7.9	220	14.0	5.4	4.0	10,000	17,000
MAY 01...	760	8.5	6.7	116	19.1	5.0	4.0	34,000	46,000
11...	762	7.0	8.1	171	22.3	6.1	4.0	28,000	30,000
13...	765	7.9	8.0	170	21.0	5.7	4.5	40,000	36,000
JUN 08...	765	6.8	8.0	194	25.4	6.9	3.3	50,000	41,000

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08075120 Brays Bayou at Lidstone Avenue, Houston, TX

LOCATION.--Lat 29°42'43", long 95°19'21", Harris County, Hydrologic Unit 12040104, 4.6 mi upstream from Buffalo Bayou.

DRAINAGE AREA.--136 mi<sup>2</sup>.

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1997 to current year.

BIOCHEMICAL DATA: Oct. 1997 to current year.

REMARKS.--Water-quality samples were collected for selected storms.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
OCT 09...	765	8.0	6.4	128	24.0	1.4	.9	--	--
JAN 22...	760	16.8	8.2	196	18.5	4.6	3.1	32,000	17,000
FEB 26...	750	8.2	7.6	288	19.0	6.3	5.4	28,000	14,000
MAR 16...	760	8.6	7.2	219	18.5	6.6	5.0	31,000	58,000
AUG 07...	765	3.4	7.7	600	28.0	4.5	3.2	14,000	8,300
SEP 10...	758	5.1	7.2	594	26.0	2.4	1.4	19,000	3,300
11...	760	7.0	7.7	102	25.1	7.2	1.7	36,000	9,700
12...	765	6.9	6.7	260	27.0	2.8	1.9	34,000	11,000

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
OCT 18...	760	8.4	7.3	119	23.9	3.4	2.8	39,000	7,200
NOV 13...	765	10.1	7.7	132	15.6	5.7	3.4	12,000	17,000
14...	760	10.8	7.4	116	16.0	1.5	.5	17,000	24,000
15...	765	9.5	7.3	282	17.5	1.9	1.2	13,000	19,000
DEC 11...	765	10.9	7.9	107	11.0	5.3	4.2	36,000	45,000
MAY 12...	760	8.5	8.5	104	22.0	5.9	4.9	28,000	39,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
MAR 15...	765	6.9	8.3	217	21.0	7.8	6.0	7,700	41,000
APR 03...	765	7.4	7.8	277	21.0	8.5	6.0	16,000	36,000
12...	765	8.8	8.1	153	19.0	7.4	5.4	30,000	32,000
MAY 02...	760	8.4	7.5	167	20.0	7.4	5.9	25,000	31,000

## 08075120 Brays Bayou at Lidstone Avenue, Houston, TX—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF col/ 100 mL (31673)
NOV									
12...	762	9.1	8.1	79	20.1	4.7	3.6	29,000	25,000
18...	768	11.0	7.7	148	11.4	1.9	1.8	13,000	11,000
24...	760	8.6	8.1	134	18.9	4.8	3.6	11,000	26,000
JAN									
11...	760	11.0	8.0	138	10.4	8.1	5.9	16,000	17,000
16...	763	9.6	7.6	260	13.4	7.8	4.8	9,700	11,000
MAR									
28...	765	6.0	8.0	97	11.8	8.4	7.2	7,700	28,000
JUN									
05...	761	7.6	7.6	64	23.0	4.9	3.9	9,700	41,000
07...	761	8.0	8.1	80	24.0	3.8	3.5	29,000	88,000
09...	761	6.2	7.6	91	25.3	4.3	3.6	11,000	8,700
AUG									
31...	762	8.3	8.7	160	23.8	3.7	2.9	35,000	59,000
SEP									
01...	763	7.8	7.7	144	24.4	3.0	2.2	25,000	40,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF col/ 100 mL (31673)
OCT									
13...	--	8.1	7.7	148	28.8	4.8	3.8	60,000	48,000
DEC									
12...	--	9.1	8.0	98	19.1	5.2	3.9	26,000	29,000
APR									
28...	750	8.2	7.9	121	17.8	7.1	5.2	18,000	29,000
JUL									
13...	760	7.2	7.5	111	25.9	4.6	2.9	16,000	21,000
16...	765	6.3	7.7	233	26.5	3.1	2.1	40,000	23,000
AUG									
15...	--	7.7	8.0	86	23.7	3.5	2.8	32,000	39,000

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF col/ 100 mL (31673)
OCT									
24...	760	8.0	7.6	168	21.1	4.6	2.5	30,000	46,000
27...	760	8.0	7.6	224	21.7	3.9	2.4	29,000	16,000
28...	760	8.2	7.7	122	22.2	5.1	3.8	31,000	46,000
NOV									
14...	760	9.1	7.7	161	16.4	4.5	2.7	10,000	11,000
FEB									
21...	760	8.8	7.8	151	16.5	8.8	6.0	14,000	11,000
SEP									
21...	761	7.3	7.6	155	24.3	4.5	2.3	30,000	21,000

## SAN JACINTO RIVER BASIN

08075120 Brays Bayou at Lidstone Avenue, Houston, TX—Continued

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat un- f uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
OCT 09...	759	7.2	8.1	85	25.0	5.2	3.6	26,000	35,000
DEC 13...	768	8.8	7.9	196	15.5	8.7	5.8	13,000	14,000
JAN 25...	761	6.9	7.9	187	18.2	4.8	3.4	29,000	26,000
FEB 05...	768	9.5	7.8	262	13.8	8.1	5.1	17,000	22,000
10...	765	9.4	7.9	211	13.9	6.4	4.2	8,300	15,000
MAY 01...	760	8.5	6.9	111	19.1	5.1	3.8	38,000	40,000
11...	762	7.1	8.2	147	21.6	6.1	4.7	32,000	36,000
13...	765	7.9	8.7	156	21.6	6.3	5.1	31,000	40,000
JUN 08...	765	6.8	8.0	198	25.5	7.6	4.8	39,000	49,000



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08075400 Sims Bayou at Hiram Clarke Street, Houston, TX

LOCATION.--Lat 29°37'07", long 95°26'45", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of bridge on Hiram Clarke in southwest Houston, 12.7 mi upstream from Sims Bayou at Houston (station 08075500), and 19.7 mi upstream from mouth.

DRAINAGE AREA.--20.2 mi<sup>2</sup>.

PERIOD OF RECORD.--Aug. 1964 to Sept. 1978, Oct. 1996 to current year. Dec. 1978 to Aug. 1979 (discharge measurements and supplemental peak discharges only), Oct. 1980 to Sept. 1992 (annual maximum), Oct. 1992 to Sept. 1996 (peak discharges greater than base discharge).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929; unadjusted for land-surface subsidence. Satellite telemeter at station.

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

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	13	9.4	9.4	9.7	20	40	10	835	8.2	32	8.0	9.1
2	14	9.6	9.6	9.4	27	19	8.8	179	8.4	13	13	11
3	12	8.9	9.8	12	17	15	11	22	45	12	13	14
4	14	8.7	9.3	18	16	14	9.8	14	58	9.2	8.8	75
5	14	8.6	8.0	18	162	24	9.2	11	46	9.3	10	32
6	64	10	8.8	12	33	16	96	9.4	14	9.0	9.6	18
7	27	9.2	11	8.3	18	13	31	8.6	13	15	8.5	19
8	16	9.8	11	88	14	9.9	15	8.9	103	17	7.7	18
9	1,330	9.8	60	24	13	12	13	9.2	28	14	7.9	16
10	833	9.1	18	11	239	13	23	33	11	8.7	26	17
11	35	8.8	11	8.7	779	13	189	337	7.4	43	38	17
12	18	9.5	213	7.8	72	12	66	204	7.1	20	9.7	17
13	13	8.5	568	8.8	34	12	26	681	48	8.2	7.7	17
14	9.2	7.9	39	10	122	90	15	838	34	6.4	7.8	13
15	7.9	88	22	12	39	39	12	58	13	6.1	7.4	8.7
16	7.4	81	16	23	25	18	10	26	24	5.8	7.3	8.4
17	7.1	1,210	12	700	20	13	9.1	21	15	5.7	7.0	8.0
18	7.1	885	9.1	47	17	12	8.6	18	9.3	8.7	10	10
19	6.3	45	7.7	25	16	11	8.4	15	8.5	7.0	10	11
20	6.1	24	8.4	17	15	12	8.2	12	7.7	6.5	8.0	8.2
21	6.4	17	7.9	16	16	14	8.2	11	18	7.7	88	7.2
22	6.7	15	7.3	14	65	14	8.4	11	51	8.1	44	7.2
23	6.5	25	18	14	64	14	8.3	11	569	8.3	21	6.2
24	6.3	15	9.2	25	58	14	53	10	841	6.2	9.9	7.5
25	31	14	8.6	488	38	16	27	10	1,410	6.4	8.9	12
26	66	15	9.4	38	18	13	17	9.9	182	7.3	8.0	10
27	14	15	9.0	19	15	14	9.2	8.9	34	7.2	8.0	8.5
28	10	9.6	12	15	16	14	7.9	8.6	23	18	93	7.1
29	9.6	10	72	63	27	11	7.7	8.7	37	8.4	33	6.0
30	9.7	9.4	14	238	---	11	8.1	8.4	46	9.4	12	6.4
31	9.2	---	9.8	35	---	9.7	---	8.3	---	8.4	12	---
TOTAL	2,629.5	2,605.8	1,238.3	2,034.7	2,015	552.6	733.9	3,445.9	3,719.6	352.0	563.2	425.5
MEAN	84.8	86.9	39.9	65.6	69.5	17.8	24.5	111	124	11.4	18.2	14.2
MAX	1,330	1,210	568	700	779	90	189	838	1,410	43	93	75
MIN	6.1	7.9	7.3	7.8	13	9.7	7.7	8.3	7.1	5.7	7.0	6.0
AC-FT	5,220	5,170	2,460	4,040	4,000	1,100	1,460	6,830	7,380	698	1,120	844

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004h, BY WATER YEAR (WY)

MEAN	33.1	31.3	30.2	39.7	35.1	25.8	30.7	40.8	54.1	20.7	30.6	38.8
MAX	125	130	119	155	82.0	103	134	138	363	67.3	154	156
(WY)	(1998)	(2001)	(1987)	(1991)	(1985)	(1997)	(1997)	(1970)	(2001)	(2002)	(1983)	(1979)
MIN	5.45	4.69	6.91	5.96	7.10	3.62	4.96	7.25	6.18	3.69	5.35	8.19
(WY)	(1965)	(1968)	(1971)	(1965)	(1976)	(1965)	(1965)	(2003)	(1967)	(1965)	(1965)	(1965)

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

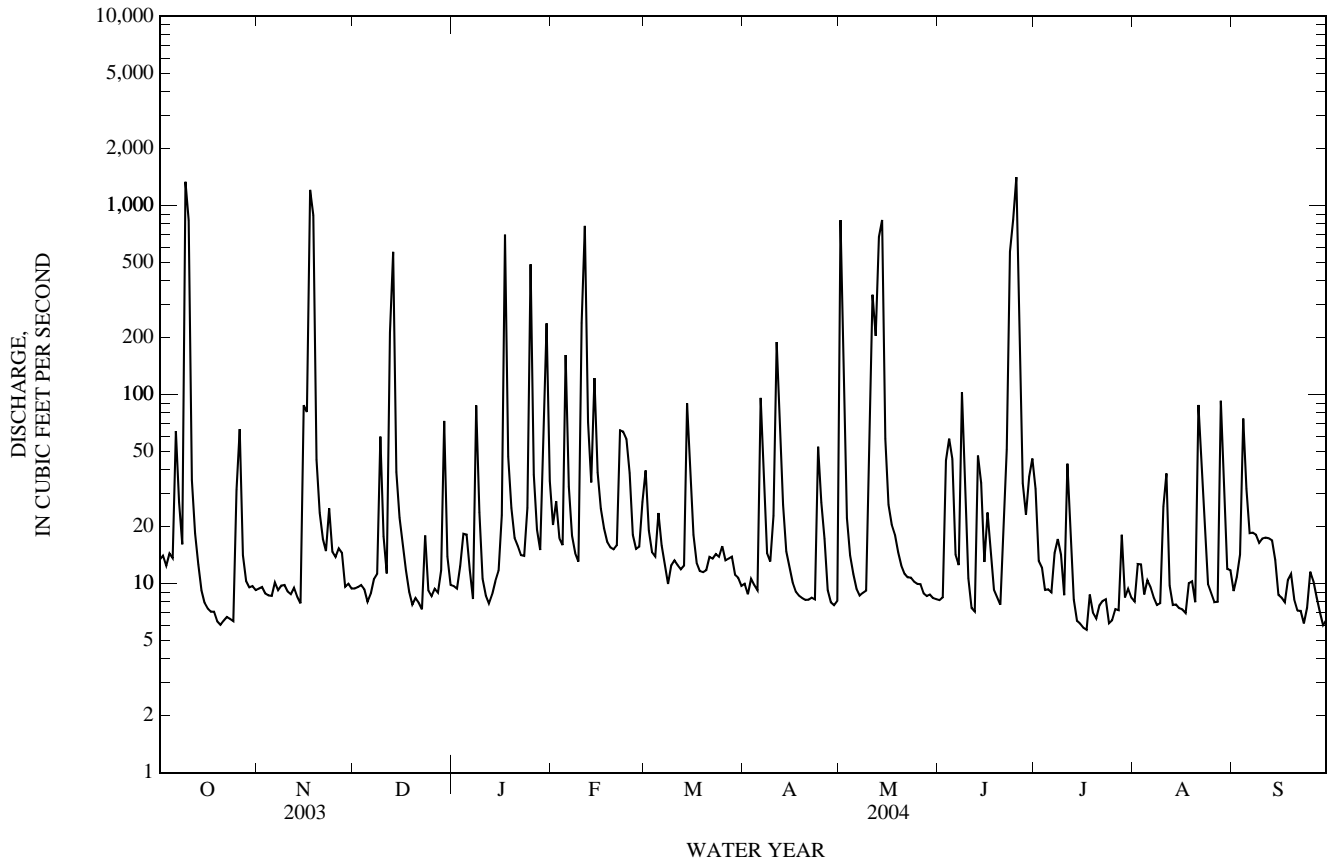
## FOR 2004 WATER YEAR

## WATER YEARS 1964 - 2004h

ANNUAL TOTAL	15,448.4	20,316.0	
ANNUAL MEAN	42.3	55.5	34.0
HIGHEST ANNUAL MEAN			68.9
LOWEST ANNUAL MEAN			10.7
HIGHEST DAILY MEAN	1,330	Oct 9	4,650
LOWEST DAILY MEAN	5.9	May 16	1.5
ANNUAL SEVEN-DAY MINIMUM	6.2	May 11	2.2
MAXIMUM PEAK FLOW			9,030
MAXIMUM PEAK STAGE			57.12
ANNUAL RUNOFF (AC-FT)	30,640	40,300	24,620
10 PERCENT EXCEEDS	72	66	47
50 PERCENT EXCEEDS	13	13	12
90 PERCENT EXCEEDS	7.7	7.7	6.2

h See Period of Record paragraph.

08075400 Sims Bayou at Hiram Clarke Street, Houston, TX—Continued



SAN JACINTO RIVER BASIN

08075500 Sims Bayou at Houston, TX

LOCATION.--Lat 29°40'27", long 95°17'21", Harris County, Hydrologic Unit 12040104, on left bank of State Highway 35 in southeast Houston and 7.0 mi upstream from mouth.

DRAINAGE AREA.--63.0 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1952 to Sept. 1995 (daily mean discharge), Oct. 1995 to current year (peak discharges greater than base discharge). Water-quality records: Chemical data: Oct. 1968 to Sept. 1998. Biochemical data: Oct. 1968 to Sept. 1998. Pesticide data: Oct. 1968 to Sept. 1998. Specific conductance: July 1993 to Sept. 1997. Water temperature: July 1993 to Sept. 1997. Dissolved oxygen: July 1993 to Sept. 1997.

REVISED RECORDS.--WSP 1922: 1960. 1975(M). WDR TX-77-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3.09 ft below NGVD of 1929, 1973 adjustment; unadjusted for land-surface subsidence. Satellite telemeter at station.

REMARKS.--Records fair. Major channel rectification completed late in the 1997 water year. No known regulation or diversions. Low flow is largely sustained by wastewater effluent from municipal and industrial uses. Stage-discharge relation is tidally affected at low flow.

AVERAGE DISCHARGE.--43 years (water years 1953-95), 96.5 ft<sup>3</sup>/s (69,900 acre-ft).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,800 ft<sup>3</sup>/s, June 9, 2001, Tropical Storm Allison (gage height, 27.91 ft); Maximum gage height, 33.23 ft, Aug. 18, 1983, Hurricane Alicia; minimum daily, 0.9 ft<sup>3</sup>/s, Aug. 7, 1955.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 10	0100	3,280	12.48	May 13	2315	4,480	13.96
Nov 18	0100	3,410	12.65	Jun 25	1415	*5,100	*14.67
May 11	2330	3,540	12.82				

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08075650 Berry Bayou at Forest Oaks Street, Houston, TX

LOCATION.--Lat 29°40'35", long 95°14'37", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of bridge at Forest Oaks Street in southeast Houston, 0.8 mi upstream from mouth of Berry Creek, and 1.7 mi upstream from Sims Bayou.

DRAINAGE AREA.--10.7 mi<sup>2</sup>.

PERIOD OF RECORD.--Apr. 1964 to Sept. 1966, Oct. 1967 to Sept. 1982 (discharge greater than base discharge), Oct. 1982 to current year (gage heights only). Water-quality records: Chemical data: Oct. 1968 to Sept. 1981. Biochemical data: Oct. 1968 to Sept. 1981. Pesticide data: Oct. 1968 to Sept. 1981. Water temperature: Apr. 1964 to Sept. 1981.

REVISED RECORDS.--WDR TX-80-2: 1979(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2.72 ft below NGVD of 1929, 1973 adjustment. June 1964 to Jan. 1965, auxiliary nonrecording gage 0.8 mi downstream at same datum. Jan. 1965 to Sept. 1982, auxiliary water-stage recorder 0.8 mi downstream at same datum. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records good. No known regulation or diversions. Low stages are affected by tides. Rises are occasionally affected by backwater from Sims Bayou. The U.S. Geological Survey report series "Hydrologic Data for Urban Studies in the Houston, Texas Metropolitan area", for water years 1965-84, contains additional storm runoff data for this station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft<sup>3</sup>/s, June 9, 1975; maximum gage height, 26.52 ft, June 9, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 14.28 ft, Oct. 9; minimum gage height, 3.61 ft, Jan. 6.

GAGE HEIGHT, FEET  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	6.37	4.40	6.17	4.43	5.27	3.80	5.52	4.39	6.35	4.41	5.83	4.10
2	6.66	4.57	6.38	4.67	5.22	3.90	5.40	3.89	6.14	4.24	5.73	3.96
3	6.68	4.36	6.32	4.41	5.53	4.26	5.37	3.80	5.96	3.90	5.96	4.17
4	6.22	4.19	5.94	4.42	4.99	3.73	5.52	3.85	6.68	4.79	6.43	4.72
5	6.02	4.04	5.67	4.51	4.60	3.70	5.27	3.71	9.21	5.04	5.92	4.10
6	7.36	3.97	5.51	4.23	4.86	3.63	4.94	3.61	5.69	4.04	5.38	3.85
7	6.00	4.31	5.43	4.10	5.35	3.72	5.85	3.87	4.49	3.89	4.86	3.83
8	5.99	4.57	5.72	3.90	5.56	3.84	7.21	4.78	5.87	4.20	5.06	3.77
9	14.28	4.97	5.72	3.98	5.68	4.43	5.98	3.93	5.89	4.15	4.49	3.76
10	8.50	5.15	6.15	4.07	4.58	3.73	5.02	3.86	6.80	4.21	5.53	3.69
11	6.09	4.46	6.38	4.52	5.23	3.71	5.29	3.91	11.69	5.42	5.21	3.73
12	6.12	4.35	6.07	4.02	11.12	4.75	5.23	3.99	5.42	4.13	5.17	3.66
13	6.11	4.52	5.58	3.67	9.34	4.16	5.18	3.84	5.36	3.95	5.71	3.67
14	6.16	3.96	6.30	4.77	4.97	3.89	4.90	3.97	5.73	4.26	6.06	3.83
15	6.29	4.93	6.46	4.51	5.87	4.49	5.10	4.02	4.36	4.04	5.64	3.94
16	6.48	4.82	6.30	4.59	5.98	3.75	6.55	4.06	5.05	3.87	5.39	3.78
17	6.27	3.96	8.92	5.38	3.91	3.68	9.85	5.28	4.79	3.80	5.30	3.76
18	5.64	4.19	10.23	4.19	4.45	3.69	5.84	3.95	4.90	3.82	5.47	3.95
19	6.09	4.37	4.19	3.83	4.36	3.66	4.48	3.84	5.30	3.82	5.27	3.97
20	6.08	4.18	5.62	3.86	4.87	3.65	5.57	3.84	5.34	3.82	5.55	4.07
21	5.73	4.06	6.03	4.52	5.48	3.74	5.56	3.80	5.14	3.80	5.32	3.80
22	5.33	3.96	5.89	4.03	5.58	3.81	5.18	3.77	5.77	4.40	5.50	4.08
23	5.26	3.79	6.36	4.43	5.66	3.81	5.04	3.76	5.63	4.42	6.32	4.59
24	5.83	4.10	4.74	3.88	4.83	3.72	5.66	4.10	5.70	4.42	6.48	4.98
25	5.97	4.18	6.12	3.88	5.81	4.00	8.83	4.37	5.59	3.92	6.23	4.36
26	5.54	3.92	6.42	4.30	6.07	4.13	5.41	3.91	4.50	3.80	6.11	4.38
27	5.61	3.77	6.39	3.73	5.73	4.34	3.92	3.75	5.29	3.75	6.51	4.52
28	5.75	3.86	3.77	3.64	5.75	4.08	5.42	3.73	6.12	3.89	6.22	4.57
29	5.79	3.81	4.75	3.73	6.42	4.03	5.96	4.19	6.55	4.59	5.26	3.71
30	6.32	4.21	5.51	3.83	5.50	3.89	5.55	4.21	---	---	5.14	3.67
31	6.26	4.16	---	---	5.81	4.62	6.09	4.00	---	---	5.06	3.66
MONTH	14.28	3.77	10.23	3.64	11.12	3.63	9.85	3.61	11.69	3.75	6.51	3.66



08075730 Vince Bayou at Pasadena, TX

LOCATION.--Lat 29°41'40", long 95°12'58", Harris County, Hydrologic Unit 12040104, on right bank of concrete-lined channel at end of West Ellaine Avenue in Pasadena and 2.4 mi upstream from mouth.

DRAINAGE AREA.--8.26 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1971 to current year. Water-quality records: Chemical data: May 1971 to Sept. 1973, Oct. 1976 to July 1979. Biochemical data: May 1971 to Sept. 1973, Oct. 1976 to July 1979. Pesticide data: May 1971 to Sept. 1973, Oct. 1976 to July 1979.

GAGE.--Water-stage recorder. Datum of gage is 2.54 ft below NGVD of 1929, 1973 adjustment; unadjusted for land-surface subsidence (levels by the U.S. Army Corps of Engineers). Satellite telemeter at station.

REMARKS.--Records 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	3.8	1.8	1.2	2.8	2.2	11	6.5	262	1.1	32	2.6	2.1
2	9.1	3.7	1.4	2.0	18	5.1	6.3	24	1.0	11	1.7	5.0
3	7.8	3.9	1.2	2.0	5.2	3.2	6.5	4.8	22	3.6	1.7	30
4	5.0	4.2	1.2	2.7	45	2.2	5.6	3.3	68	3.3	1.7	3.6
5	2.6	4.1	1.3	2.7	203	4.9	2.8	2.7	24	3.4	2.0	1.4
6	61	4.2	0.99	1.8	11	2.5	104	2.6	2.1	10	1.8	0.94
7	3.6	3.7	0.96	1.3	4.6	2.2	14	2.3	1.4	25	4.7	0.86
8	1.5	3.7	1.2	92	3.5	1.6	3.2	2.1	67	44	1.7	0.93
9	387	3.6	28	7.6	3.3	1.5	2.5	1.9	11	6.5	1.3	0.75
10	59	4.1	2.4	2.3	126	1.4	23	16	4.9	140	1.8	0.58
11	7.9	3.2	1.4	2.0	247	1.7	103	183	4.1	172	1.6	0.63
12	3.3	2.0	93	1.6	17	2.0	25	39	2.4	29	1.4	0.78
13	4.8	1.3	106	1.6	7.7	2.6	6.4	309	25	3.6	1.4	2.8
14	4.7	1.1	4.6	2.0	99	e4.0	3.2	128	13	4.4	1.5	14
15	1.7	6.8	2.4	2.1	8.7	e6.0	2.6	9.2	3.5	6.1	1.3	5.1
16	1.4	13	3.3	17	5.3	3.9	2.3	5.4	21	7.4	1.5	1.1
17	2.8	157	1.9	212	3.7	2.9	3.6	5.2	5.2	6.2	1.5	2.2
18	1.4	156	1.4	8.4	3.0	3.1	6.0	3.7	83	3.6	1.7	0.48
19	1.3	8.2	1.3	3.2	3.0	3.4	6.3	1.4	7.8	3.0	2.2	0.18
20	1.3	5.2	3.5	2.3	2.8	3.2	6.1	1.2	15	3.7	2.3	0.17
21	1.4	4.0	3.7	1.5	2.8	3.4	5.9	1.2	3.8	3.9	76	0.20
22	1.5	3.4	4.0	2.8	13	2.3	5.7	1.4	22	15	31	2.8
23	1.3	76	8.4	3.3	7.7	2.1	5.8	0.87	201	3.8	13	1.8
24	1.3	11	3.6	9.8	42	2.4	50	0.97	109	3.3	2.0	2.0
25	26	4.0	3.4	114	12	2.3	18	0.82	317	30	1.4	5.4
26	18	3.6	3.4	5.3	4.3	1.9	7.9	0.79	47	5.9	2.7	1.5
27	2.5	2.8	6.7	2.3	3.0	2.0	6.1	0.77	12	3.6	1.5	0.48
28	1.7	1.3	17	1.6	2.2	2.0	5.8	0.85	3.8	4.1	3.8	0.11
29	1.4	1.3	83	36	43	2.1	5.6	0.96	3.2	11	3.7	0.10
30	1.3	1.2	4.2	30	---	2.3	3.6	0.97	5.1	76	1.4	0.19
31	1.3	---	2.6	3.5	---	3.5	---	1.1	---	6.3	2.1	---
TOTAL	628.7	499.4	398.65	579.5	949.0	94.7	453.3	1,017.50	1,106.4	680.7	176.0	88.18
MEAN	20.3	16.6	12.9	18.7	32.7	3.05	15.1	32.8	36.9	22.0	5.68	2.94
MAX	387	157	106	212	247	11	104	309	317	172	76	30
MIN	1.3	1.1	0.96	1.3	2.2	1.4	2.3	0.77	1.0	3.0	1.3	0.10
AC-FT	1,250	991	791	1,150	1,880	188	899	2,020	2,190	1,350	349	175

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004, BY WATER YEAR (WY)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004			
MEAN	16.9	16.2	13.9	18.4	13.3	11.7	13.1	17.7	28.2	14.3	14.0	20.3																								
MAX	87.4	41.1	35.6	57.7	40.3	36.8	57.6	49.8	112	87.4	78.1	113																								
(WY)	(1995)	(1987)	(2002)	(1980)	(1992)	(1979)	(1991)	(1981)	(2001)	(1979)	(1983)	(1979)																								
MIN	0.64	1.71	1.49	1.82	1.67	0.59	0.39	0.90	1.81	1.66	1.31	1.04																								
(WY)	(1979)	(1981)	(1989)	(1996)	(1988)	(1996)	(1983)	(1988)	(1990)	(1982)	(1980)	(1982)																								

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

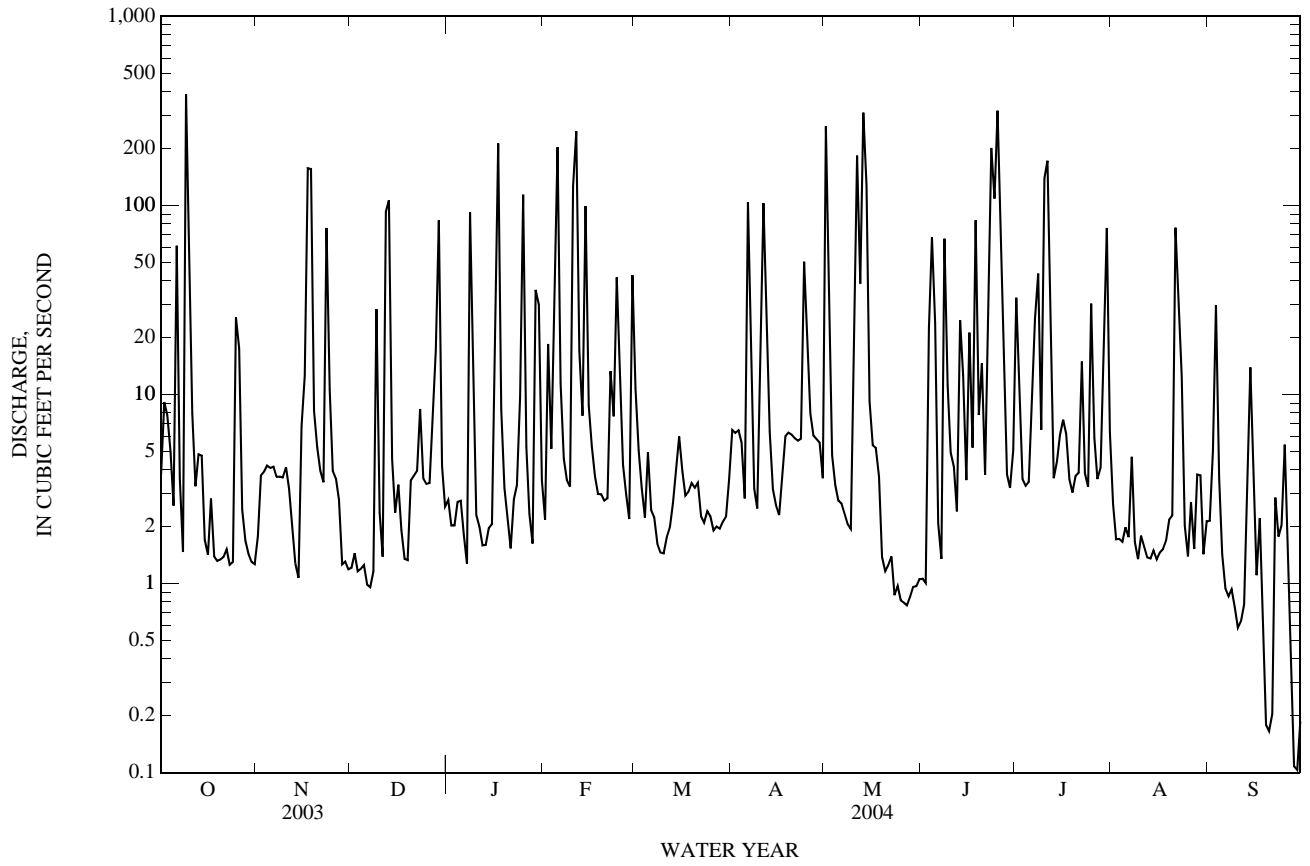
## WATER YEARS 1972 - 2004

ANNUAL TOTAL	6,003.69	6,672.03	
ANNUAL MEAN	16.4	18.2	16.5
HIGHEST ANNUAL MEAN			32.1
LOWEST ANNUAL MEAN			4.97
HIGHEST DAILY MEAN	387	Oct 9	1,720
LOWEST DAILY MEAN	0.16	Apr 2	0.00
ANNUAL SEVEN-DAY MINIMUM	0.41	Mar 9	0.04
MAXIMUM PEAK FLOW			6,870
MAXIMUM PEAK STAGE			23.38
ANNUAL RUNOFF (AC-FT)	11,910	13,230	11,950
10 PERCENT EXCEEDS	46	43	28
50 PERCENT EXCEEDS	3.0	3.5	2.3
90 PERCENT EXCEEDS	0.56	1.2	0.56

e Estimated



08075730 Vince Bayou at Pasadena, TX—Continued



## 08075770 Hunting Bayou at Interstate Highway 610, Houston, TX

LOCATION.--Lat 29°47'35", long 95°16'04", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of downstream service road bridge of Interstate Highway 610 in northeast Houston, and 8.8 mi upstream from mouth.

DRAINAGE AREA.--16.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Apr. 1964 to current year. Prior to Oct. 1973, published as "at U.S. Highway 90-A, Houston". Water-quality records: Chemical data: Oct. 1968 to Sept. 1998. Biochemical data: Oct. 1968 to Sept. 1998. Pesticide data: Oct. 1968 to Sept. 1998.

REVISED RECORDS.--WRD TX-74-2: Drainage area, WDR TX-78-2: Drainage area, WDR TX-79-2: Drainage area, WDR TX-87-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929, 1959 adjustment; unadjusted for land-surface subsidence. Prior to Oct. 1, 1972, water-stage recorder at site 1,800 ft upstream at same datum. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation or diversions. Low flow is largely maintained by wastewater and industrial effluent. The stage-discharge relation is affected by seasonal vegetal growth during most years.

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	4.8	5.5	13	15	18	31	6.3	777	6.7	43	5.9	3.0
2	4.8	5.1	11	12	36	18	6.5	188	6.6	12	9.1	14
3	5.2	5.1	11	11	17	15	6.9	47	15	9.4	6.2	74
4	4.9	5.3	10	10	15	12	9.1	15	89	7.7	4.6	8.9
5	4.8	4.9	10	10	244	17	6.2	11	68	13	4.3	5.1
6	4.8	4.9	9.5	8.7	51	13	118	11	11	12	4.2	3.3
7	4.6	4.5	9.1	8.4	21	10	42	8.2	9.5	21	4.2	3.1
8	4.7	4.8	8.8	102	16	9.2	10	7.5	208	7.9	4.3	2.7
9	264	4.5	105	32	14	8.6	7.9	7.2	68	6.5	4.5	2.9
10	229	4.5	28	15	121	8.5	87	8.4	12	57	10	2.8
11	19	4.8	14	12	372	8.2	385	238	8.5	130	15	2.7
12	11	4.3	68	11	73	8.1	95	163	7.0	36	5.0	2.7
13	8.9	4.2	285	10	35	8.2	31	266	131	8.9	4.5	2.7
14	7.0	4.6	34	10	110	112	15	468	190	7.0	3.4	9.5
15	6.9	4.6	31	10	37	47	14	52	25	6.1	3.6	5.6
16	6.5	68	13	16	23	18	9.7	19	54	5.4	3.7	3.5
17	5.9	e430	9.2	308	21	12	8.8	22	25	5.3	4.0	3.1
18	5.7	e420	8.5	45	15	10	8.3	15	15	5.1	3.9	2.7
19	5.6	35	7.6	29	16	9.3	8.0	11	10	4.9	3.8	2.9
20	5.5	15	7.3	16	16	8.9	7.4	9.8	52	4.9	3.2	2.7
21	5.5	12	8.8	12	15	11	7.6	11	50	6.2	75	3.4
22	5.4	13	9.4	10	63	9.2	7.7	17	37	12	12	6.8
23	5.4	65	38	9.7	119	7.9	6.9	11	316	5.3	6.7	4.0
24	5.1	50	12	40	41	7.7	84	7.7	709	4.6	4.1	3.3
25	94	26	9.6	408	45	7.9	63	8.6	1,000	127	3.5	3.9
26	51	14	9.1	55	23	7.1	24	7.6	238	59	3.2	3.2
27	12	19	14	20	18	7.8	10	6.4	58	7.8	3.3	3.2
28	7.7	13	16	15	16	7.6	8.6	5.7	23	6.0	3.0	2.9
29	6.5	13	82	29	22	7.7	7.4	6.3	32	6.2	4.7	3.5
30	6.0	13	17	41	---	7.2	8.1	5.7	35	16	3.4	4.9
31	5.6	---	12	22	---	6.4	---	5.9	---	15	3.3	---
TOTAL	817.8	1,277.6	920.9	1,352.8	1,633	471.5	1,109.4	2,437.0	3,509.3	668.2	229.6	197.0
MEAN	26.4	42.6	29.7	43.6	56.3	15.2	37.0	78.6	117	21.6	7.41	6.57
MAX	264	430	285	408	372	112	385	777	1,000	130	75	74
MIN	4.6	4.2	7.3	8.4	14	6.4	6.2	5.7	6.6	4.6	3.0	2.7
AC-FT	1,620	2,530	1,830	2,680	3,240	935	2,200	4,830	6,960	1,330	455	391

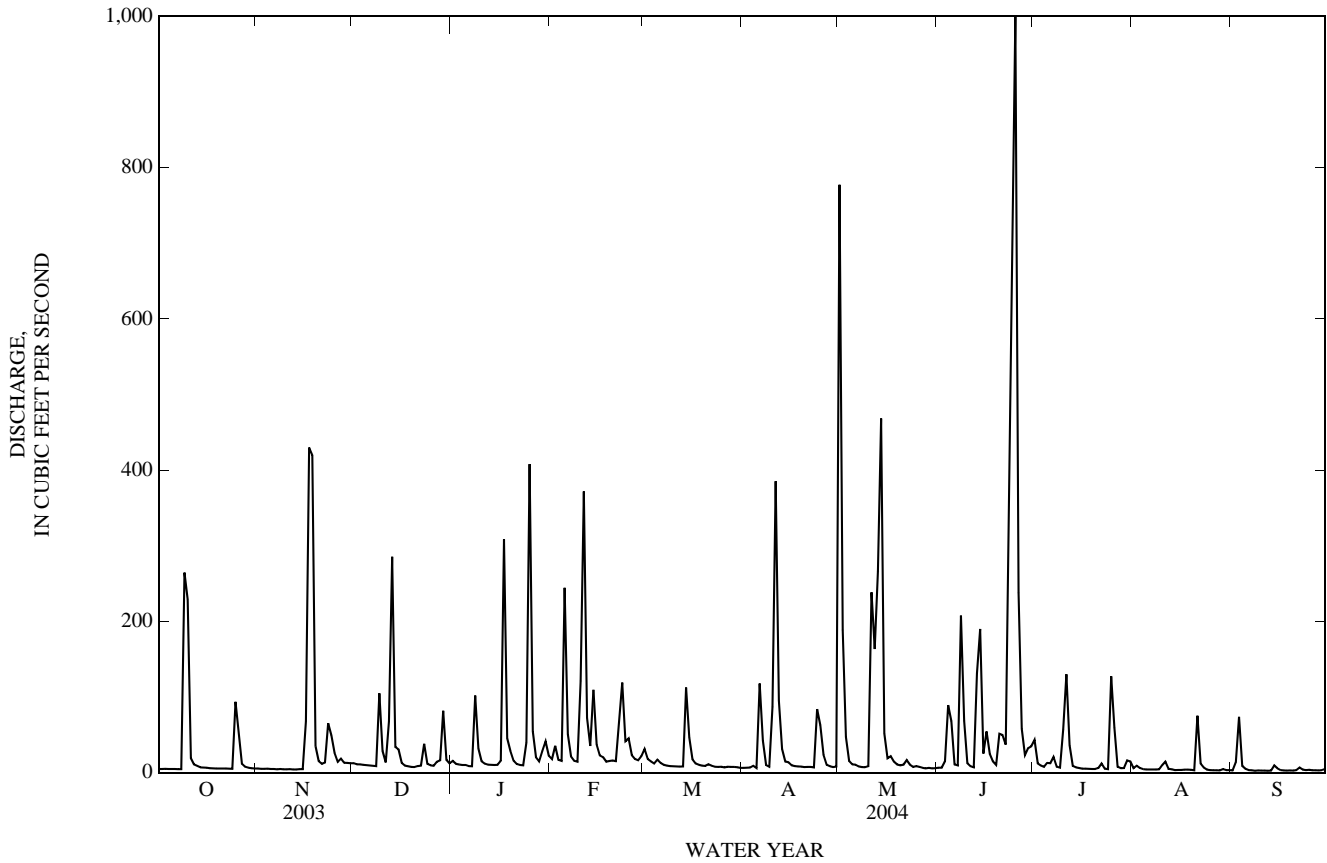
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	26.7	22.5	23.0	28.5	25.9	25.7	23.5	30.9	42.1	18.0	17.5	28.2
MAX	154	67.9	68.0	99.4	107	113	83.0	91.1	264	83.4	121	194
(WY)	(1995)	(1999)	(1987)	(1991)	(1992)	(1993)	(1979)	(1982)	(2001)	(1987)	(1983)	(1979)
MIN	3.75	2.92	4.55	5.05	3.46	3.16	2.88	3.42	2.55	1.95	3.35	5.92
(WY)	(1979)	(1968)	(1989)	(1996)	(1996)	(1965)	(1965)	(1996)	(1967)	(1964)	(1967)	(1982)

08075770 Hunting Bayou at Interstate Highway 610, Houston, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004	
ANNUAL TOTAL	10,080.3		14,624.1			
ANNUAL MEAN	27.6		40.0		26.2	
HIGHEST ANNUAL MEAN					48.6	2001
LOWEST ANNUAL MEAN					6.97	1965
HIGHEST DAILY MEAN	458	Feb 21	1,000	Jun 25	2,950	Jun 9, 2001
LOWEST DAILY MEAN	2.9	May 31	2.7	Sep 8	0.88	Aug 24, 1971
ANNUAL SEVEN-DAY MINIMUM	3.2	May 28	2.8	Sep 7	1.0	Jul 2, 1965
MAXIMUM PEAK FLOW			2,070	Jun 25	3,230	Jun 9, 2001
MAXIMUM PEAK STAGE			36.62	Jun 25	41.97	Jun 9, 2001
ANNUAL RUNOFF (AC-FT)	19,990		29,010		19,010	
10 PERCENT EXCEEDS	64		85		42	
50 PERCENT EXCEEDS	9.2		10		7.5	
90 PERCENT EXCEEDS	4.6		4.2		3.4	

e Estimated



08075900 Greens Bayou near U.S. Highway 75 near Houston, TX

LOCATION.--Lat 29°57'24", long 95°25'04", Harris County, Hydrologic Unit 12040104, on right bank at upstream side of bridge on Knobcrest Street, 600 ft downstream from Interstate Highway 45 access road bridge, 8.9 mi upstream from Greens Bayou (station 08076000), and 20.9 mi upstream from Halls Bayou.

DRAINAGE AREA.--36.6 mi<sup>2</sup>.

PERIOD OF RECORD.--Aug. 1965 to Sept. 1980 (daily mean discharge), Oct. 1980 to Mar. 1981 (discharge measurements and supplemental peak discharges only). Mar. 1981 to Sept. 1992 (daily mean discharge), Oct. 1992 to current year (peak discharges greater than base discharge).

REVISED RECORDS.--WDR TX-76-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929; unadjusted for land-surface subsidence. Prior to July 19, 1989, water-stage recorder at site 600 ft upstream at present datum. Radio telemeter at station. Satellite telemeter at station.

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

AVERAGE DISCHARGE.--26 years (water year 1966-80, 1982-1992), 40.5 ft<sup>3</sup>/s (29,370 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft<sup>3</sup>/s, June 26, 1989, gage height, 90.20 ft, from floodmark at former site; maximum gage height, 91.09 ft, Feb. 21, 1969, at former site, occurred prior to 1980-81 channel rectification; minimum daily discharge, 0.16 ft<sup>3</sup>/s, Oct. 21, 22, 1969.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 9	1915	3,810	80.29	Jan 25	0200	3,180	79.28
Nov 17	1600	*10,700	*88.59	Apr 10	2215	5,560	82.76
Jan 17	0145	4,220	80.91	May 1	1345	3,580	79.92

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08076000 Greens Bayou near Houston, TX

LOCATION.--Lat 29°55'05", long 95°18'24", Harris County, Hydrologic Unit 12040104, on right bank at downstream side of bridge on U.S. Highway 59 access road, 10.5 mi northeast of Houston, 12.0 mi upstream from Halls Bayou, and 23.4 mi upstream from mouth.

DRAINAGE AREA.--68.7 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1952 to current year. Water-quality records: Chemical data: Oct. 1968 to Sept. 1998. Biochemical data: Oct. 1968 to Sept. 1998. Pesticide data: Oct. 1968 to Sept. 1998.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.66 ft below NGVD of 1929, 1957 adjustment; unadjusted for land-surface subsidence. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation or diversions. Channel was rectified during water years 1974-75. Low flow is sustained by industrial releases and wastewater effluent. 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	32	32	32	39	75	345	39	1,790	32	374	50	32
2	26	29	31	38	324	107	37	648	31	129	40	64
3	26	29	31	36	95	70	33	137	68	88	38	243
4	27	28	31	33	69	64	34	82	120	72	36	77
5	34	27	30	34	307	143	34	65	118	59	35	51
6	459	26	29	31	107	78	116	54	60	53	33	36
7	53	24	30	30	68	54	89	48	47	52	33	42
8	31	25	32	208	60	49	43	43	769	69	32	35
9	1,140	26	146	79	59	49	33	39	405	76	32	34
10	912	26	70	41	294	47	311	55	86	74	38	33
11	112	25	37	36	787	44	2,030	661	61	75	109	32
12	59	26	127	33	249	41	394	440	40	47	39	34
13	46	25	583	32	131	40	166	702	871	44	31	36
14	41	24	68	32	173	596	87	1,450	959	41	29	75
15	37	68	47	32	135	245	66	261	1,240	43	29	48
16	37	761	42	68	91	99	57	127	471	43	28	37
17	35	4,500	38	1,710	75	72	49	217	579	41	29	36
18	30	3,850	39	179	67	61	38	126	337	38	45	33
19	30	342	33	76	64	54	34	137	104	39	121	33
20	31	121	32	59	60	50	31	68	74	39	114	33
21	30	78	31	55	53	243	32	56	62	51	623	37
22	29	55	31	48	128	95	30	48	358	59	155	37
23	28	59	145	44	371	58	31	45	1,300	71	76	36
24	28	52	47	279	99	51	234	39	1,790	240	50	35
25	245	42	34	1,480	352	50	237	38	1,410	72	40	33
26	261	44	30	179	103	49	149	36	954	72	36	32
27	51	44	30	81	68	45	61	37	746	43	33	31
28	36	34	57	60	58	57	43	35	704	81	36	28
29	32	33	276	193	135	77	36	34	961	97	40	25
30	30	31	53	443	---	60	33	33	453	60	35	24
31	30	---	41	108	---	45	---	32	---	45	33	---
TOTAL	3,998	10,486	2,283	5,796	4,657	3,138	4,607	7,583	15,210	2,387	2,098	1,362
MEAN	129	350	73.6	187	161	101	154	245	507	77.0	67.7	45.4
MAX	1,140	4,500	583	1,710	787	596	2,030	1,790	1,790	374	623	243
MIN	26	24	29	30	53	40	30	32	31	38	28	24
AC-FT	7,930	20,800	4,530	11,500	9,240	6,220	9,140	15,040	30,170	4,730	4,160	2,700

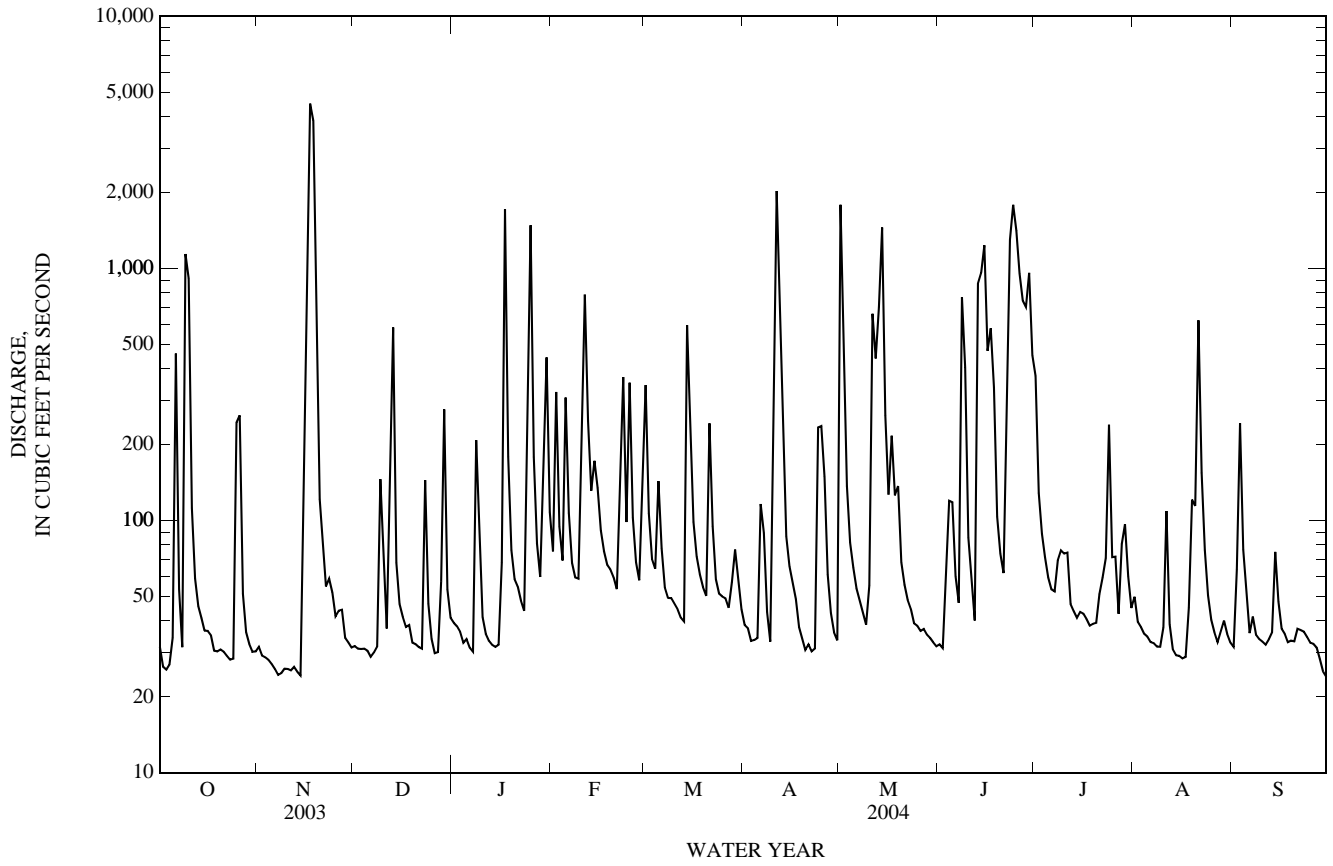
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2004, BY WATER YEAR (WY)

	MEAN	85.7	80.7	76.5	81.3	92.7	73.6	83.2	115	130	57.4	52.2	84.1
MAX	519	350	293	284	353	374	328	480	1,211	291	330	443	
(WY)	(2003)	(2004)	(1992)	(1991)	(1961)	(1997)	(1973)	(1989)	(2001)	(1961)	(1983)	(1961)	
MIN	0.00	0.00	0.00	0.06	0.35	0.05	0.13	0.25	0.12	0.45	0.81	1.97	
(WY)	(1953)	(1956)	(1955)	(1957)	(1957)	(1955)	(1956)	(1956)	(1954)	(1957)	(1957)	(1956)	

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1953 - 2004	
ANNUAL TOTAL	43,506		63,605			
ANNUAL MEAN	119		174		84.2	
HIGHEST ANNUAL MEAN					194	
LOWEST ANNUAL MEAN					6.82	
HIGHEST DAILY MEAN	4,500	Nov 17	4,500	Nov 17	22,300	Jun 9, 2001
LOWEST DAILY MEAN	24	Nov 7	24	Nov 7	0.00	Oct 1, 1952
ANNUAL SEVEN-DAY MINIMUM	25	Nov 7	25	Nov 7	0.00	Oct 1, 1952
MAXIMUM PEAK FLOW			12,100		26,500	
MAXIMUM PEAK STAGE			64.59		67.81	
ANNUAL RUNOFF (AC-FT)	86,290		126,200		60,990	
10 PERCENT EXCEEDS	213		380		148	
50 PERCENT EXCEEDS	44		50		26	
90 PERCENT EXCEEDS	30		30		2.7	

08076000 Greens Bayou near Houston, TX—Continued



## SAN JACINTO RIVER BASIN

08076180 Garners Bayou near Humble, TX

LOCATION.--Lat 29°56'03", long 95°14'02", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of upstream bridge on Beltway 8, 0.2 mi downstream from Williams Gully, 1.2 mi upstream from Greens Bayou, and 4.5 mi southeast of Humble.

DRAINAGE AREA.--31.0 mi<sup>2</sup>.

PERIOD OF RECORD.--Feb. 1986 to Sept. 1993, (daily mean discharge), Oct. 1993 to Sept. 2001 (peaks above base discharge), Oct. 2001 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929, 1978 adjustment, levels furnished by Harris County Flood Control District. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. No known regulation or diversions. Low flow is sustained by wastewater effluent. Minor channel rectification made in 1988.

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	12	15	15	14	39	150	17	851	31	172	22	19
2	12	16	16	14	142	50	17	405	32	72	22	24
3	12	16	15	14	54	34	17	87	40	49	17	196
4	10	16	14	14	35	29	18	39	218	31	19	47
5	12	15	15	14	220	44	18	26	220	45	19	21
6	54	15	13	13	83	33	38	21	52	45	20	17
7	20	16	13	13	44	24	43	23	40	25	16	19
8	13	15	13	94	29	21	22	20	557	24	15	19
9	1,040	15	60	39	27	19	19	18	303	23	17	17
10	1,100	16	32	17	137	18	69	22	75	22	17	16
11	122	17	16	15	735	17	588	427	49	29	19	16
12	46	17	45	14	193	17	168	492	38	25	17	16
13	25	15	221	14	75	17	79	423	112	23	18	16
14	21	16	32	14	178	217	42	889	286	20	17	34
15	18	24	21	14	79	130	28	192	417	21	14	37
16	17	983	16	19	47	48	23	84	290	21	16	18
17	17	2,450	15	730	34	30	19	66	228	20	17	16
18	16	2,400	14	109	28	23	18	61	321	19	16	15
19	16	187	15	47	27	20	19	45	78	20	23	15
20	16	67	16	28	24	19	18	37	52	20	43	15
21	16	37	14	20	21	42	19	36	86	19	104	14
22	15	25	14	18	53	28	19	36	105	32	60	14
23	15	29	56	18	190	20	17	32	669	28	32	15
24	16	25	20	79	59	19	78	31	1,600	20	24	14
25	21	20	14	735	102	18	111	32	1,190	20	22	15
26	33	22	13	122	45	18	85	31	479	19	20	15
27	19	28	14	51	29	18	30	30	255	20	19	15
28	16	16	15	33	25	18	20	31	252	22	16	15
29	15	15	65	57	61	25	18	33	665	30	16	14
30	15	14	23	219	---	23	17	29	380	22	17	14
31	15	---	16	64	---	18	---	29	---	18	19	---
TOTAL	2,795	6,562	881	2,666	2,815	1,207	1,694	4,578	9,120	976	733	738
MEAN	90.2	219	28.4	86.0	97.1	38.9	56.5	148	304	31.5	23.6	24.6
MAX	1,100	2,450	221	735	735	217	588	889	1,600	172	104	196
MIN	10	14	13	13	21	17	17	18	31	18	14	14
AC-FT	5,540	13,020	1,750	5,290	5,580	2,390	3,360	9,080	18,090	1,940	1,450	1,460

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2004h, BY WATER YEAR (WY)

	62.3	60.3	62.9	61.3	55.7	67.4	48.4	69.5	173	30.7	23.0	33.1
MEAN	62.3	60.3	62.9	61.3	55.7	67.4	48.4	69.5	173	30.7	23.0	33.1
MAX	304	219	187	158	174	238	144	265	595	113	40.7	87.8
(WY)	(2003)	(2004)	(1992)	(1992)	(1992)	(1992)	(1993)	(1989)	(2001)	(1987)	(2002)	(2002)
MIN	5.00	5.37	7.28	21.9	8.44	14.5	7.94	10.1	8.82	6.48	5.13	6.74
(WY)	(1988)	(1989)	(1989)	(2002)	(1989)	(1987)	(1987)	(2003)	(1990)	(1986)	(1990)	(1988)

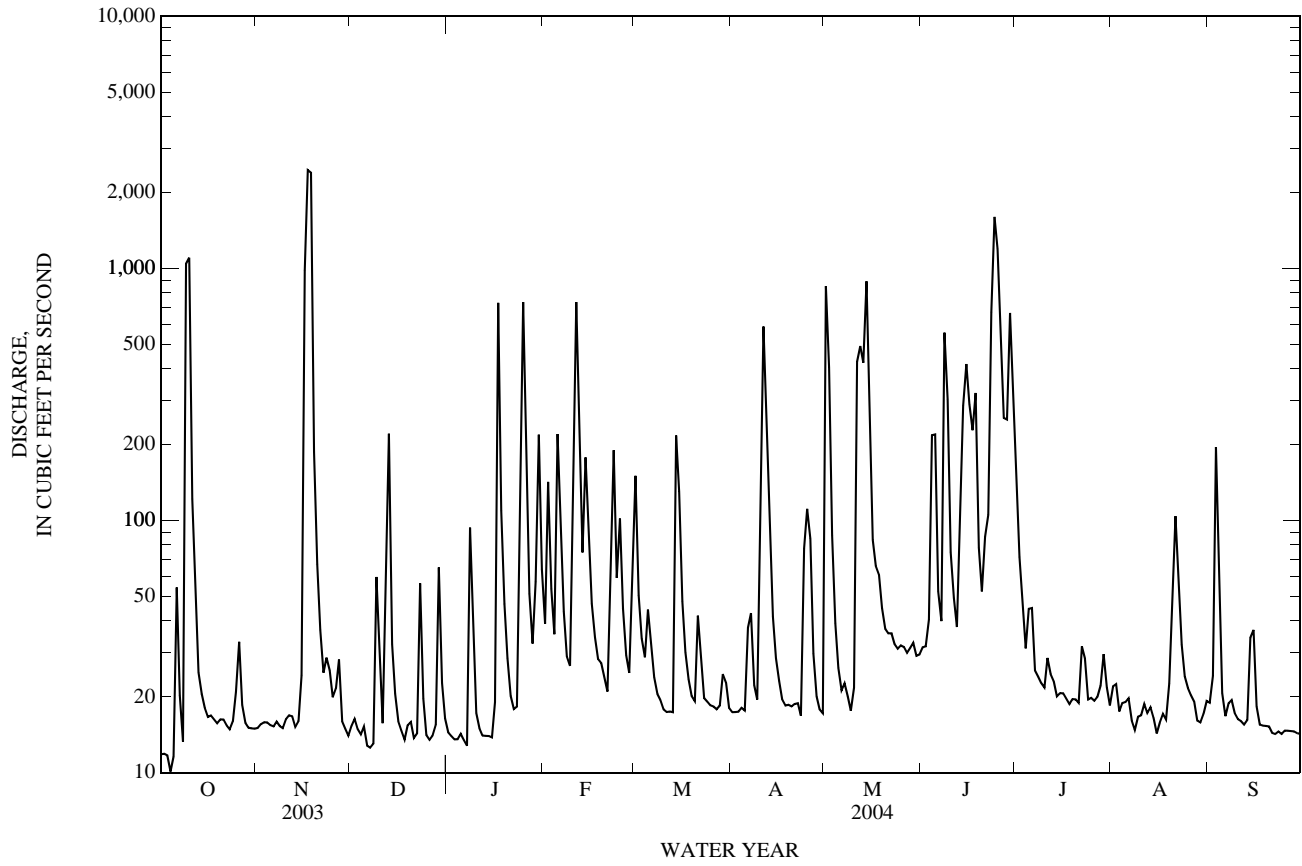
## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1986 - 2004h	
ANNUAL TOTAL	21,135.6		34,765			
ANNUAL MEAN	57.9		95.0		64.3	
HIGHEST ANNUAL MEAN					96.5	
LOWEST ANNUAL MEAN					20.7	
HIGHEST DAILY MEAN	2,450	Nov 17	2,450	Nov 17	9,400	Jun 9, 2001
LOWEST DAILY MEAN	9.0	May 25	10	Oct 4	3.0	Sep 28, 1990
ANNUAL SEVEN-DAY MINIMUM	9.7	May 5	14	Jan 1	3.1	Sep 25, 1990
MAXIMUM PEAK FLOW			4,570		12,400	
MAXIMUM PEAK STAGE			54.66		59.41	
ANNUAL RUNOFF (AC-FT)	41,920		68,960		46,590	
10 PERCENT EXCEEDS	71		202		100	
50 PERCENT EXCEEDS	18		22		14	
90 PERCENT EXCEEDS	11		15		6.6	

h See PERIOD OF RECORD paragraph.



08076180 Garners Bayou near Humble, TX—Continued



08076500 Halls Bayou at Houston, TX

LOCATION.--Lat 29°51'42", long 95°20'05", Harris County, Hydrologic Unit 12040104, on right bank, at downstream side of bridge on Jensen Drive in northeast section of Houston, and 11.0 mi upstream from mouth.

DRAINAGE AREA.--28.7 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1952 to Sept. 1993 (daily mean discharge), Oct. 1993 to Sept. 2001 (peak discharges greater than base discharge), Oct. 2001 to current year. Water-quality records: Chemical data: Oct. 1968 to Sept. 1984. Biochemical data: Oct. 1968 to Sept. 1984. Pesticide data: Oct. 1968 to Sept. 1984.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.66 ft below NGVD of 1929, 1957 adjustment; records unadjusted for land-surface subsidence. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. No known regulation or diversions. Stage-discharge relation is affected by seasonal vegetal growth during most years. Low flow is sustained wastewater effluent.

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	9.4	13	16	20	40	108	12	701	19	133	24	8.7
2	9.2	13	14	19	122	45	12	236	17	48	16	13
3	9.1	13	15	18	47	35	13	53	22	32	12	65
4	9.2	12	15	18	34	32	12	28	18	26	10	22
5	12	12	13	17	156	53	12	21	36	25	11	12
6	90	12	12	14	62	38	81	17	34	25	12	10
7	18	12	13	14	36	28	34	18	20	27	11	10
8	12	12	14	93	29	24	17	21	219	21	12	8.6
9	418	12	51	40	27	22	14	16	77	30	11	9.3
10	305	12	25	23	160	22	135	18	23	28	14	8.5
11	38	13	14	20	744	21	736	347	18	28	14	8.4
12	21	12	75	19	153	20	172	231	21	18	13	8.6
13	16	12	225	18	67	20	66	312	338	16	11	15
14	14	11	34	18	191	509	32	776	211	16	12	20
15	13	19	24	19	75	164	23	138	151	15	12	11
16	12	475	20	34	45	52	18	53	90	14	12	9.5
17	12	1,400	17	794	35	34	18	37	121	15	13	8.5
18	11	1,510	17	99	29	27	18	28	91	14	13	8.5
19	11	202	15	45	27	24	16	29	34	14	17	8.9
20	11	72	15	32	27	23	14	23	24	13	28	8.9
21	11	40	15	26	25	34	15	29	20	16	232	8.9
22	10	30	15	23	65	31	17	20	181	25	41	9.9
23	9.7	28	47	22	206	21	14	17	847	14	20	8.2
24	9.5	25	21	92	59	20	73	17	968	42	13	8.0
25	205	21	17	621	53	20	81	19	688	23	12	8.7
26	86	22	16	87	37	19	49	19	460	14	11	9.0
27	20	22	17	42	29	19	22	16	225	12	9.4	8.5
28	16	16	19	32	26	21	17	18	125	14	10	8.2
29	14	15	67	60	65	21	16	18	408	17	9.7	8.6
30	13	16	25	200	---	18	17	16	226	19	9.4	9.1
31	13	---	19	56	---	13	---	17	---	17	8.5	---
TOTAL	1,458.1	4,084	922	2,635	2,671	1,538	1,776	3,309	5,732	771	654.0	361.5
MEAN	47.0	136	29.7	85.0	92.1	49.6	59.2	107	191	24.9	21.1	12.1
MAX	418	1,510	225	794	744	509	736	776	968	133	232	65
MIN	9.1	11	12	14	25	13	12	16	17	12	8.5	8.0
AC-FT	2,890	8,100	1,830	5,230	5,300	3,050	3,520	6,560	11,370	1,530	1,300	717

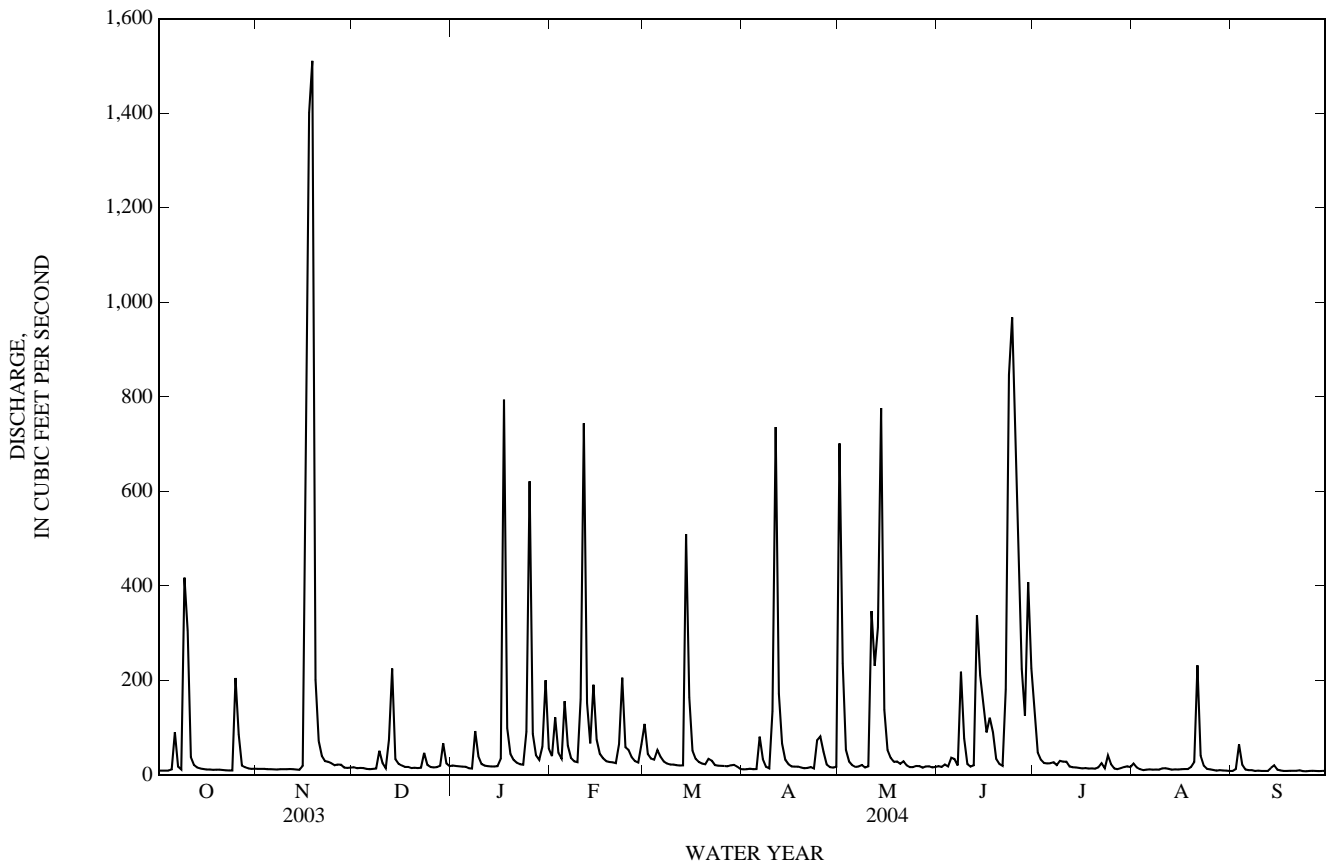
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2004h, BY WATER YEAR (WY)

	28.3	31.8	31.7	36.5	41.3	32.1	32.2	43.3	44.6	24.6	21.7	31.9
MEAN	28.3	31.8	31.7	36.5	41.3	32.1	32.2	43.3	44.6	24.6	21.7	31.9
MAX	154	136	114	123	127	145	127	174	245	149	174	185
(WY)	(2003)	(2004)	(1992)	(1974)	(1961)	(1992)	(1973)	(1970)	(1973)	(1961)	(1983)	(1979)
MIN	0.00	0.38	0.67	0.30	1.05	0.38	0.67	0.99	0.08	0.42	0.78	0.25
(WY)	(1953)	(1956)	(1955)	(1957)	(1957)	(1955)	(1955)	(1956)	(1954)	(1956)	(1963)	(1956)

08076500 Halls Bayou at Houston, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1953 - 2004h	
ANNUAL TOTAL	16,289.1		25,911.6		33.1	
ANNUAL MEAN	44.6		70.8		71.0	
HIGHEST ANNUAL MEAN					1992	
LOWEST ANNUAL MEAN					2.99	
HIGHEST DAILY MEAN	1,510	Nov 18	1,510	Nov 18	2,800	May 18, 1989
LOWEST DAILY MEAN	5.9	Jun 11	8.0	Sep 24	0.00	Oct 1, 1952
ANNUAL SEVEN-DAY MINIMUM	7.0	May 28	8.5	Sep 23	0.00	Oct 1, 1952
MAXIMUM PEAK FLOW			3,360	Nov 17	7,320	Jun 9, 2001
MAXIMUM PEAK STAGE			60.11	Nov 17	a64.89	Jun 9, 2001
ANNUAL RUNOFF (AC-FT)	32,310		51,400		23,980	
10 PERCENT EXCEEDS	75		161		53	
50 PERCENT EXCEEDS	15		20		9.5	
90 PERCENT EXCEEDS	8.1		11		1.2	

h See Period of Record paragraph.  
 a From floodmark.



08076530 Halls Bayou at Parker Road, Houston, TX

LOCATION.--Lat 29°51'23", long 95°18'20", Harris County, Hydrologic Unit 12040104, 8.8 mi upstream from mouth.

DRAINAGE AREA.--34.7 mi<sup>2</sup>.

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1997 to current year.

BIOCHEMICAL DATA: Oct. 1997 to current year.

REMARKS.--Water-quality samples were collected for selected storms.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
DEC 03...	765	8.5	7.4	174	16.0	6.8	6.3	41,000	61,000
FEB 26...	750	7.5	6.8	260	16.5	5.4	4.4	30,000	32,000
AUG 07...	765	4.5	7.9	708	29.0	3.6	2.1	2,100	680
SEP 11...	750	6.4	7.6	78	24.2	2.4	1.6	32,000	13,000

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
OCT 18...	760	7.1	7.5	116	23.5	5.6	3.6	44,000	14,000
NOV 12...	765	8.7	7.7	108	15.0	4.4	3.6	36,000	11,000
NOV 14...	760	9.8	7.2	110	16.0	2.8	1.9	28,000	31,000
DEC 11...	--	10.2	7.6	110	10.7	5.0	3.7	49,000	20,000
MAY 12...	760	7.5	8.1	107	20.0	6.3	3.6	39,000	18,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
MAY 04...	763	6.3	7.1	188	21.0	8.5	7.9	29,000	17,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
JUN 06...	770	4.9	7.2	82	22.8	3.4	2.6	38,000	14,000

08076530 Halls Bayou at Parker Road, Houston, TX—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF col/ 100 mL (31673)
APR 08...	750	6.7	7.5	119	17.1	6.4	5.2	39,000	81,000

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
OCT 29...	760	7.5	7.8	76	21.4	4.3	2.8	39,000	49,000
JUL 09...	760	6.5	7.3	222	26.2	6.7	4.5	51,000	11,000

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
NOV 17...	765	6.9	7.8	85	21.1	3.5	2.9	49,000	29,000
MAY 01...	764	6.6	6.9	151	19.9	4.8	3.8	55,000	62,000
11...	761	6.3	7.7	201	22.1	7.8	4.9	64,000	66,000
JUN 24...	761	6.6	7.1	139	24.8	4.7	3.4	49,000	45,000
24...	764	6.4	7.4	181	24.3	3.9	2.7	29,000	26,000
25...	765	6.4	7.5	203	24.3	3.7	2.8	41,000	70,000

08076535 Allwood Street Tributary Halls Bayou, Houston, TX

LOCATION.--Lat 29°51'16", long 95°18'40", Harris County, Hydrologic Unit 12040104, 0.5 mi upstream from Halls Bayou.

DRAINAGE AREA.--3.26 mi<sup>2</sup>.

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1997 to current year.

BIOCHEMICAL DATA: Oct. 1997 to current year.

REMARKS.--Water-quality samples were collected for selected storms.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
DEC 03...	765	8.0	7.1	111	16.5	6.1	5.3	19,000	13,000
FEB 26...	750	8.0	7.3	162	16.5	5.4	5.2	13,000	14,000
SEP 11...	760	6.9	7.3	70	24.5	1.4	.6	13,000	15,000

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
OCT 18...	760	7.9	7.2	93	23.5	2.8	2.4	20,000	23,000
NOV 12...	765	9.0	7.8	105	16.5	3.2	2.2	20,000	24,000
NOV 14...	760	10.0	7.1	108	16.0	.9	.4	13,000	24,000
DEC 11...	765	10.4	7.6	81	11.0	3.7	3.3	19,000	22,000
MAY 12...	760	7.7	7.8	90	20.0	5.0	2.7	35,000	14,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
MAY 04...	760	6.8	7.2	134	21.2	5.3	4.0	17,000	11,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
JUN 06...	770	6.0	7.3	95	22.9	2.7	2.3	31,000	12,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
APR 08...	750	7.1	7.3	119	17.4	5.8	4.7	32,000	66,000

## 08076535 Allwood Street Tributary Halls Bayou, Houston, TX—Continued

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF col/ 100 mL (31673)
OCT 29...	759	7.3	7.4	88	21.3	4.2	3.2	34,000	45,000
JUL 09...	760	6.8	7.3	122	25.7	3.7	3.0	16,000	8,000

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC col/ 100 mL (31625)	Fecal strep- tococci KF col/ 100 mL (31673)
NOV 17...	765	6.7	7.4	83	21.7	3.9	3.4	--	--
MAY 01...	761	7.4	7.1	110	19.6	4.1	3.5	45,000	49,000
11...	760	6.8	7.8	127	22.1	5.4	4.4	72,000	50,000
JUN 24...	765	5.6	7.1	138	25.7	4.4	3.5	38,000	41,000
24...	765	6.8	7.6	113	24.2	2.9	2.1	32,000	36,000
25...	765	6.6	7.7	127	24.1	3.3	2.2	28,000	44,000

08076540 Halls Bayou at Homestead Boulevard, Houston, TX

LOCATION.--Lat 29°51'11", long 95°18'01", Harris County, Hydrologic Unit 12040104, 8.3 mi upstream from mouth.

DRAINAGE AREA.--38.2 mi<sup>2</sup>.

PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1997 to current year.

BIOCHEMICAL DATA: Oct. 1997 to current year.

REMARKS.--Water-quality samples were collected for selected storms.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
DEC 03...	765	7.8	7.4	168	16.0	7.1	6.0	42,000	70,000
FEB 26...	750	7.6	7.0	248	12.0	5.5	4.1	39,000	36,000
AUG 07...	765	4.4	7.8	620	29.0	3.5	1.8	4,000	1,300
SEP 11...	--	6.5	7.6	80	24.0	2.2	1.5	38,000	7,700

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

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
OCT 18...	765	7.3	7.5	115	23.5	5.9	4.2	49,000	10,000
NOV 12...	765	7.8	7.7	106	15.5	4.4	3.0	20,000	13,000
NOV 14...	760	10.0	7.3	111	16.0	2.7	1.5	25,000	32,000
DEC 11...	765	10.2	7.8	113	10.5	5.4	3.9	39,000	18,000
MAY 12...	762	7.4	7.8	109	20.0	6.1	3.1	34,000	17,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
MAY 04...	760	6.3	7.7	189	21.0	8.0	6.8	40,000	19,000

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)
JUN 06...	770	5.0	7.2	91	22.8	4.8	4.4	42,000	15,000



## 08076540 Halls Bayou at Homestead Boulevard, Houston, TX—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coliform, M-FC col/100 mL (31625)	Fecal streptococci KF, col/100 mL (31673)
APR 08...	750	6.8	7.5	119	17.1	7.3	6.4	41,000	62,000

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

Date	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coliform, M-FC col/100 mL (31625)	Fecal streptococci KF, col/100 mL (31673)
OCT 29...	--	7.7	7.9	80	21.4	4.9	3.6	44,000	60,000
JUL 09...	760	6.7	7.3	173	25.9	5.2	4.1	44,000	7,700

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

Date	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	CBOD, water, unfltrd 5 day, mg/L (80082)	Fecal coliform, M-FC col/100 mL (31625)	Fecal streptococci KF, col/100 mL (31673)
NOV 17...	765	7.0	7.9	78	21.1	3.5	3.0	41,000	36,000
MAY 01...	761	6.6	7.0	150	19.9	6.3	4.9	41,000	56,000
MAY 11...	760	6.2	7.8	208	22.0	8.5	5.8	66,000	62,000
JUN 23...	765	6.5	6.8	180	24.9	5.3	4.6	45,000	35,000
JUN 24...	765	6.5	6.8	181	24.2	3.8	2.6	31,000	30,000
JUN 25...	765	6.7	7.3	205	24.2	4.5	2.9	38,000	31,000



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08077600 Clear Creek near Friendswood, TX

LOCATION.--Lat 29°31'02", long 95°10'42", Galveston County, Hydrologic Unit 12040204, on right bank at right downstream side of bridge on Farm Road 528 near Friendswood.

DRAINAGE AREA.--122 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1965 to July 1994 (annual maximum), Oct. 1997 to current year (peak discharges greater than base discharge).

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft<sup>3</sup>/s, June 9, 2001, gage height, 20.43 ft; maximum gage height, 20.85 ft, Aug. 1, 1989.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 10	0315	5,080	*0.00	Feb 11	1030	4,150	0.00
Nov 18	0545	4,180	0.00	May 14	0430	*5,200	0.00
Dec 13	0630	4,730	0.00				

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08077650 Moses Lake-Galveston Bay near Texas City, TX

LOCATION.--Lat 29°26'50", long 94°55'12", Galveston County, Hydrologic Unit 12040204, on right side of gate abutment of Texas City Flood Control Dike, at mouth of Moses Lake, and 4.5 mi north of Texas City.

DRAINAGE AREA.--Not applicable.

PERIOD OF RECORD.--May 1967 to Sept 2004 (maximum and minimum elevations for Galveston Bay and maximum elevation for Moses Lake). Oct. 2004 to current year (maximum and minimum elevations for Galveston Bay and Moses Lake).

GAGE.--Water-stage recorders. Datum of gage is NGVD of 1929 (levels by Galveston County engineer), 1978 adjustment. Prior to May 19, 1983, datum of gage was 0.49 ft below NGVD of 1929, 1973 adjustment. Prior records unadjusted for land-surface subsidence. Satellite telemeter at station.

REMARKS.--Records good. Moses Lake is connected to Galveston Bay by gated opening through levee. The gate is open during periods of normal tide and is closed during periods of high tide and hurricane surge. One orifice line is located in Moses Lake and one orifice line is located in Galveston Bay.

EXTREMES FOR PERIOD OF RECORD.--

MOSES LAKE: Maximum elevation, 4.8 ft, Sept. 11, 1998; minimum elevation, -4.2 ft, Feb. 28, 1983.

GALVESTON BAY: Maximum elevation, about 10.0 ft, from Hurricane Alicia, Aug. 18, 1983; minimum elevation, about -4.2 ft, Feb. 28, 1983.

EXTREMES FOR CURRENT YEAR.--MOSES LAKE: Maximum elevation, 2.9 ft, Dec. 13; minimum elevation, -1.6 ft, Nov. 28.

GALVESTON BAY: Maximum elevation, 3.7 ft, Sep. 22; minimum elevation, -1.9 ft, Dec. 10.

GALVESTON BAY  
ELEVATION ABOVE NGVD 1929, FEET  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	2.5	1.0	2.2	0.9	1.2	0.1	1.7	0.8	2.2	0.8	1.7	0.3
2	2.8	1.0	2.4	1.2	1.0	0.4	1.5	0.3	2.1	0.4	1.6	0.2
3	2.8	0.9	2.2	0.9	1.4	0.8	1.6	0.2	1.7	-0.3	1.9	0.4
4	2.4	0.6	1.9	1.0	1.4	0.0	1.8	0.2	2.6	1.1	2.4	1.1
5	2.2	0.4	1.6	1.0	0.9	-0.3	1.8	-0.4	2.8	0.8	2.2	0.5
6	1.9	0.6	1.6	1.1	1.0	-0.8	1.1	-0.8	1.8	-0.6	1.7	0.1
7	1.9	0.8	1.5	0.7	1.5	0.0	2.0	0.4	0.3	-1.0	1.0	-0.2
8	1.8	1.2	1.8	0.3	1.6	0.1	2.3	1.0	1.7	0.3	0.8	-0.3
9	2.7	1.5	1.8	0.4	1.8	0.3	2.0	-0.3	1.9	0.5	0.5	-0.4
10	2.6	1.3	2.2	0.6	0.6	-1.9	1.0	-0.5	1.2	-0.1	1.2	-0.6
11	2.0	1.0	2.5	0.8	1.3	-0.5	1.4	0.1	2.0	0.7	0.9	0.1
12	2.0	0.8	2.2	0.3	2.6	0.8	1.4	0.4	1.3	0.4	1.1	-0.4
13	2.2	0.9	1.9	0.3	3.0	0.1	1.3	0.1	1.3	0.0	1.6	-0.1
14	2.2	0.5	2.4	0.9	1.1	-0.3	1.0	0.5	1.1	-0.1	1.6	0.0
15	2.2	1.3	2.6	0.9	1.8	1.0	1.2	0.5	0.3	-1.6	1.6	-0.1
16	2.7	1.1	2.3	0.8	1.9	-1.0	2.1	0.4	0.9	-0.9	1.4	0.0
17	2.3	0.3	2.5	1.1	0.3	-1.4	2.2	1.0	0.9	-1.0	1.3	-0.2
18	1.7	0.7	3.5	0.0	0.4	-0.6	1.9	-0.4	1.0	-0.8	1.4	0.2
19	2.2	0.8	0.1	-1.1	0.6	-0.8	0.6	-1.8	1.3	-0.2	1.3	0.2
20	2.2	0.6	1.5	0.1	1.0	-0.7	1.5	-0.3	1.5	-0.1	1.4	0.4
21	1.8	0.5	1.8	0.8	1.5	-0.2	1.5	-0.3	1.1	-0.4	1.1	0.3
22	1.3	0.3	1.9	0.1	1.7	-0.1	1.3	-0.7	1.6	0.8	1.5	0.5
23	1.1	0.3	2.1	0.5	1.9	-0.7	1.0	-0.4	1.6	1.0	1.9	1.1
24	1.6	0.7	0.7	-1.7	1.0	-1.1	1.3	0.1	1.5	0.9	2.2	1.2
25	1.8	0.3	2.1	0.2	1.7	0.2	1.9	0.3	1.6	-0.6	2.1	0.8
26	1.8	0.0	2.4	0.7	2.1	0.5	1.1	-0.2	0.6	-1.1	2.0	0.8
27	1.6	-0.1	2.5	0.1	2.0	0.6	-0.2	-1.2	1.2	0.0	2.2	0.8
28	1.8	0.2	0.1	-1.8	1.8	0.5	1.4	-0.5	1.9	0.2	2.0	1.0
29	1.8	0.0	0.9	-0.6	1.5	-0.4	1.7	0.5	1.9	0.8	1.4	0.4
30	2.3	0.6	1.5	0.1	1.6	0.1	1.5	0.2	---	---	1.5	0.2
31	2.3	0.5	---	---	1.7	1.0	2.0	0.3	---	---	1.2	-0.1
MONTH	2.8	-0.1	3.5	-1.8	3.0	-1.9	2.3	-1.8	2.8	-1.6	2.4	-0.6

08077650 Moses Lake-Galveston Bay near Texas City, TX—Continued

GALVESTON BAY  
ELEVATION ABOVE NGVD 1929, FEET—CONTINUED  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	1.2	-0.1	2.6	0.6	1.7	0.0	1.9	-0.1	1.6	-0.2	1.1	0.4
2	1.2	0.1	0.9	0.2	1.8	0.0	1.8	-0.2	1.4	0.0	1.1	0.0
3	1.3	0.2	1.2	-0.2	2.0	0.1	1.7	-0.3	1.1	0.1	1.3	0.0
4	1.0	0.3	1.0	-0.2	1.5	-0.2	1.4	-0.2	0.9	0.0	1.6	0.2
5	1.7	0.5	1.4	-0.2	1.5	-0.8	1.5	-0.2	0.9	-0.2	1.6	0.0
6	2.5	0.9	1.6	-0.3	1.4	-0.4	1.3	0.0	0.5	-0.2	1.4	-0.1
7	1.7	0.2	1.7	-0.3	1.9	0.0	1.1	0.1	1.2	0.2	1.1	-0.2
8	1.1	0.0	1.9	-0.1	2.4	0.7	1.1	0.5	1.5	0.1	1.2	-0.3
9	1.3	-0.5	2.0	0.2	2.3	1.2	1.4	0.6	1.5	0.1	1.4	0.0
10	1.5	-0.2	2.0	0.3	1.9	1.3	1.7	0.2	1.5	---	1.4	-0.1
11	1.4	-0.4	2.3	0.7	1.8	---	1.6	0.2	1.3	-0.2	1.2	0.0
12	1.0	-0.3	2.2	1.3	---	---	1.5	-0.3	1.2	-0.3	1.8	0.0
13	0.0	-1.3	3.0	1.6	---	---	1.2	-0.7	1.7	-0.2	1.8	0.9
14	0.3	-1.2	2.1	1.1	2.1	0.8	1.1	-0.5	1.7	0.4	2.8	1.3
15	0.5	-0.5	1.9	1.1	2.4	0.4	1.2	-0.6	1.8	0.4	2.8	1.9
16	0.7	-0.2	2.0	1.0	2.2	0.4	1.2	-0.7	1.4	0.3	2.3	1.6
17	0.8	0.3	2.2	0.9	2.0	0.4	1.0	-0.6	1.1	0.1	2.4	1.5
18	1.1	0.4	2.1	0.7	1.8	0.1	0.2	-0.9	1.2	0.1	2.0	0.5
19	1.5	0.2	2.1	0.6	1.6	0.1	1.3	-1.0	1.4	0.5	2.0	0.0
20	1.2	0.0	2.2	0.5	1.6	-0.2	1.3	-0.1	1.3	0.2	2.3	0.8
21	1.6	0.1	2.0	0.5	1.6	0.0	1.4	0.2	1.1	-0.1	3.2	1.5
22	2.0	0.4	2.1	0.4	1.8	0.1	1.2	0.1	1.3	0.1	3.7	1.7
23	2.2	0.7	2.2	0.6	1.6	0.2	1.1	0.4	1.5	-0.1	3.1	0.9
24	2.0	0.9	2.1	0.5	1.7	0.5	1.2	0.1	1.4	-0.3	2.2	0.6
25	2.0	0.4	2.0	0.7	1.3	0.2	1.3	-0.3	1.4	-0.4	2.5	0.8
26	1.4	0.4	1.7	0.5	1.3	0.6	1.3	-0.3	1.4	-0.4	1.7	0.9
27	1.3	-0.1	1.5	0.5	1.6	0.4	1.3	-0.4	1.4	-0.3	1.9	0.7
28	1.8	0.2	1.4	0.5	1.6	0.2	1.4	-0.3	1.3	-0.4	1.1	0.5
29	1.8	1.1	1.6	0.9	1.7	-0.1	1.4	-0.5	1.1	-0.4	1.2	0.2
30	2.0	0.6	2.2	0.9	1.7	0.0	1.4	-0.5	1.3	-0.3	1.4	0.2
31	---	---	2.0	0.3	---	---	1.3	-0.5	1.3	0.4	---	---
MONTH	2.5	-1.3	3.0	-0.3			1.9	-1.0	1.8	-0.4	3.7	-0.3

08077650 Moses Lake-Galveston Bay near Texas City, TX—Continued

MOSES LAKE  
ELEVATION ABOVE NGVD 1929, FEET  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH					
1	2.5	1.4	2.2	1.1	1.2	0.2	1.7	0.9	2.1	1.0	1.7	0.5				
2	1.5	1.2	2.4	1.3	0.9	0.4	1.5	0.5	2.1	0.8	1.5	0.4				
3	1.3	1.2	2.1	1.1	1.4	0.9	1.4	0.4	1.4	0.1	1.7	0.7				
4	1.3	1.3	1.8	1.2	1.4	0.2	1.6	0.5	2.5	1.4	2.3	1.3				
5	1.6	0.8	1.5	1.1	1.0	0.0	1.7	0.0	2.7	1.2	2.2	0.9				
6	1.9	0.8	1.5	1.1	0.7	-0.5	0.9	-0.4	1.8	0.0	1.6	0.4				
7	1.9	0.9	1.5	0.8	1.2	0.2	1.5	0.6	0.4	-0.8	1.0	0.1				
8	1.8	1.3	1.6	0.6	1.6	0.5	2.2	1.2	1.3	0.0	0.6	0.1				
9	2.6	1.5	1.8	0.7	1.7	0.7	2.0	0.2	1.8	0.8	0.5	-0.3				
10	2.6	1.6	1.8	0.8	1.1	-1.4	1.0	-0.2	1.1	0.3	1.2	-0.5				
11	2.0	1.1	2.4	1.2	0.7	-0.7	1.3	0.4	2.0	0.8	0.9	0.3				
12	1.9	1.1	2.1	0.7	2.2	0.7	1.3	0.6	1.5	0.5	1.0	-0.2				
13	2.0	1.1	1.8	0.7	2.9	0.7	1.2	0.3	1.3	0.1	1.5	0.1				
14	2.1	0.8	2.3	1.3	0.9	-0.1	0.9	0.5	1.2	0.2	1.5	0.4				
15	2.0	1.2	2.6	1.2	1.7	0.6	1.2	0.6	0.2	-1.1	1.5	0.3				
16	2.6	1.3	2.2	1.1	1.8	-0.6	2.0	0.6	0.7	-0.6	1.5	0.2				
17	2.3	0.8	2.2	1.3	0.0	-1.2	2.3	1.5	0.9	-0.4	1.2	0.1				
18	1.7	0.8	2.6	0.5	0.3	-0.4	1.9	0.0	0.8	-0.3	1.3	0.5				
19	2.2	1.0	0.5	-0.8	0.4	-0.7	0.1	-1.4	1.0	0.1	1.3	0.4				
20	2.1	0.9	1.4	-0.2	0.8	-0.4	1.1	0.0	1.4	0.3	1.3	0.6				
21	1.7	0.7	1.8	1.1	1.3	0.1	1.5	0.1	1.0	0.0	0.9	0.5				
22	1.2	0.4	1.6	0.5	1.5	0.4	1.2	-0.2	1.5	0.7	1.5	0.6				
23	1.0	0.4	2.0	1.0	1.7	0.0	0.9	-0.1	1.6	1.1	1.9	1.1				
24	1.5	0.8	1.0	-0.9	0.6	-0.7	1.2	0.4	1.5	1.2	2.1	1.3				
25	1.8	0.8	1.5	0.2	1.3	0.4	1.7	0.6	1.5	0.0	2.0	1.0				
26	1.8	0.3	2.5	1.1	2.0	0.8	1.1	0.2	0.4	-0.7	2.0	1.0				
27	1.2	0.3	2.4	0.5	1.8	0.8	0.2	-0.9	1.2	0.1	2.0	1.0				
28	1.8	0.6	0.5	-1.6	1.8	0.7	1.3	-0.5	1.8	0.3	1.8	1.1				
29	1.8	0.4	0.5	-1.0	1.5	-0.1	1.7	0.6	1.9	1.0	1.5	0.6				
30	2.2	0.9	1.4	0.4	1.4	0.0	1.5	0.6	---	---	1.3	0.2				
31	2.1	0.9	---	---	1.7	1.1	1.8	0.4	---	---	1.2	0.1				
MONTH	2.6	0.3	2.6	-1.6	2.9	-1.4	2.3	-1.4	2.7	-1.1	2.3	-0.5				
DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER					
1	1.0	0.0	2.6	1.1	1.7	0.5	1.7	0.4	1.6	0.2	1.1	0.5				
2	1.1	0.2	1.2	0.4	1.8	0.4	1.6	0.4	1.4	0.5	0.9	0.3				
3	1.1	0.4	1.2	0.1	1.8	0.4	1.5	0.3	1.1	0.4	1.1	0.5				
4	0.9	0.3	1.0	0.0	1.4	0.4	1.5	0.2	0.8	0.2	1.5	0.5				
5	1.6	0.5	1.3	0.1	1.4	0.1	1.5	0.3	0.9	0.1	1.6	0.4				
6	2.1	1.2	1.4	0.0	1.3	0.1	1.3	0.4	0.6	0.1	1.3	0.2				
7	1.6	0.5	1.7	0.1	1.7	0.2	1.0	0.3	1.2	0.3	1.0	-0.1				
8	1.0	0.1	1.8	0.4	2.3	0.8	1.1	0.6	1.4	0.2	1.0	-0.1				
9	1.2	-0.2	1.9	0.6	2.1	1.4	1.4	0.8	1.4	0.4	1.3	0.0				
10	1.4	0.1	1.9	0.7	1.7	1.2	1.5	0.5	0.4	0.3	1.3	0.2				
11	1.4	0.3	2.1	0.9	1.7	0.8	1.5	0.4	0.4	0.3	1.1	0.2				
12	1.1	0.0	2.2	1.4	1.6	0.7	1.3	0.0	0.8	-0.1	1.7	0.3				
13	0.1	-1.1	2.7	1.6	1.8	0.7	1.1	-0.1	1.5	-0.1	1.8	1.0				
14	0.1	-1.2	2.4	1.2	2.0	0.8	0.8	-0.3	1.5	0.6	1.5	1.4				
15	0.5	-0.3	1.8	1.2	1.3	0.6	1.0	-0.3	1.5	0.5	1.4	1.4				
16	0.6	0.0	1.9	1.2	1.9	0.6	1.0	-0.2	1.4	0.6	2.1	1.3				
17	0.7	0.3	2.1	1.1	1.5	0.7	0.8	-0.2	1.1	0.5	2.3	1.6				
18	1.0	0.4	2.0	1.0	1.6	---	0.1	-0.7	1.2	0.5	2.0	0.7				
19	1.4	0.4	2.0	0.9	1.4	0.3	1.0	-0.8	1.4	0.6	1.8	0.4				
20	1.2	0.2	2.1	0.9	1.4	0.2	1.2	0.2	1.4	0.5	2.1	0.8				
21	1.5	0.3	2.0	0.8	1.4	0.3	1.0	0.3	0.9	0.1	2.3	1.3				
22	1.9	0.6	2.0	0.8	1.5	0.5	0.9	0.2	1.1	0.3	1.8	1.8				
23	2.1	0.9	2.1	0.9	1.5	0.6	0.8	0.3	1.4	0.3	1.8	1.3				
24	1.9	1.1	2.0	0.9	1.8	0.7	0.8	0.3	1.4	0.2	1.4	0.9				
25	1.7	0.6	1.9	0.9	1.3	0.5	1.1	0.1	1.4	0.0	1.6	1.0				
26	1.4	0.6	1.6	0.7	1.3	0.7	1.1	0.0	1.3	0.0	1.7	1.1				
27	1.2	0.1	1.4	0.6	1.5	0.6	1.3	0.1	1.3	0.0	1.9	1.0				
28	1.6	0.3	1.2	0.6	1.4	0.4	1.4	0.2	1.3	0.0	1.4	0.7				
29	1.7	1.2	1.5	0.9	1.6	0.4	1.5	0.1	1.1	0.0	1.0	0.3				
30	1.7	0.6	2.1	1.1	1.8	0.3	1.5	0.0	1.1	0.1	1.1	0.4				
31	---	---	1.9	0.5	---	---	1.3	0.1	1.2	0.5	---	---				
MONTH	2.1	-1.2	2.7	0.0	2.3		1.7	-0.8	1.6	-0.1	2.3	-0.1				



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## 08077740 LaMarque Levee Pump Station near LaMarque, TX

LOCATION.--Lat 29°20'44", long 94°57'47", Galveston County, Hydrologic Unit 12040204, in the LaMarque Levee Pump Station on the LaMarque hurricane protection levee, one orifice located landward and one seaward, 0.5 mi southwest of Interstate Highway 45, 0.9 mi south of LaMarque, and 4.8 mi northwest of Virginia Point.

PERIOD OF RECORD.--Nov. 1986 to Sept. 2004 (maximum elevation landward, maximum and minimum elevation seaward, and maximum elevation for supplementary gage). Supplementary gage was discontinued on Sept. 30, 2003. Oct. 2004 to current year (maximum and minimum elevation seaward and lanward).

GAGE.--Water-stage recorders. Datum of gages are NGVD of 1929 (levels by Galveston County Engineer). Radio telemeter at station. Telephone telemeter at station.

REMARKS.--Records good. Landward orifice records elevation of flood runoff behind levee. This runoff is pumped into Jones Bay. Seaward records are tidal but influenced by runoff in Highland Bayou.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation (landward), 3.5 ft, July 26, 1989; maximum elevation (seaward), 6.5 ft, Sept. 11, 1998; minimum elevation (seaward), -2.0 ft, Apr. 11, 1988.

EXTREMES FOR CURRENT YEAR.--LANDWARD: Maximum elevation, 0.5 ft, Dec. 13; minimum elevation , -5.2 ft, June 3, 5-6. SEAWARD: Maximum elevation, 3.4 ft, Sep. 22; minimum elevation, -1.0 ft, several days.

ELEVATION ABOVE NGVD 1929, FEET  
SEAWARD  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	2.4	1.2	2.0	1.0	0.9	0.1	1.6	0.8	1.9	0.9	1.6	0.5
2	2.5	1.4	2.2	1.2	0.8	0.4	1.3	0.4	2.0	0.5	1.5	0.3
3	2.5	1.2	1.9	1.0	1.2	0.8	1.4	0.3	1.4	0.0	1.7	0.7
4	2.1	0.9	1.6	1.0	1.1	0.2	1.4	0.5	2.5	1.2	2.2	1.2
5	1.8	0.7	1.3	0.9	0.9	-0.3	1.2	-0.2	2.5	1.0	2.0	0.8
6	1.7	0.7	1.4	0.8	0.8	-0.4	0.8	-0.5	1.5	-0.1	1.4	0.3
7	1.8	0.8	1.3	0.6	1.3	0.1	1.7	0.5	0.4	-0.7	0.8	0.1
8	1.7	1.1	1.5	0.5	1.4	0.4	2.1	1.1	1.4	0.0	0.6	0.0
9	2.3	1.3	1.6	0.6	1.6	0.7	1.8	0.0	1.6	0.8	0.4	-0.2
10	2.1	1.3	2.0	0.8	1.0	-0.9	0.8	-0.2	1.0	0.3	1.1	-0.5
11	1.7	0.9	2.2	1.1	0.9	-0.4	1.1	0.3	1.8	0.7	0.8	0.2
12	1.8	0.9	1.9	0.6	2.6	0.9	1.1	0.6	1.4	0.4	0.9	-0.2
13	1.9	1.0	1.5	0.3	3.1	0.7	1.1	0.2	1.1	0.0	1.3	0.0
14	2.0	0.5	2.1	1.3	0.9	0.0	0.8	0.3	1.0	0.1	1.4	0.3
15	2.1	1.2	2.4	1.1	1.6	0.8	1.0	0.4	0.2	-0.8	1.3	0.2
16	2.4	1.2	2.1	0.9	1.7	-0.5	2.0	0.5	0.5	-0.6	1.2	0.2
17	2.0	0.5	2.4	1.4	-0.2	-1.0	2.3	1.4	0.6	-0.4	1.1	0.1
18	1.5	0.8	2.7	0.3	0.1	-0.5	1.7	-0.3	0.7	-0.2	1.2	0.4
19	2.0	0.9	0.3	-0.8	0.3	-0.6	0.2	-1.0	1.0	0.1	1.2	0.4
20	1.9	0.8	1.3	-0.4	0.7	-0.4	1.1	-0.2	1.2	0.3	1.2	0.5
21	1.5	0.6	1.6	0.8	1.2	0.1	1.3	0.0	0.8	-0.1	0.7	0.2
22	1.1	0.3	1.6	0.4	1.5	0.3	1.0	-0.2	1.3	0.7	1.3	0.4
23	0.9	0.3	1.9	0.5	1.5	-0.3	0.8	-0.1	1.5	0.9	1.8	1.0
24	1.3	0.6	0.6	-0.7	0.6	-0.4	1.2	0.4	1.4	0.9	2.0	1.2
25	1.5	0.7	1.8	0.3	1.4	0.3	1.4	0.4	1.3	0.0	1.8	0.9
26	1.5	0.0	2.2	0.8	1.8	0.6	0.8	-0.3	0.2	-0.6	1.8	0.8
27	1.5	0.3	2.3	0.4	1.6	0.8	-0.2	-1.0	0.9	-0.1	2.0	0.9
28	1.7	0.5	0.4	-1.0	1.6	0.8	1.1	-0.6	1.6	0.3	1.7	1.0
29	1.6	0.3	0.6	-0.8	1.1	-0.1	1.8	0.4	1.8	1.0	1.3	0.4
30	2.1	0.8	1.1	0.3	1.2	0.0	1.7	0.4	---	---	1.0	0.1
31	2.0	0.8	---	---	1.5	0.9	1.6	0.3	---	---	0.9	0.0
MONTH	2.5	0.0	2.7	-1.0	3.1	-1.0	2.3	-1.0	2.5	-0.8	2.2	-0.5





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08078000 Chocolate Bayou near Alvin, TX

LOCATION.--Lat 29°22'09", long 95°19'14", Brazoria County, Hydrologic Unit 12040204, on right bank 800 ft downstream from bridge on Farm Road 1462, 5.9 mi southwest of Alvin, and 6.9 mi upstream from State Highway 35.

DRAINAGE AREA.--87.7 mi<sup>2</sup>. During extreme flooding, overflow from about 11 mi<sup>2</sup> of the Mustang Bayou drainage basin enters the Chocolate Bayou basin upstream from gage.

PERIOD OF RECORD.--Aug. to Oct. 1944 and Mar. to Dec. 1946 (low-water records during irrigation season), Jan. 1947 to Feb. 1958, and Mar. 1958 to Feb. 1959 (discharge measurements only), Mar. 1959 to current year. Water-quality records: Chemical data: May 1971 to Sept. 1985. Biochemical data: May 1971 to Sept. 1985. Pesticide data: May 1971 to Sept. 1981.

GAGE.--Water-stage recorder. Datum of gage is 0.31 ft above NGVD of 1929. Prior to May 3, 1959, nonrecording gage or water-stage recorders located at various sites from 900 to 1,400 ft upstream and at datum 3.00 ft higher. May 3, 1959 to Sept. 30, 1987, present site, at datum 10.00 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. No known regulation. Stage-discharge relation is affected by seasonal vegetation during most years. Large area of riceland above station is irrigated with water diverted from the Brazos River. Low flow from Apr. to Oct. is largely drainage from these irrigated lands. Diversions for irrigation occur above station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 14, 1939, reached a stage of 32.5 ft, present site and datum, adjusted from floodmark 1,700 ft to right and 550 ft upstream from present gage, on basis of slope of flood of Oct. 8, 1949, from information by local residents.

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

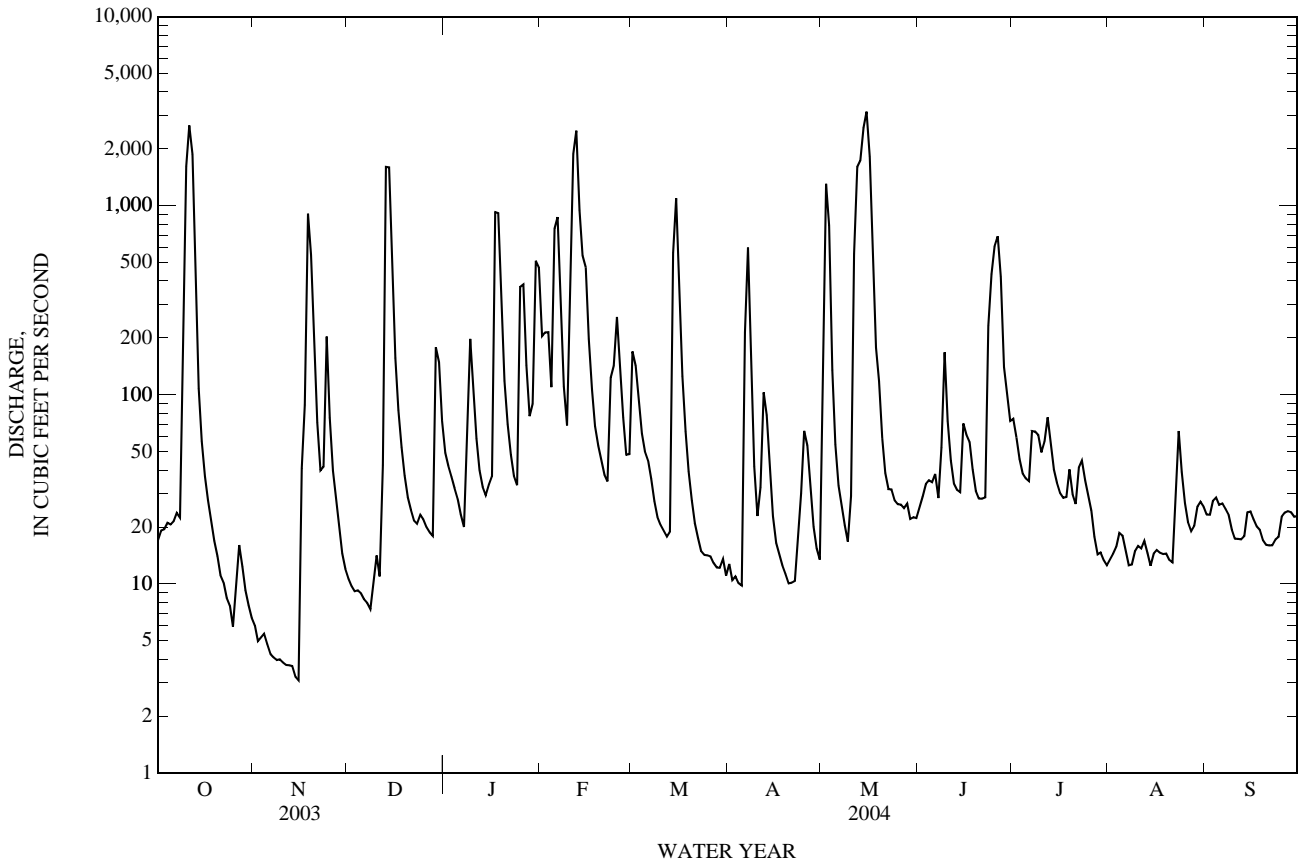
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	6.0	11	49	204	170	13	297	25	75	13	23
2	19	5.0	9.7	42	214	143	10	1,310	29	59	14	23
3	19	5.2	9.1	37	215	92	11	788	34	46	16	28
4	21	5.5	9.2	32	110	62	10	135	35	38	19	29
5	21	4.8	8.9	28	758	50	9.8	55	35	36	18	26
6	22	4.3	8.3	23	871	45	214	33	38	35	15	27
7	24	4.1	7.9	20	258	36	601	26	28	64	13	25
8	22	4.0	7.4	74	111	27	127	20	53	64	13	23
9	102	4.0	9.9	198	69	23	42	17	168	61	15	19
10	1,620	3.8	14	107	359	20	23	29	73	50	16	17
11	2,660	3.7	11	59	1,880	19	32	556	45	56	15	17
12	1,870	3.7	42	40	2,490	18	103	1,600	34	76	17	17
13	459	3.7	1,610	33	947	19	78	1,730	31	56	15	18
14	108	3.2	1,600	29	545	563	39	2,580	31	40	12	24
15	57	3.1	467	34	472	1,100	23	3,150	71	34	14	24
16	37	41	157	37	197	332	16	1,820	62	30	15	22
17	28	88	83	925	107	126	14	462	56	29	15	20
18	21	907	53	914	68	64	13	178	40	29	14	19
19	17	550	37	289	54	39	11	118	31	40	14	17
20	14	173	29	118	46	28	10	59	28	30	13	16
21	11	71	25	70	38	21	10	39	28	26	13	16
22	10	40	22	48	35	17	10	32	29	41	29	16
23	8.4	42	21	37	123	15	18	32	232	45	64	17
24	7.7	203	23	33	143	14	30	28	435	35	39	18
25	5.9	76	22	371	258	14	65	26	609	30	27	23
26	10	40	20	384	149	14	54	26	689	24	21	24
27	16	28	19	143	76	13	33	25	421	18	19	24
28	12	20	18	77	48	12	20	27	140	14	20	24
29	9.3	14	178	90	49	12	15	22	102	15	26	23
30	7.7	12	149	512	---	14	13	23	73	13	27	23
31	6.6	---	73	472	---	11	---	22	---	13	26	---
TOTAL	7,262.6	2,369.1	4,754.4	5,325	10,894	3,133	1,667.8	15,265	3,705	1,222	607	642
MEAN	234	79.0	153	172	376	101	55.6	492	124	39.4	19.6	21.4
MAX	2,660	907	1,610	925	2,490	1,100	601	3,150	689	76	64	29
MIN	5.9	3.1	7.4	20	35	11	9.8	17	25	13	12	16
AC-FT	14,410	4,700	9,430	10,560	21,610	6,210	3,310	30,280	7,350	2,420	1,200	1,270

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2004, BY WATER YEAR (WY)

MEAN	101	93.4	111	133	109	75.4	97.0	131	201	143	112	142
MAX	619	378	385	464	508	476	572	528	876	1,659	642	843
(WY)	(2003)	(1975)	(2002)	(1992)	(1992)	(1997)	(1997)	(1992)	(1968)	(1979)	(1989)	(1979)
MIN	0.52	0.38	0.77	2.17	0.98	0.70	8.57	15.8	18.2	12.9	12.3	4.47
(WY)	(1978)	(2000)	(1990)	(2000)	(2000)	(2000)	(1987)	(2003)	(1990)	(2000)	(1999)	(1999)

08078000 Chocolate Bayou near Alvin, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1959 - 2004	
ANNUAL TOTAL	32,256.1		56,846.9		120	
ANNUAL MEAN	88.4		155		340	
HIGHEST ANNUAL MEAN					19.4	1979
LOWEST ANNUAL MEAN					15,700	Jul 26, 1979
HIGHEST DAILY MEAN	2,660	Oct 11	3,150	May 15	0.03	Dec 17, 1975
LOWEST DAILY MEAN	3.1	Nov 15	3.1	Nov 15	0.08	Oct 15, 1977
ANNUAL SEVEN-DAY MINIMUM	3.6	Nov 9	3.6	Nov 9	21,500	Jul 26, 1979
MAXIMUM PEAK FLOW			3,340	May 15	33.88	Jul 26, 1979
MAXIMUM PEAK STAGE			29.59	May 15		
ANNUAL RUNOFF (AC-FT)	63,980		112,800		86,890	
10 PERCENT EXCEEDS	150		395		209	
50 PERCENT EXCEEDS	24		29		29	
90 PERCENT EXCEEDS	8.5		10		3.6	



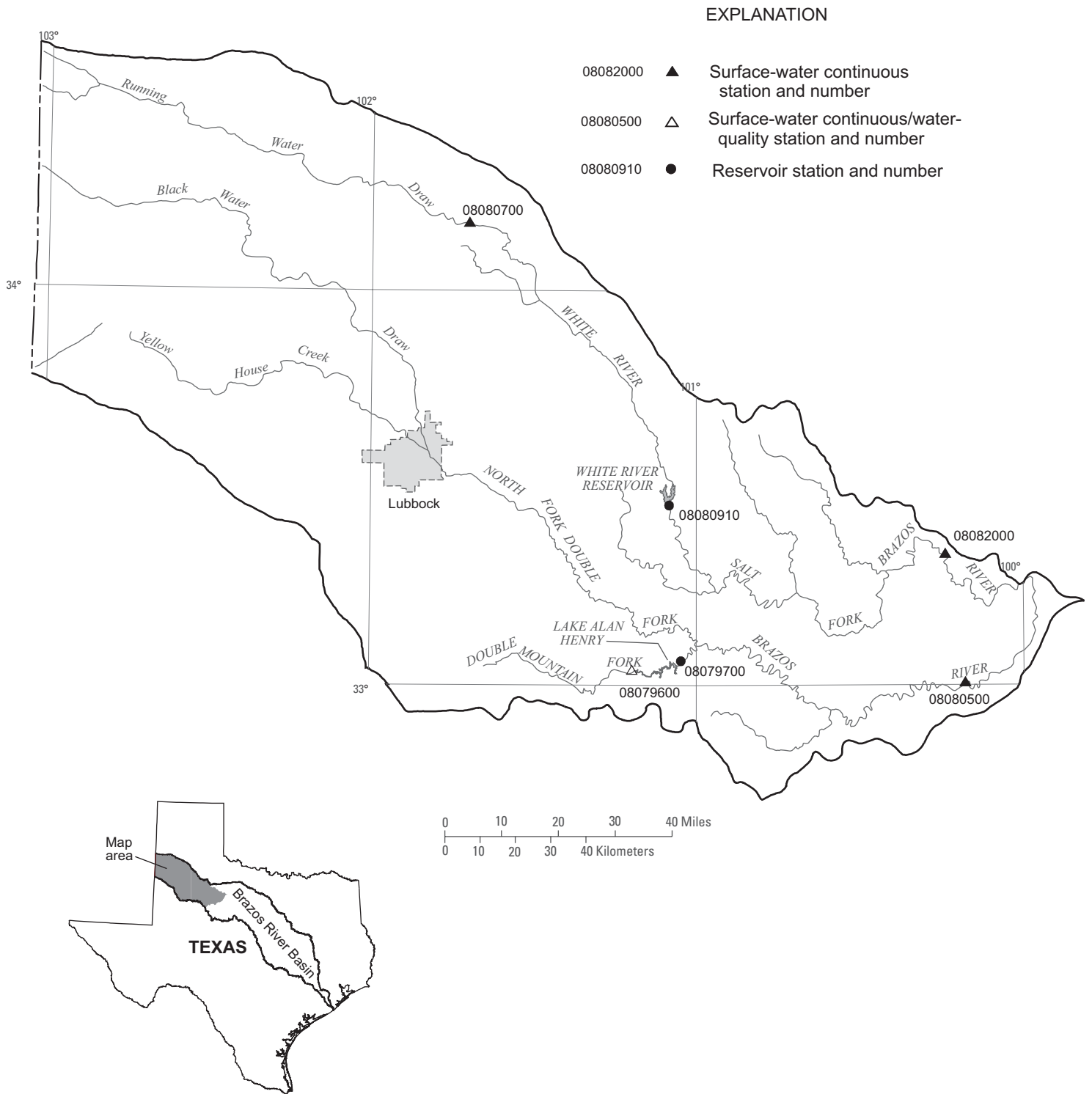


Figure 5.--Map showing location of gaging stations in the first section of the Brazos River Basin



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08079700	Lake Alan Henry Reservoir near Justiceburg, TX . . . . .	260
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08082000	Salt Fork Brazos River near Aspermont, TX . . . . .	268

## BRAZOS RIVER BASIN

08079600 Double Mountain Fork Brazos River at Justiceburg, TX

LOCATION.--Lat 33°02'18", long 101°11'50", Garza County, Hydrologic Unit 12050004, on right bank at downstream side of bridge on U.S. Highway 84 at Justiceburg, 250 ft downstream from Panhandle and Santa Fe Railroad, and at mile 143.4 measured from confluence with Salt Fork Brazos River at mile 923.2 on the Brazos River.

DRAINAGE AREA.--1,466 mi<sup>2</sup> of which 1,222 mi<sup>2</sup> probably is noncontributing.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Nov. 1961 to current year. Prior to Oct. 1963, published as "Sand Creek or South Fork Double Mountain Fork Brazos River at Justiceburg".

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,222.47 ft above NGVD of 1929. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1895, 25.8 ft in 1914 and 22.2 ft in Sept. 1955, from information by local resident. Flood in July 1961 reached a stage of 18.2 ft, from floodmark.

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	17	0.00	0.00	0.00	e2.8	&1.1	e11
2	0.00	0.00	0.00	0.00	0.00	5.6	0.00	0.00	0.00	e0.05	e0.43	e0.23
3	0.00	0.00	0.00	0.00	0.00	&11	0.00	0.00	e1.3	e0.00	e0.37	e0.01
4	0.00	0.00	0.00	0.00	0.00	&958	0.00	0.00	e0.00	e0.00	e0.00	e0.00
5	0.00	0.00	0.00	0.00	0.00	89	55	0.00	e8.2	e35	e0.00	0.00
6	310	0.00	0.00	0.00	0.00	4.8	1,310	0.00	28	e1.8	e0.00	0.00
7	11	0.00	0.00	0.00	0.00	0.44	11	0.00	e0.28	e0.84	1,410	0.00
8	2.1	0.00	0.00	0.00	0.00	0.23	1.3	0.00	e0.00	e0.35	372	0.00
9	38	0.00	0.00	0.00	0.00	0.13	0.09	0.00	0.00	e0.33	102	0.00
10	6.2	0.00	0.00	0.00	0.00	0.02	0.04	0.00	0.00	e0.35	19	0.00
11	1.2	0.00	0.00	0.00	0.00	0.04	0.02	9.3	0.00	e0.34	e9.1	0.00
12	e0.00	0.00	0.00	0.00	0.00	1.0	0.00	0.96	e6.0	e0.30	e4.0	0.00
13	0.00	0.00	0.00	0.00	0.00	17	0.00	0.19	e10	e0.27	e1.0	0.00
14	0.00	0.00	0.00	0.00	0.00	5.7	0.00	e0.02	e0.00	e0.00	e0.50	0.00
15	0.00	0.00	0.00	0.00	0.00	4.6	0.00	0.00	0.00	0.00	e0.10	0.00
16	0.00	0.00	0.00	3.7	0.00	0.23	0.00	0.00	0.00	0.00	0.01	0.00
17	0.00	0.00	0.00	33	0.00	0.13	0.00	0.00	e11	0.00	e0.00	0.00
18	0.00	0.00	0.00	41	0.00	0.09	0.00	0.00	81	0.00	e67	0.00
19	0.00	0.00	0.00	1.1	0.00	e0.04	0.00	0.00	196	0.00	26	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10	0.00	196	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e3.2	0.00	54	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.4	0.00	11	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e22	e4.0	0.00
24	0.00	0.00	0.00	0.00	4.7	0.00	0.00	0.00	0.00	263	e1.0	0.00
25	0.00	0.00	0.00	0.00	25	0.00	0.00	0.00	0.00	521	e0.10	1,680
26	0.00	0.00	0.00	0.00	3.0	0.00	0.00	0.00	0.00	125	e0.00	341
27	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	205	0.00	22
28	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	e21	2,220	0.00	59
29	0.00	0.00	0.00	0.00	84	0.00	0.00	0.00	109	805	0.00	85
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	e47	64	2,230	913
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	9.9	408	---
TOTAL	368.50	0.00	0.00	78.80	116.77	1,115.05	1,377.45	10.47	533.38	4,277.33	4,916.71	3,111.24
MEAN	11.9	0.00	0.00	2.54	4.03	36.0	45.9	0.34	17.8	138	159	104
MAX	310	0.00	0.00	41	84	958	1,310	9.3	196	2,220	2,230	1,680
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	731	0.00	0.00	156	232	2,210	2,730	21	1,060	8,480	9,750	6,170
CFSM	0.05	0.00	0.00	0.01	0.02	0.15	0.19	0.00	0.07	0.57	0.65	0.43
IN.	0.06	0.00	0.00	0.01	0.02	0.17	0.21	0.00	0.08	0.65	0.75	0.47

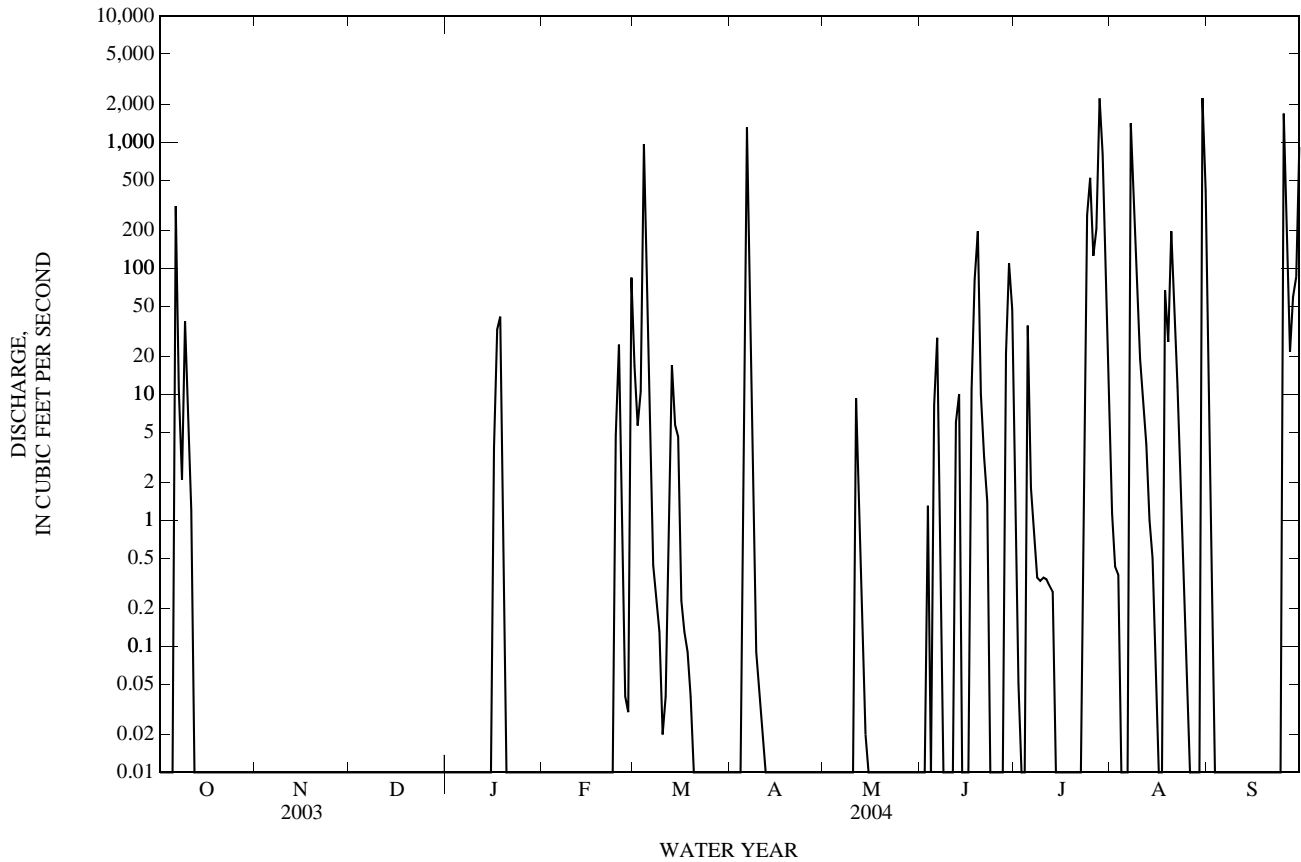
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004, BY WATER YEAR (WY)

MEAN	36.2	7.64	4.58	1.95	4.79	10.1	14.0	50.4	76.2	30.0	37.6	49.2
MAX	337	100	87.7	30.9	56.1	81.6	140	357	510	249	408	321
(WY)	(2001)	(2002)	(1992)	(1992)	(1992)	(1970)	(1997)	(1969)	(1967)	(1979)	(1972)	(1962)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.00	0.00	0.00
(WY)	(1965)	(1978)	(1974)	(1974)	(1965)	(1971)	(1964)	(1989)	(1994)	(1964)	(1987)	(1968)

08079600 Double Mountain Fork Brazos River at Justiceburg, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004	
ANNUAL TOTAL	7,467.47		15,905.70			
ANNUAL MEAN	20.5		43.5		26.5	
HIGHEST ANNUAL MEAN					69.8	1967
LOWEST ANNUAL MEAN					1.65	1983
HIGHEST DAILY MEAN	1,320	Aug 30	2,230	Aug 30	10,000	Jun 12, 1999
LOWEST DAILY MEAN	0.00	Jan 10	0.00	Oct 1	0.00	Feb 17, 1962
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 10	0.00	Oct 12	0.00	Mar 3, 1962
MAXIMUM PEAK FLOW			7,050	Jul 28	49,600	May 6, 1969
MAXIMUM PEAK STAGE			10.40	Jul 28	p19.80	May 6, 1969
ANNUAL RUNOFF (AC-FT)	14,810		31,550		19,230	
ANNUAL RUNOFF (CFSM)	0.084		0.178		0.109	
ANNUAL RUNOFF (INCHES)	1.14		2.42		1.48	
10 PERCENT EXCEEDS	8.0		25		9.7	
50 PERCENT EXCEEDS	0.00		0.00		0.01	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

p Observed.  
 e Estimated  
 & Value was computed from affected unit values



08079600 Double Mountain Fork Brazos River at Justiceburg, TX—Continued

## WATER-QUALITY RECORDS

## PERIOD OF RECORD.--

CHEMICAL DATA: Dec. 1964 to Sept. 1965, Oct. 1975 to current year.  
 SEDIMENT DATA: June 1977 to June 1982.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1975 to current year (local observer).  
 WATER TEMPERATURE: Oct. 1975 to current year (local observer).

REMARKS.--Records fair. Interruptions in the record were due to no flow except for several days when specific conductance and water temperature were not determined. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous years using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 31,400 microsiemens/cm, Dec. 6, 1994; minimum daily, 370 microsiemens/cm, Oct. 20, 1983.  
 WATER TEMPERATURE: Maximum daily, 38.0°C, May 17, 2001; minimum daily, 0.0°C, on many days during winter months.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 15,600 microsiemens/cm, Mar. 12; minimum daily, 430 microsiemens/cm, Apr. 6.  
 WATER TEMPERATURE: Maximum daily, 37.0°C, June 29; minimum daily, 4.5°C, Feb. 24.

## 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)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	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)
FEB 25...	1350	39	12.1	109	9.2	652	7.3	9	2.74	.624	1.28	18	128
APR 06...	1215	939	--	--	--	365	14.3	17	4.92	1.11	1.85	8	76.5
MAY 13...	0930	.19	6.6	87	8.2	7,970	23.0	670	168d	60.6d	11.3d	24	1450d
JUN 30...	1430	13	6.8	97	8.4	630	31.9	46	14.3	2.46	2.69	7	109
JUL 07...	1045	.59	7.8	106	8.0	13,500	24.3	320	82.3	28.7	3.66	62	2560d

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

Date	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)
FEB 25...	71.0	.5	5.8	31.6	327
APR 06...	38.9	.7	7.3	27.0	218
MAY 13...	2380d	1.3	10.7	339d	4,520
JUN 30...	96.1	.6	9.7	35.1	340
JUL 07...	4520d	.7	7.7d	404d	7,690

Remark codes used in this table:

E -- Estimated value

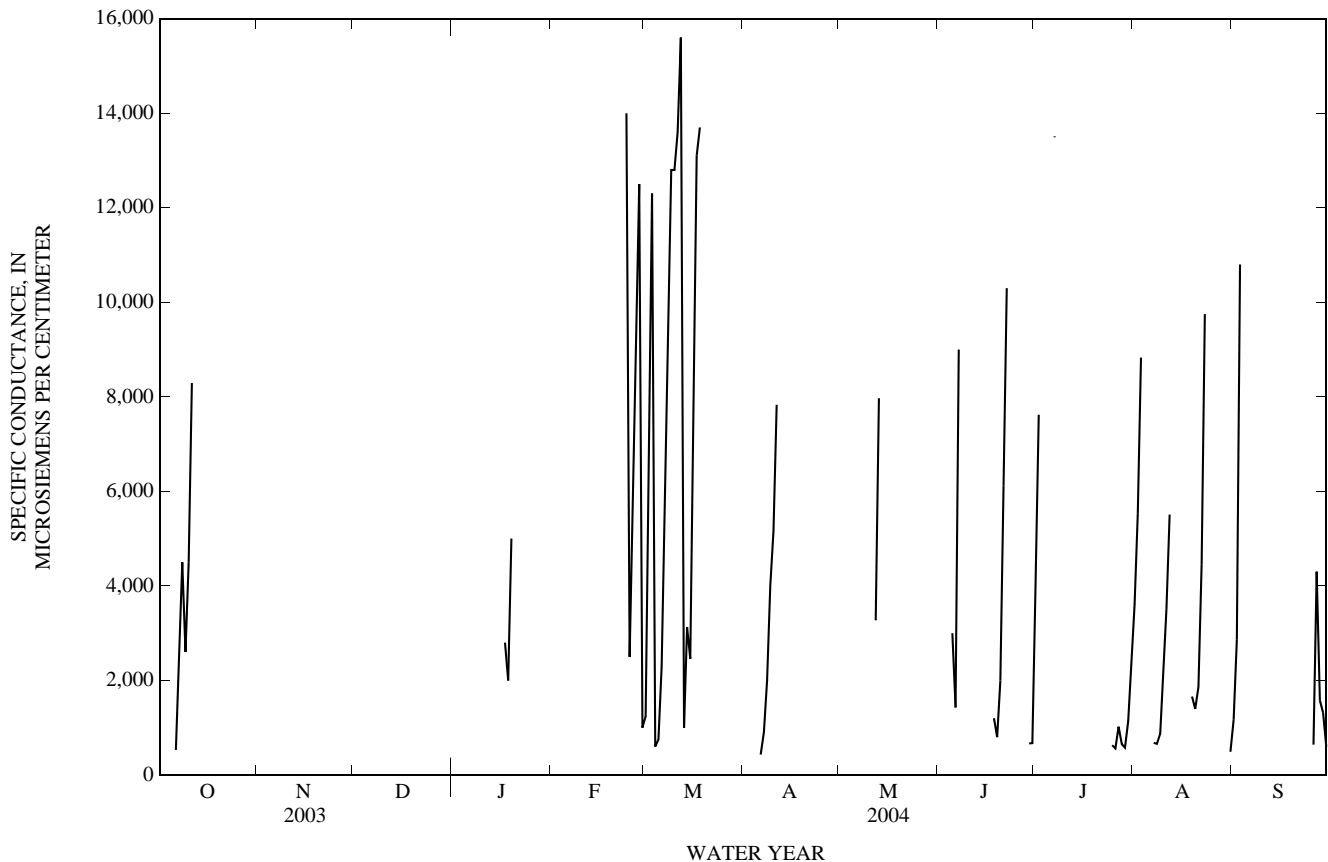
Value qualifier codes used in this table:

d -- Diluted sample: method hi range exceeded

08079600 Double Mountain Fork Brazos River at Justiceburg, TX—Continued

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

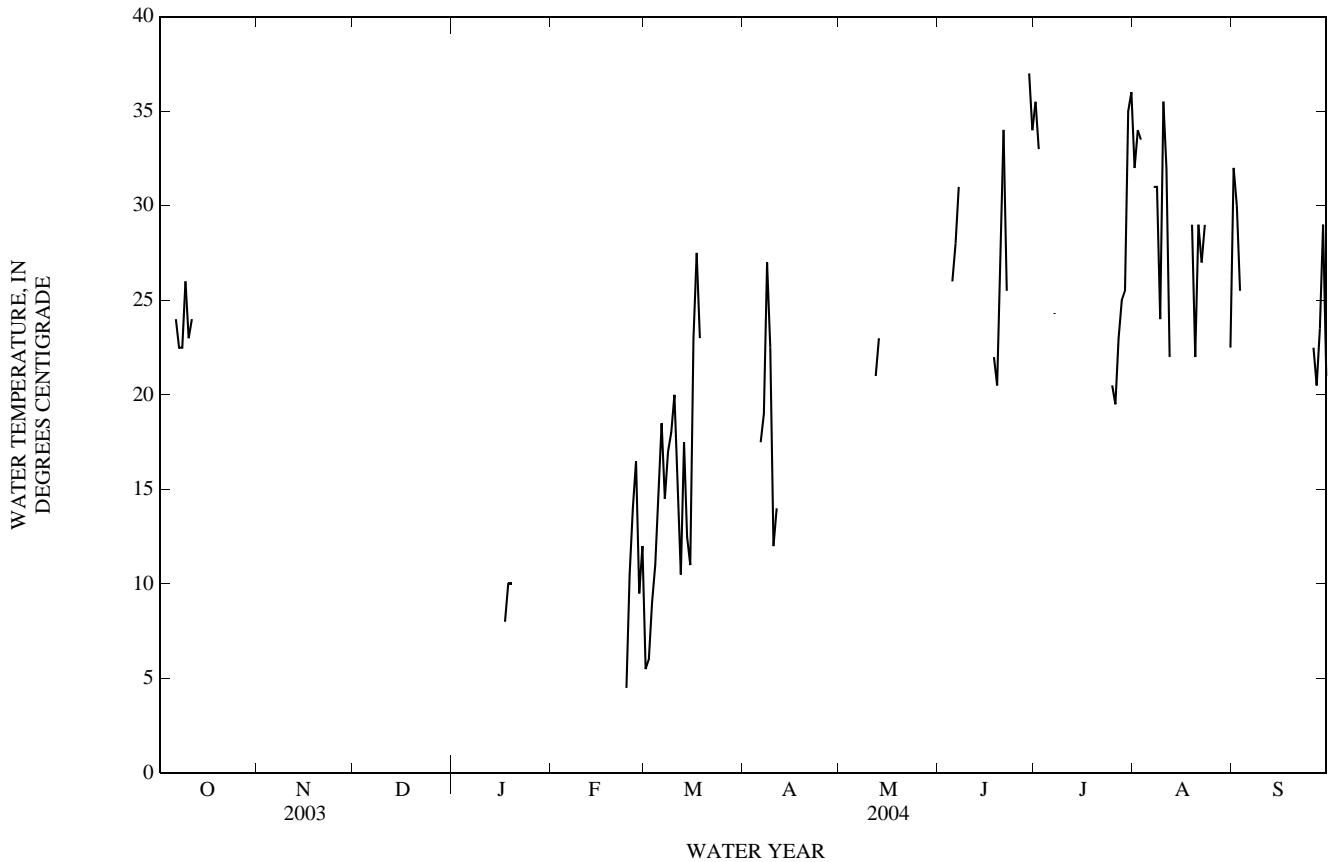
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	1,230	---	---	---	4,040	3,610	1,170
2	---	---	---	---	---	5,970	---	---	---	7,620	5,540	2,860
3	---	---	---	---	---	12,300	---	---	---	---	8,830	10,800
4	---	---	---	---	---	600	---	---	---	---	---	---
5	---	---	---	---	---	745	---	---	3,000	---	---	---
6	530	---	---	---	---	2,290	430	---	1,430	---	---	---
7	2,600	---	---	---	---	5,480	899	---	9,000	13,500	680	---
8	4,500	---	---	---	---	10,300	2,000	---	---	---	659	---
9	2,600	---	---	---	---	12,800	4,000	---	---	---	867	---
10	4,500	---	---	---	---	12,800	5,160	---	---	---	2,410	---
11	8,290	---	---	---	---	13,600	7,830	---	---	---	3,510	---
12	---	---	---	---	---	15,600	---	3,270	---	---	5,510	---
13	---	---	---	---	---	1,000	---	7,970	---	---	---	---
14	---	---	---	---	---	3,130	---	---	---	---	---	---
15	---	---	---	---	---	2,460	---	---	---	---	---	---
16	---	---	---	---	---	8,810	---	---	---	---	---	---
17	---	---	---	2,800	---	13,100	---	---	---	---	---	---
18	---	---	---	2,000	---	13,700	---	---	1,200	---	---	---
19	---	---	---	5,000	---	---	---	---	800	---	1,660	---
20	---	---	---	---	---	---	---	---	2,000	---	1,400	---
21	---	---	---	---	---	---	---	---	6,130	---	1,860	---
22	---	---	---	---	---	---	---	---	10,300	---	4,460	---
23	---	---	---	---	---	---	---	---	---	---	9,750	---
24	---	---	---	---	14,000	---	---	---	---	---	---	---
25	---	---	---	---	2,500	---	---	---	---	630	---	---
26	---	---	---	---	6,500	---	---	---	---	563	---	643
27	---	---	---	---	10,000	---	---	---	---	1,020	---	4,300
28	---	---	---	---	12,500	---	---	---	---	654	---	1,580
29	---	---	---	---	1,000	---	---	---	667	582	---	1,320
30	---	---	---	---	---	---	---	---	676	1,140	---	600
31	---	---	---	---	---	---	---	---	---	2,330	492	---



08079600 Double Mountain Fork Brazos River at Justiceburg, TX—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
 DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	5.5	---	---	---	35.5	32.0	32.0
2	---	---	---	---	---	6.0	---	---	---	33.0	34.0	30.0
3	---	---	---	---	---	9.0	---	---	---	---	33.5	25.5
4	---	---	---	---	---	11.0	---	---	---	---	---	---
5	---	---	---	---	---	14.5	---	---	26.0	---	---	---
6	24.0	---	---	---	---	18.5	17.5	---	28.0	---	---	---
7	22.5	---	---	---	---	14.5	19.0	---	31.0	24.3	31.0	---
8	22.5	---	---	---	---	17.0	27.0	---	---	---	31.0	---
9	26.0	---	---	---	---	18.0	22.5	---	---	---	24.0	---
10	23.0	---	---	---	---	20.0	12.0	---	---	---	35.5	---
11	24.0	---	---	---	---	14.5	14.0	---	---	---	32.0	---
12	---	---	---	---	---	10.5	---	21.0	---	---	22.0	---
13	---	---	---	---	---	17.5	---	23.0	---	---	---	---
14	---	---	---	---	---	12.5	---	---	---	---	---	---
15	---	---	---	---	---	11.0	---	---	---	---	---	---
16	---	---	---	---	---	23.0	---	---	---	---	---	---
17	---	---	---	8.0	---	27.5	---	---	---	---	---	---
18	---	---	---	10.0	---	23.0	---	---	22.0	---	---	---
19	---	---	---	10.0	---	---	---	---	20.5	---	29.0	---
20	---	---	---	---	---	---	---	---	27.0	---	22.0	---
21	---	---	---	---	---	---	---	---	34.0	---	29.0	---
22	---	---	---	---	---	---	---	---	25.5	---	27.0	---
23	---	---	---	---	---	---	---	---	---	---	29.0	---
24	---	---	---	---	4.5	---	---	---	---	---	---	---
25	---	---	---	---	10.5	---	---	---	---	20.5	---	---
26	---	---	---	---	14.0	---	---	---	---	19.5	---	22.5
27	---	---	---	---	16.5	---	---	---	---	23.0	---	20.5
28	---	---	---	---	9.5	---	---	---	---	25.0	---	23.5
29	---	---	---	---	12.0	---	---	---	37.0	25.5	---	29.0
30	---	---	---	---	---	---	---	---	34.0	35.0	---	21.0
31	---	---	---	---	---	---	---	---	---	36.0	22.5	---



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08079700 Lake Alan Henry Reservoir near Justiceburg, TX

LOCATION.--Lat 33°03'46", long 101°02'50". Garza County, Hydrologic Unit 12050004, on left bank at left end of John T. Montford Dam in intake structure of Alan Henry Dam on Double Mountain Fork Brazos River, 0.5 mi west of Garza and Kent county line and 9.0 mi east of Justiceburg.

DRAINAGE AREA.--1,617 mi<sup>2</sup> of which 1,222 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--Oct. 1997 to Sept. 2003 (contents), Oct. 2003 to current year.

GAGE.--Water-stage recorder. Datum of gage is 0.00 ft from Brazos River Authority benchmark (vertical control datum unknown). Satellite telemeter at station.

REMARKS.--Records good. The dam was completed Oct. 1993. The reservoir is formed by a rolled earthfill dam, 3,600 foot long. The dam and lake are owned by the city of Lubbock and operated by Brazos River Authority for recreation and future municipal use. The spillway consists of a fixed gate type service spillway with an ogee crest and a 1,700-foot-long emergency spillway cut into natural ground near right end of dam. The control works consist of 30 and 42-inch-diameter gated steel conduits, encased in concrete, that discharge from the outlet structure. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	2,263.0
Design flood	2,259.4
Crest of spillway	2,240.0
Crest of service spillway	2,220.0
Lowest gated outlet (invert)	2,140.0

COOPERATION.--Records of diversion may be obtained from the Brazos River Authority.

EXTREMES FOR PERIOD OF RECORD.--Oct. 1997 to Sept. 2003: Maximum contents, 93,590 acre-ft, Sept. 12, 2003; minimum contents, 34,640 acre-ft, Mar. 16, 17, 1999; Oct. 1997 to current year: Maximum elevation, 2,219.75 ft, Sept. 30, 2004; minimum elevation, 2,180.91 ft, Mar. 16, 17, 1999.

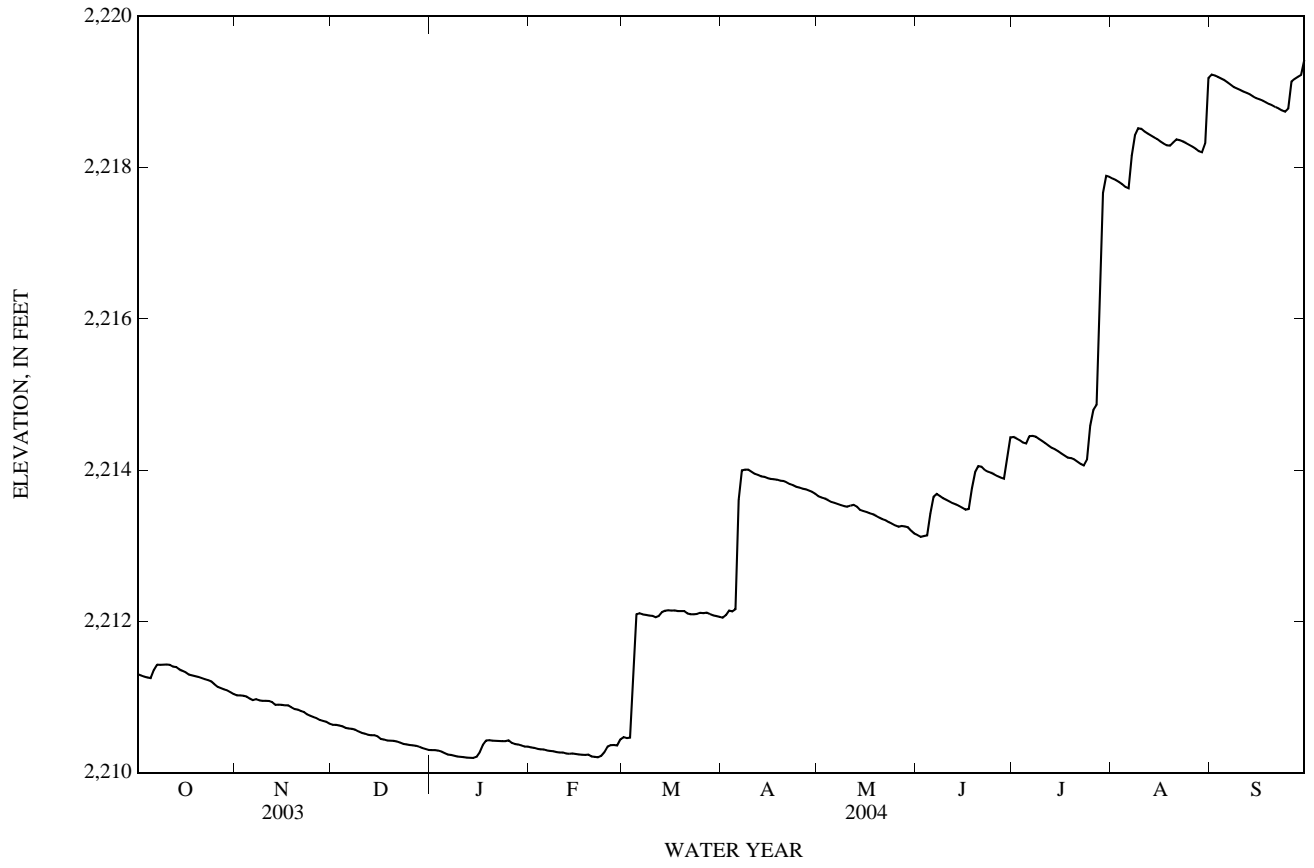
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,219.75 ft, Sept. 30; minimum elevation, 2,210.19 ft, Jan. 12-15, Feb. 22.

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	2,211.30	2,211.02	2,210.63	2,210.30	2,210.34	2,210.47	2,212.05	2,213.65	2,213.14	2,214.44	2,217.86	2,219.23
2	2,211.28	2,211.02	2,210.63	2,210.30	2,210.33	2,210.46	2,212.08	2,213.64	2,213.12	2,214.42	2,217.84	2,219.22
3	2,211.27	2,211.02	2,210.62	2,210.29	2,210.32	2,210.46	2,212.14	2,213.62	2,213.13	2,214.39	2,217.81	2,219.20
4	2,211.26	2,211.01	2,210.61	2,210.28	2,210.31	2,211.15	2,212.13	2,213.60	2,213.14	2,214.36	2,217.78	2,219.18
5	2,211.25	2,210.98	2,210.59	2,210.26	2,210.31	2,212.09	2,212.16	2,213.58	2,213.43	2,214.35	2,217.74	2,219.16
6	2,211.36	2,210.96	2,210.58	2,210.24	2,210.30	2,212.11	2,213.61	2,213.57	2,213.65	2,214.45	2,217.73	2,219.13
7	2,211.43	2,210.97	2,210.58	2,210.23	2,210.29	2,212.09	2,214.00	2,213.55	2,213.68	2,214.45	2,218.16	2,219.09
8	2,211.43	2,210.96	2,210.57	2,210.22	2,210.28	2,212.09	2,214.01	2,213.54	2,213.66	2,214.44	2,218.43	2,219.06
9	2,211.43	2,210.95	2,210.55	2,210.21	2,210.27	2,212.08	2,214.01	2,213.52	2,213.63	2,214.41	2,218.52	2,219.04
10	2,211.43	2,210.95	2,210.53	2,210.21	2,210.27	2,212.07	2,213.98	2,213.51	2,213.61	2,214.39	2,218.51	2,219.02
11	2,211.43	2,210.95	2,210.52	2,210.20	2,210.27	2,212.05	2,213.95	2,213.53	2,213.59	2,214.36	2,218.48	2,219.00
12	2,211.40	2,210.93	2,210.50	2,210.20	2,210.25	2,212.07	2,213.94	2,213.54	2,213.56	2,214.32	2,218.45	2,218.99
13	2,211.40	2,210.90	2,210.49	2,210.20	2,210.25	2,212.12	2,213.92	2,213.52	2,213.55	2,214.30	2,218.43	2,218.97
14	2,211.36	2,210.90	2,210.49	2,210.20	2,210.25	2,212.14	2,213.91	2,213.47	2,213.53	2,214.28	2,218.40	2,218.94
15	2,211.35	2,210.90	2,210.48	2,210.21	2,210.25	2,212.15	2,213.89	2,213.46	2,213.50	2,214.25	2,218.38	2,218.92
16	2,211.33	2,210.89	2,210.45	2,210.27	2,210.24	2,212.14	2,213.89	2,213.45	2,213.48	2,214.22	2,218.34	2,218.90
17	2,211.30	2,210.89	2,210.44	2,210.37	2,210.24	2,212.15	2,213.88	2,213.43	2,213.49	2,214.19	2,218.32	2,218.89
18	2,211.29	2,210.86	2,210.43	2,210.43	2,210.23	2,212.14	2,213.87	2,213.42	2,213.76	2,214.17	2,218.30	2,218.86
19	2,211.28	2,210.84	2,210.42	2,210.43	2,210.24	2,212.14	2,213.86	2,213.39	2,213.97	2,214.16	2,218.29	2,218.84
20	2,211.26	2,210.83	2,210.42	2,210.42	2,210.21	2,212.14	2,213.86	2,213.37	2,214.05	2,214.14	2,218.33	2,218.82
21	2,211.25	2,210.81	2,210.41	2,210.42	2,210.21	2,212.11	2,213.84	2,213.35	2,214.04	2,214.11	2,218.37	2,218.80
22	2,211.24	2,210.80	2,210.40	2,210.42	2,210.20	2,212.09	2,213.82	2,213.34	2,214.00	2,214.08	2,218.36	2,218.78
23	2,211.22	2,210.77	2,210.38	2,210.42	2,210.22	2,212.09	2,213.80	2,213.31	2,213.98	2,214.06	2,218.35	2,218.76
24	2,211.21	2,210.75	2,210.38	2,210.42	2,210.27	2,212.10	2,213.78	2,213.29	2,213.96	2,214.14	2,218.32	2,218.74
25	2,211.17	2,210.74	2,210.37	2,210.43	2,210.34	2,212.11	2,213.77	2,213.27	2,213.94	2,214.59	2,218.30	2,218.78
26	2,211.13	2,210.72	2,210.36	2,210.39	2,210.36	2,212.11	2,213.76	2,213.25	2,213.92	2,214.80	2,218.28	2,219.14
27	2,211.12	2,210.70	2,210.36	2,210.38	2,210.36	2,212.11	2,213.75	2,213.26	2,213.90	2,214.86	2,218.25	2,219.17
28	2,211.10	2,210.68	2,210.34	2,210.37	2,210.36	2,212.10	2,213.73	2,213.26	2,213.89	2,216.26	2,218.22	2,219.20
29	2,211.09	2,210.67	2,210.33	2,210.36	2,210.44	2,212.08	2,213.71	2,213.25	2,214.16	2,217.66	2,218.20	2,219.22
30	2,211.06	2,210.65	2,210.31	2,210.34	---	2,212.07	2,213.69	2,213.20	2,214.43	2,217.89	2,218.32	2,219.42
31	2,211.04	---	2,210.30	2,210.34	---	2,212.06	---	2,213.16	---	2,217.88	2,219.19	---
MEAN	2,211.27	2,210.87	2,210.47	2,210.32	2,210.28	2,211.91	2,213.56	2,213.43	2,213.70	2,214.74	2,218.27	2,219.02
MAX	2,211.43	2,211.02	2,210.63	2,210.43	2,210.44	2,212.15	2,214.01	2,213.65	2,214.43	2,217.89	2,219.19	2,219.42
MIN	2,211.04	2,210.65	2,210.30	2,210.20	2,210.20	2,210.46	2,212.05	2,213.16	2,213.12	2,214.06	2,217.73	2,218.74
CAL YR	2003	MEAN	2,209.61	MAX	2,211.68	MIN	2,207.25					
WTR YR	2004	MEAN	2,213.16	MAX	2,219.42	MIN	2,210.20					



08079700 Lake Alan Henry Reservoir near Justiceburg, TX—Continued



## 08080500 Double Mountain Fork Brazos River near Aspermont, TX

LOCATION.--Lat 33°00'29", long 100°10'49", Stonewall County, Hydrologic Unit 12050004, on right bank at downstream side of bridge on U.S. Highway 83, 0.3 mi downstream from Hitson Creek, 10.0 mi south of Aspermont, and at mile 34.5, measured from confluence with Salt Fork Brazos River, which is at mile 923.2 on the Brazos River.

DRAINAGE AREA.--8,796 mi<sup>2</sup> of which 6,932 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--Dec. 1923 to Sept. 1934, June 1939 to current year. Water-quality records: Chemical data: Oct. 1948 to Nov. 1951, Sept. 1956 to Aug. 2002. Biochemical data: June 1978 to May 1993, Nov. 1995 to Aug. 2002. Pesticide data: Mar. to June 1979. Sediment data: Sept. 1944 to Nov. 1951, June 1978 to Sept. 1993. Specific conductance: Oct. 1948 to Nov. 1951, Sept. 1956 to Sept. 1995. Water temperature: Nov. 1949 to Nov. 1951, Sept. 1956 to Sept. 1995.

REVISED RECORDS.--WSP 733: 1927(M), WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,624.79 ft above NGVD of 1929. Dec. 3, 1923 to Sept. 30, 1934, nonrecording gage at site 90 ft downstream at datum 2.0 ft higher, and June 8, 1939 to Aug. 12, 1972, water-stage recorder at present site at datum 2.0 ft higher. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since water year 1994, at least 10% of contributing drainage area has been regulated. There are small diversions above station for oil field operations. No flow at times most years.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--64 years (water years 1925-34, 1940-93) prior to completion of Lake Alan Henry Reservoir, 158 ft<sup>3</sup>/s (114,300 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS 1925-1934, 1940-1993: Maximum discharge, 91,400 ft<sup>3</sup>/s Sept. 26, 1955 (gage height, 29.50 ft) from rating curve extended above 75,900 ft<sup>3</sup>/s; no flow at times most years.

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	7.3	e0.00	1.9	0.69	3.3	25	40	38	18	95	939	1,140
2	7.1	0.00	2.0	0.68	3.2	24	39	36	14	129	326	705
3	6.8	e0.00	1.9	0.65	2.9	35	39	33	138	96	206	246
4	6.4	e0.00	1.8	0.65	2.9	89	61	30	205	75	166	155
5	6.4	e0.00	1.7	0.64	3.0	1,230	109	28	260	61	140	126
6	7.3	e10	1.6	0.64	2.8	e1,260	254	26	298	51	123	119
7	8.9	30	1.6	0.64	2.5	e870	1,400	24	352	45	126	93
8	42	60	1.5	0.63	2.4	210	851	23	189	40	184	82
9	e25	31	1.5	0.59	2.3	173	312	21	103	34	197	74
10	e15	16	1.4	0.56	2.1	150	184	19	363	29	146	65
11	e13	11	1.3	0.57	2.5	119	137	18	106	26	130	58
12	e9.0	8.6	1.3	0.56	2.4	97	140	17	186	23	106	51
13	6.2	7.3	1.4	0.56	2.4	91	123	17	248	20	94	46
14	5.6	6.5	1.4	0.57	2.6	92	118	41	113	17	83	39
15	4.8	5.9	1.3	0.81	2.4	89	116	27	61	15	80	32
16	e3.5	5.5	1.1	1.4	2.2	80	100	22	40	13	98	29
17	e2.5	5.1	1.0	2.2	1.8	74	92	19	29	12	80	26
18	e2.0	4.8	0.99	3.1	1.6	69	86	16	23	12	69	22
19	1.4	4.4	0.98	2.8	1.4	66	82	14	21	11	67	20
20	1.1	4.1	0.98	2.4	1.1	60	79	13	30	9.6	71	18
21	0.80	3.7	0.95	2.2	1.1	55	72	12	71	&10	80	17
22	0.69	3.4	0.90	3.1	1.1	52	65	11	80	&9.6	76	15
23	0.61	3.1	0.87	5.3	10	52	61	9.9	63	&10	61	15
24	0.54	2.8	0.80	7.7	20	54	54	8.7	49	&208	55	15
25	0.37	2.7	0.79	7.3	20	153	48	41	45	346	51	17
26	0.39	2.5	0.79	6.2	12	154	66	86	62	286	48	17
27	0.37	2.4	0.79	5.3	8.8	100	62	59	98	183	42	19
28	e0.20	2.2	0.75	4.7	7.7	67	64	48	44	522	40	43
29	e0.10	2.1	0.73	4.2	26	55	54	62	94	346	39	67
30	0.00	2.0	0.72	3.9	---	48	44	36	73	785	37	78
31	e0.00	---	0.72	3.5	---	44	---	25	---	1,320	36	---
TOTAL	185.37	237.10	37.46	74.74	154.5	5,737	4,952	880.6	3,476	4,839.2	3,996	3,449
MEAN	5.98	7.90	1.21	2.41	5.33	185	165	28.4	116	156	129	115
MAX	42	60	2.0	7.7	26	1,260	1,400	86	363	1,320	939	1,140
MIN	0.00	0.00	0.72	0.56	1.1	24	39	8.7	14	9.6	36	15
AC-FT	368	470	74	148	306	11,380	9,820	1,750	6,890	9,600	7,930	6,840

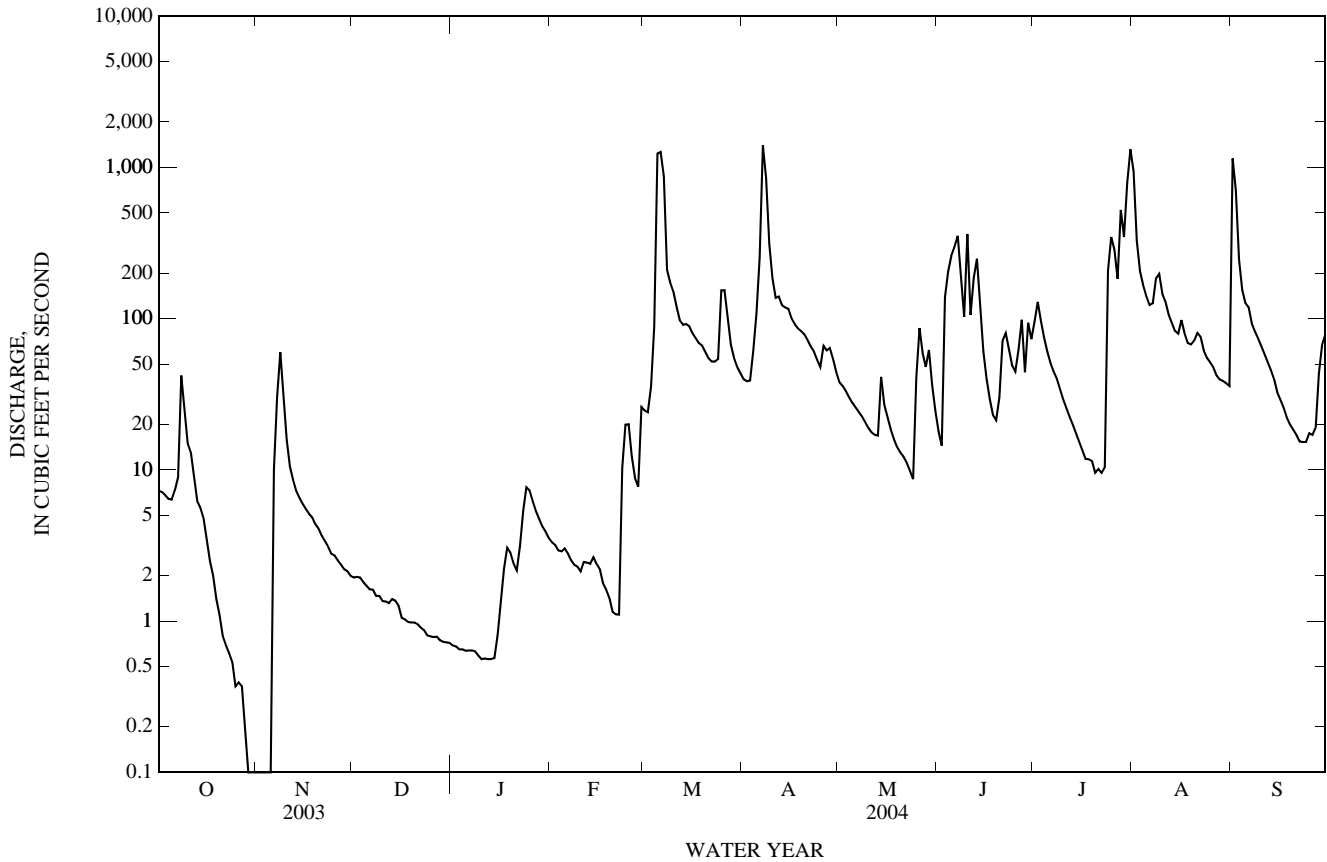
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2004z, BY WATER YEAR (WY)

MEAN	20.4	25.7	15.0	11.5	23.8	97.6	50.4	62.6	224	51.5	49.0	54.0
MAX	102	134	70.3	77.1	143	685	253	181	1,264	156	152	231
(WY)	(2001)	(2001)	(2001)	(2001)	(1997)	(2000)	(1997)	(1995)	(1999)	(2004)	(1996)	(1995)
MIN	0.94	0.25	0.00	0.33	0.01	0.04	0.03	0.84	10.4	0.06	0.00	0.00
(WY)	(1999)	(1994)	(1999)	(2000)	(1999)	(1995)	(1995)	(1996)	(2002)	(1994)	(1994)	(1998)

08080500 Double Mountain Fork Brazos River near Aspermont, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1994 - 2004z	
ANNUAL TOTAL	12,009.53		28,018.97		57.1	
ANNUAL MEAN	32.9		76.6		129	
HIGHEST ANNUAL MEAN					1999	
LOWEST ANNUAL MEAN					7.55	
HIGHEST DAILY MEAN	2,610	Jun 6	1,400	Apr 7	14,600	Mar 23, 2000
LOWEST DAILY MEAN	0.00	Jul 20	0.00	Oct 30	0.00	Oct 1, 1993
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 20	0.00	Oct 30	0.00	Oct 1, 1993
MAXIMUM PEAK FLOW			2,610	Mar 5	23,000	Mar 23, 2000
MAXIMUM PEAK STAGE			a6.82	Mar 5	p17.30	Mar 23, 2000
ANNUAL RUNOFF (AC-FT)	23,820		55,580		41,340	
10 PERCENT EXCEEDS	34		154		90	
50 PERCENT EXCEEDS	5.6		22		5.8	
90 PERCENT EXCEEDS	0.00		0.80		0.00	

z Period of regulated streamflow.  
 p Observed.  
 a From floodmark.  
 e Estimated  
 & Value was computed from affected unit values



## BRAZOS RIVER BASIN

08080700 Running Water Draw at Plainview, TX

LOCATION.--Lat 34°10'44", long 101°42'08", Hale County, Hydrologic Unit 12050005, on downstream side of bridge on Broadway Street in Plainview. .5 mi upstream from Atchison, Topeka and Sante Fe Railway Co. bridge. 6 mi downstream from an unnamed tributary, and 28.1 mi upstream from White River.

DRAINAGE AREA.--1,291 mi<sup>2</sup> of which 909 mi<sup>2</sup> probably is noncontributing (revised).

PERIOD OF RECORD.--June 1939 to Sept. 1949, Feb. 1961 to Sept. 1978, Oct. 2002 to current year. Records from Oct. 1949 to Sept. 1953, Oct. 1956 to Apr. 1960, are unpublished and available in the files of the U.S. Geological Survey. Prior to Oct. 1963, published as White River at Plainview.

REVISED RECORDS.--WDR TX-76-2: Drainage area

GAGE.--Water-stage recorder. Datum of gage is 3,341.11 ft above NGVD of 1929. Satellite telemeter at site.

REMARKS.--No estimated daily discharges. Records good. No known regulation. No known diversions.

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	11	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	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	19	4.4	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	3.2	1.1	0.00	0.06	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.00	13	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	12	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	1.7	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	12	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.00	0.00	0.00	0.01	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	1.2	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	8.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	1.1	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	2.5	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	0.51	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.17
22	0.00	0.00	0.00	0.00	1.2	0.00	0.00	0.00	0.08	0.00	1.3	2.3
23	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	3.6	0.00	0.00	0.00	0.00	1.6	0.00	0.00
25	0.00	0.00	0.00	0.00	1.2	0.00	0.00	0.00	0.00	0.00	0.00	5.0
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13
28	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	9.0	0.89	0.00	2.6
29	0.00	0.00	0.00	0.00	8.4	0.00	0.00	0.00	6.1	18	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	117	0.00	7.7	0.05
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	1.5	---
TOTAL	0.00	0.00	0.00	9.50	14.62	24.90	35.98	0.00	135.84	31.61	51.82	39.12
MEAN	0.00	0.00	0.00	0.31	0.50	0.80	1.20	0.00	4.53	1.02	1.67	1.30
MAX	0.00	0.00	0.00	8.4	8.4	19	18	0.00	117	18	13	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	19	29	49	71	0.00	269	63	103	78

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

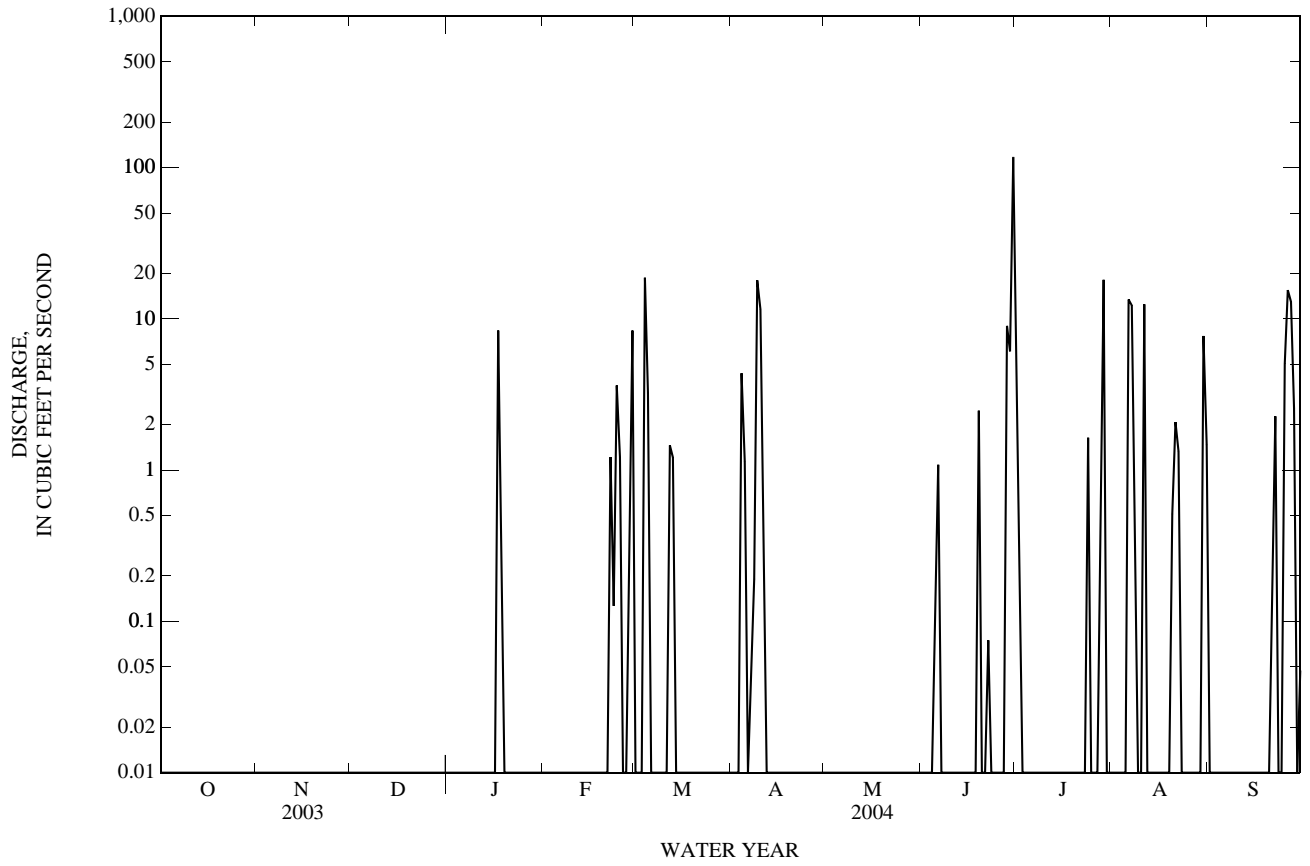
	3.14	0.15	0.34	0.04	0.06	0.10	0.33	8.01	19.3	2.22	0.76	0.62
MEAN	3.14	0.15	0.34	0.04	0.06	0.10	0.33	8.01	19.3	2.22	0.76	0.62
MAX	88.6	3.10	11.1	0.31	0.50	0.80	4.26	69.2	353	26.1	8.61	10.7
(WY)	(1942)	(1942)	(1947)	(2004)	(2004)	(2004)	(1970)	(1951)	(1941)	(1959)	(1974)	(1971)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1944)	(1940)	(1946)	(1942)	(1942)	(1940)	(1944)	(1942)	(1940)	(1939)	(1943)	(1939)

## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004h	
ANNUAL TOTAL	68.19		343.39			
ANNUAL MEAN	0.19		0.94		2.98	
HIGHEST ANNUAL MEAN					35.6	
LOWEST ANNUAL MEAN					0.00	
HIGHEST DAILY MEAN	28	Jun 21	117	Jun 30	3,710	Jun 6, 1941
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Jul 1, 1939
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Jul 1, 1939
MAXIMUM PEAK FLOW			455	Jun 30	12,000	Jun 6, 1941
MAXIMUM PEAK STAGE			4.30	Jun 30	8.75	Jun 6, 1941
ANNUAL RUNOFF (AC-FT)	135		681		2,160	
10 PERCENT EXCEEDS	0.00		0.62		0.20	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

h See PERIOD OF RECORD paragraph.

08080700 Running Water Draw at Plainview, TX—Continued



## 08080910 White River Reservoir near Spur, TX

LOCATION.--Lat 33°27'28", long 101°05'01", Crosby County, Hydrologic Unit 12050006, on right bank near intake structure at White River Dam on White River, 0.5 mi downstream from Sand Creek, 1.7 mi upstream from Home Creek, 13.0 mi west of Spur, and 22.8 mi upstream from Salt Fork Brazos River.

DRAINAGE AREA.--3,069 mi<sup>2</sup> of which 2,380 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--Apr. 1964 to Sept. 1976, Jan. 1999 to Sept. 2002 (contents), Oct. 2002 to current year. Water-quality records: Chemical data: Dec. 1970 to July 1975.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Aug. 1, 2002, water-stage recorder on intake structure 145 ft left and 20 ft downstream at same datum. Satellite telemeter at station.

REMARKS.--Records fair. Interruptions in the record were due to malfunction of the instrument. The reservoir is formed by a rolled earthfill dam 3,300 ft long. The dam was completed and storage began in Oct. 1963. The emergency spillway is an open cut channel through rock, 1,100 ft wide, located at the right end of dam. The spillway is designed to discharge 69,000 ft<sup>3</sup>/s with a 7.5 ft head. The uncontrolled service spillway is a 5.0 ft square drop-inlet structure that discharges through a 5.0 ft square concrete conduit. The service outlet is a controlled 18-inch diameter concrete pipe that is connected to the 5.0 ft conduit. There is a pump station about 1,400 ft upstream from the dam on the right bank. The pump station is connected to the lake by a 58-inch diameter concrete pipe. The dam is owned by the White River Municipal Water District. The water in the reservoir is used for municipal and industrial supplies for the cities of Crosbyton, Post, Ralls, and Spur. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	2,395.0
Crest of emergency spillway	2,384.0
Crest of service spillway	2,372.5
Lowest gated outlet (invert)	2,331.2

COOPERATION.--Records of diversions may be obtained from White River Municipal Water District.

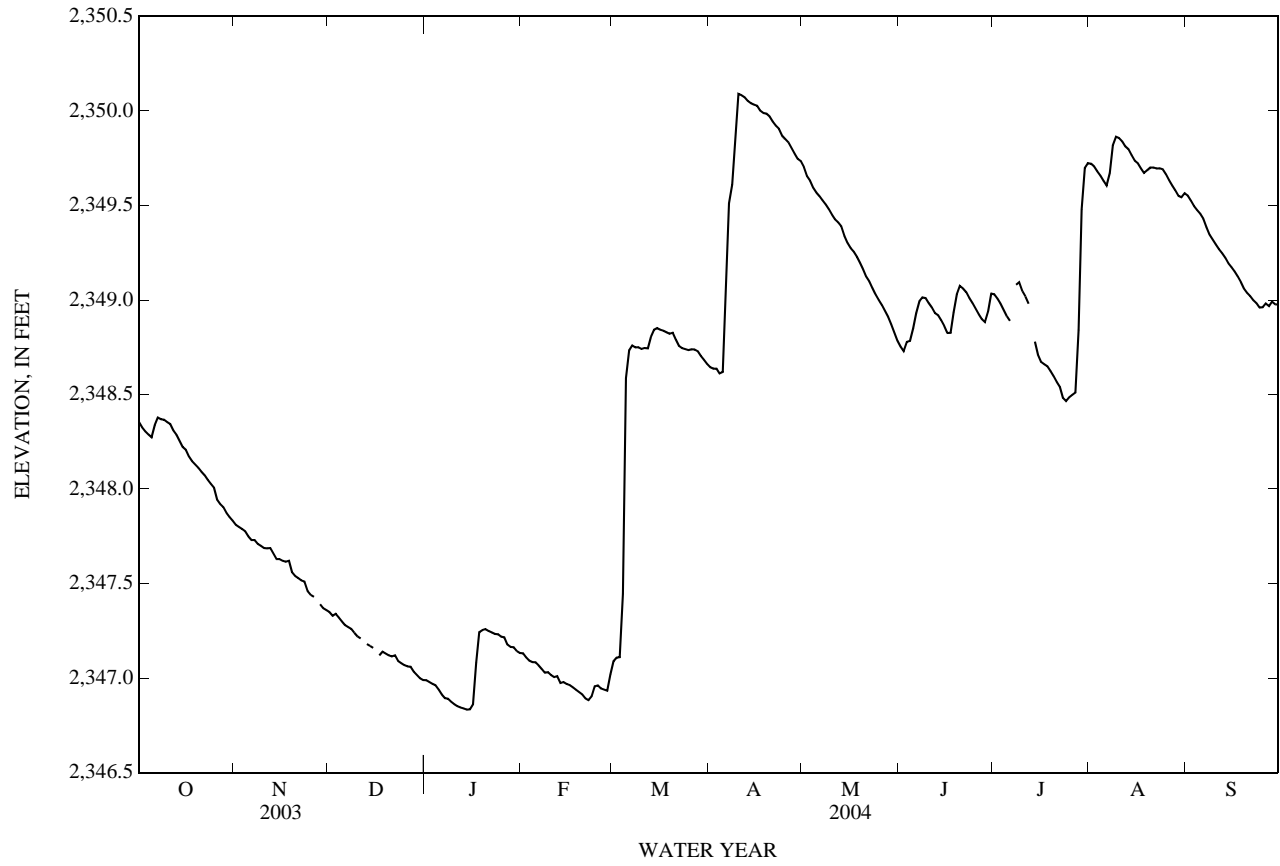
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 45,580 acre-ft, Oct. 25, 1974, elevation, 2,372.84 ft; minimum contents, 5,120 acre-ft, Sept. 30, 2002, elevation, 2,346.45 ft; minimum elevation, 2,345.60 ft, June 4, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,350.12 ft, Apr. 10; minimum elevation, 2,346.82 ft, Jan. 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	2,348.35	2,347.81	2,347.35	2,346.99	2,347.13	2,347.09	2,348.64	2,349.70	2,348.75	2,349.03	2,349.72	2,349.55
2	2,348.32	2,347.80	2,347.33	2,346.98	2,347.11	2,347.11	2,348.64	2,349.66	2,348.73	2,349.01	2,349.71	2,349.53
3	2,348.30	2,347.79	2,347.34	2,346.97	2,347.09	2,347.11	2,348.64	2,349.63	2,348.78	2,348.98	2,349.68	2,349.50
4	2,348.29	2,347.78	2,347.32	2,346.96	2,347.09	2,347.45	2,348.61	2,349.59	2,348.78	2,348.95	2,349.66	2,349.47
5	2,348.27	2,347.75	2,347.30	2,346.94	2,347.08	2,348.59	2,348.62	2,349.57	2,348.85	2,348.91	2,349.63	2,349.46
6	2,348.34	2,347.73	2,347.28	2,346.91	2,347.07	2,348.73	2,349.00	2,349.55	2,348.93	2,348.89	2,349.61	2,349.43
7	2,348.38	2,347.73	2,347.27	2,346.89	2,347.05	2,348.76	2,349.51	2,349.53	2,348.99	---	2,349.67	2,349.38
8	2,348.37	2,347.71	2,347.26	2,346.89	2,347.03	2,348.75	2,349.61	2,349.51	2,349.01	2,349.08	2,349.82	2,349.34
9	2,348.37	2,347.70	2,347.24	2,346.88	2,347.03	2,348.75	2,349.84	2,349.48	2,349.01	2,349.09	2,349.86	2,349.32
10	2,348.35	2,347.69	2,347.22	2,346.86	2,347.02	2,348.74	2,350.09	2,349.45	2,348.98	2,349.05	2,349.86	2,349.29
11	2,348.34	2,347.69	2,347.21	2,346.85	2,347.01	2,348.75	2,350.08	2,349.43	2,348.96	2,349.02	2,349.84	2,349.27
12	2,348.31	2,347.69	---	2,346.84	2,347.01	2,348.74	2,350.07	2,349.41	2,348.93	2,348.98	2,349.81	2,349.25
13	2,348.29	2,347.66	2,347.18	2,346.84	2,346.97	2,348.80	2,350.05	2,349.39	2,348.92	---	2,349.80	2,349.22
14	2,348.25	2,347.63	2,347.17	2,346.83	2,346.98	2,348.84	2,350.04	2,349.34	2,348.89	2,348.78	2,349.77	2,349.19
15	2,348.22	2,347.63	2,347.16	2,346.84	2,346.97	2,348.85	2,350.03	2,349.30	2,348.86	2,348.71	2,349.74	2,349.17
16	2,348.21	2,347.62	---	2,346.86	2,346.96	2,348.84	2,350.03	2,349.27	2,348.82	2,348.67	2,349.72	2,349.15
17	2,348.17	2,347.61	2,347.12	2,347.08	2,346.95	2,348.84	2,350.00	2,349.26	2,348.83	2,348.66	2,349.70	2,349.12
18	2,348.15	2,347.62	2,347.14	2,347.24	2,346.94	2,348.83	2,349.99	2,349.23	2,348.93	2,348.65	2,349.67	2,349.09
19	2,348.13	2,347.56	2,347.13	2,347.25	2,346.93	2,348.82	2,349.99	2,349.20	2,349.03	2,348.62	2,349.69	2,349.06
20	2,348.11	2,347.54	2,347.12	2,347.26	2,346.91	2,348.83	2,349.97	2,349.16	2,349.07	2,348.60	2,349.70	2,349.04
21	2,348.09	2,347.53	2,347.11	2,347.25	2,346.89	2,348.79	2,349.94	2,349.12	2,349.06	2,348.57	2,349.70	2,349.02
22	2,348.07	2,347.52	2,347.12	2,347.24	2,346.88	2,348.76	2,349.92	2,349.10	2,349.04	2,348.54	2,349.70	2,349.00
23	2,348.05	2,347.51	2,347.09	2,347.23	2,346.90	2,348.74	2,349.91	2,349.06	2,349.01	2,348.48	2,349.70	2,348.98
24	2,348.03	2,347.46	2,347.08	2,347.23	2,346.96	2,348.74	2,349.87	2,349.03	2,348.98	2,348.47	2,349.69	2,348.96
25	2,348.01	2,347.44	2,347.07	2,347.22	2,346.96	2,348.74	2,349.85	2,349.00	2,348.95	2,348.48	2,349.66	2,348.96
26	2,347.94	2,347.43	2,347.06	2,347.22	2,346.95	2,348.74	2,349.83	2,348.97	2,348.92	2,348.50	2,349.63	2,348.98
27	2,347.92	---	2,347.06	2,347.18	2,346.94	2,348.74	2,349.80	2,348.94	2,348.90	2,348.51	2,349.61	2,348.97
28	2,347.90	2,347.39	2,347.03	2,347.16	2,346.93	2,348.73	2,349.77	2,348.91	2,348.88	2,348.44	2,349.58	2,348.99
29	2,347.87	2,347.37	2,347.02	2,347.16	2,347.02	2,348.70	2,349.75	2,348.87	2,348.94	2,349.48	2,349.55	2,348.98
30	2,347.85	2,347.36	2,347.00	2,347.14	---	2,348.68	2,349.73	2,348.83	2,349.03	2,349.70	2,349.54	2,348.98
31	2,347.83	---	2,346.99	2,347.13	---	2,348.66	---	2,348.78	---	2,349.72	2,349.56	---
MEAN	2,348.16	---	---	2,347.04	2,346.99	2,348.56	2,349.66	2,349.27	2,348.93	---	2,349.70	2,349.19
MAX	2,348.38	---	---	2,347.26	2,347.13	2,348.85	2,350.09	2,349.70	2,349.07	---	2,349.86	2,349.55
MIN	2,347.83	---	---	2,346.83	2,346.88	2,347.09	2,348.61	2,348.78	2,348.73	---	2,349.54	2,348.96

08080910 White River Reservoir near Spur, TX—Continued



## 08082000 Salt Fork Brazos River near Aspermont, TX

LOCATION.--Lat 33°20'02", long 100°14'16", Stonewall County, Hydrologic Unit 12050007, on left bank at downstream side of bridge on U.S. Highway 83, 5.5 mi downstream from Salt Croton Creek, 13.2 mi north of Aspermont, and at mile 27.3 measured from confluence with Double Mountain Fork Brazos River which is at mile 923.2 on the Brazos River.

DRAINAGE AREA.--5,130 mi<sup>2</sup> of which 2,634 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--Dec. 1923 to Aug. 1925, June 1939 to current year. Water-quality records: Chemical data: July 1941 to Oct. 1951, Oct. 1956 to Aug. 1994. Biochemical data: Oct. 1974 to Aug. 1994. Pesticide data: Mar. to June 1979. Sediment data: June 1961 to Sept. 1965, Oct. 1974 to Aug. 1994. Specific conductance: Oct. 1948 to Oct. 1951, Oct. 1956 to Sept. 1982. Water temperature: Oct. 1948 to Oct. 1951, Oct. 1956 to Sept. 1982.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,588.70 ft above NGVD of 1929. Dec. 5, 1923 to Aug. 29, 1925, nonrecording gage at site 6.7 mi downstream at different datum. June 15, 1939 to July 13, 1972, water-stage recorder at present site. July 14, 1972 to July 14, 1975, at site 0.1 mi upstream at same datum. Satellite telemeter at station.

REMARKS.--Records poor. Since water year 1964, at least 10% of contributing drainage area has been regulated. There are no large diversions above station. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--24 years (water years 1940-63) prior to completion of White River Reservoir, 148 ft<sup>3</sup>/s (107,400 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Dec. 1913 reached a stage of 14.4 ft, and flood in Nov. 1934 reached a stage of 13.7 ft, from information by local residents.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1940-1963: Maximum discharge, 52,200 ft<sup>3</sup>/s Sept. 25, 1955 (gage height, 14.92 ft) from rating curve extended above 28,800 ft<sup>3</sup>/s by logarithmic plotting; 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	e0.00	e0.00	e0.10	e0.10	e0.60	e1.0	7.8	e6.5	0.00	222	442	53
2	e0.01	e0.00	e0.10	e0.10	e0.60	e3.0	10	7.8	0.00	&362	297	174
3	e0.01	e0.00	e0.10	e0.10	e0.60	6.5	13	e5.9	45	&224	230	115
4	e0.03	e0.00	e0.10	e0.10	e0.40	403	25	e5.4	104	&178	172	88
5	0.05	0.25	e0.10	e0.10	e0.40	1,200	28	e4.9	307	&150	138	75
6	15	0.64	e0.10	e0.10	e0.40	413	93	e4.4	490	&103	129	66
7	30	2.9	e0.10	e0.10	e0.20	e378	230	e3.6	263	&65	120	55
8	2.5	3.1	e0.10	e0.10	e0.20	112	349	e3.2	183	&35	135	49
9	1.5	0.66	e0.10	e0.10	e0.20	72	209	e2.9	93	26	127	45
10	0.90	&0.61	e0.10	e0.10	e0.10	36	137	e2.6	234	21	123	41
11	0.85	&0.50	e0.10	e0.10	e0.10	25	116	e2.0	268	17	112	38
12	0.74	&0.51	e0.10	0.14	e0.10	19	118	0.87	59	14	92	35
13	0.70	e0.55	e0.10	e0.10	e0.10	29	82	0.57	54	11	81	32
14	0.55	&0.52	e0.10	e0.10	e0.10	30	61	0.40	21	8.9	81	28
15	e0.50	e0.35	e0.10	e0.10	e0.10	23	47	0.21	18	7.1	83	26
16	e0.40	e0.25	e0.10	7.0	e0.10	20	41	0.13	8.1	5.5	147	23
17	e0.30	e0.20	e0.10	50	e0.10	15	32	0.10	4.2	4.5	105	22
18	e0.25	e0.15	e0.10	37	e0.10	13	26	0.06	305	3.9	77	20
19	e0.20	e0.10	e0.10	22	e0.10	13	22	14	293	4.0	113	18
20	e0.15	0.10	e0.10	7.8	e0.10	13	21	1.2	374	3.2	95	17
21	e0.10	e0.10	e0.10	3.0	e0.10	11	18	0.22	263	2.4	98	17
22	e0.10	e0.10	e0.10	1.9	e0.10	12	16	0.08	188	1.9	116	21
23	e0.08	e0.10	e0.10	1.6	e0.20	12	15	0.06	97	1.6	101	20
24	e0.05	e0.10	e0.10	1.5	18	13	14	0.07	60	10	79	24
25	e0.02	e0.10	e0.10	1.1	17	14	13	0.09	45	158	66	47
26	e0.01	e0.10	e0.10	e1.0	12	16	40	0.12	49	92	58	23
27	e0.01	e0.10	e0.10	e1.0	1.3	e20	26	0.08	68	107	52	37
28	e0.01	e0.10	e0.10	e1.0	e1.0	20	15	0.48	92	&4,710	47	35
29	e0.00	e0.10	e0.10	e0.80	e1.0	20	11	0.44	414	&3,020	45	51
30	e0.00	e0.10	e0.10	e0.80	---	e10	8.4	0.06	261	&2,100	43	66
31	e0.00	---	e0.10	e0.80	---	10	---	0.00	---	&841	38	---
TOTAL	55.02	12.39	3.10	139.84	55.40	2,982.5	1,844.2	68.44	4,660.30	12,509.0	3,642	1,361
MEAN	1.77	0.41	0.10	4.51	1.91	96.2	61.5	2.21	155	404	117	45.4
MAX	30	3.1	0.10	50	18	1,200	349	14	490	4,710	442	174
MIN	0.00	0.00	0.10	0.10	0.10	1.0	7.8	0.00	0.00	1.6	38	17
AC-FT	109	25	6.1	277	110	5,920	3,660	136	9,240	24,810	7,220	2,700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004z, BY WATER YEAR (WY)

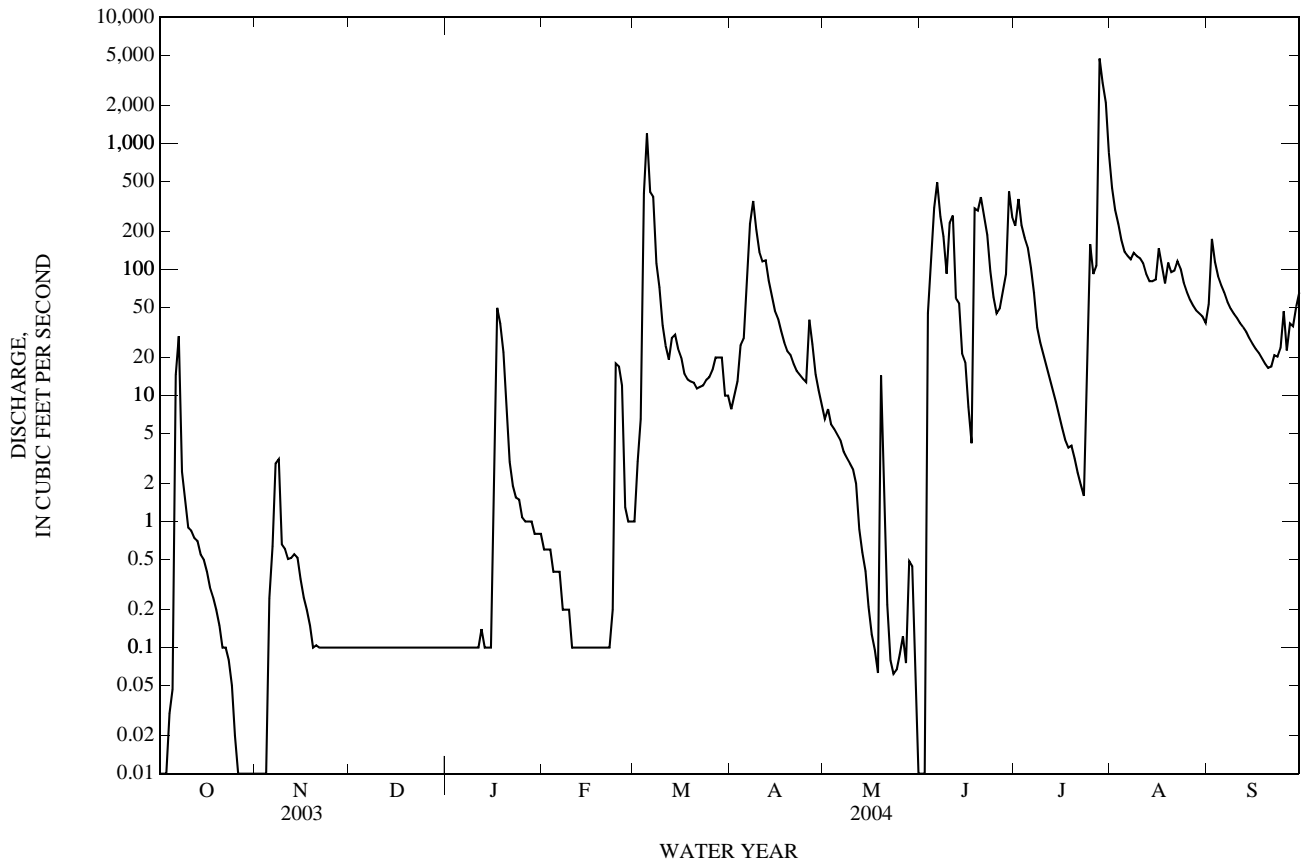
MEAN	91.3	24.6	18.4	15.2	22.0	31.2	34.6	110	173	41.6	98.8	97.8
MAX	918	125	226	134	232	192	200	724	1,087	404	1,054	664
(WY)	(1987)	(1987)	(1992)	(1992)	(1992)	(2000)	(1997)	(1987)	(1990)	(2004)	(1972)	(1966)
MIN	0.06	0.07	0.00	0.03	0.05	0.26	0.26	0.35	1.10	0.01	0.01	0.00
(WY)	(1980)	(2000)	(2000)	(2000)	(2000)	(1971)	(1971)	(1964)	(1998)	(1998)	(2000)	(2000)

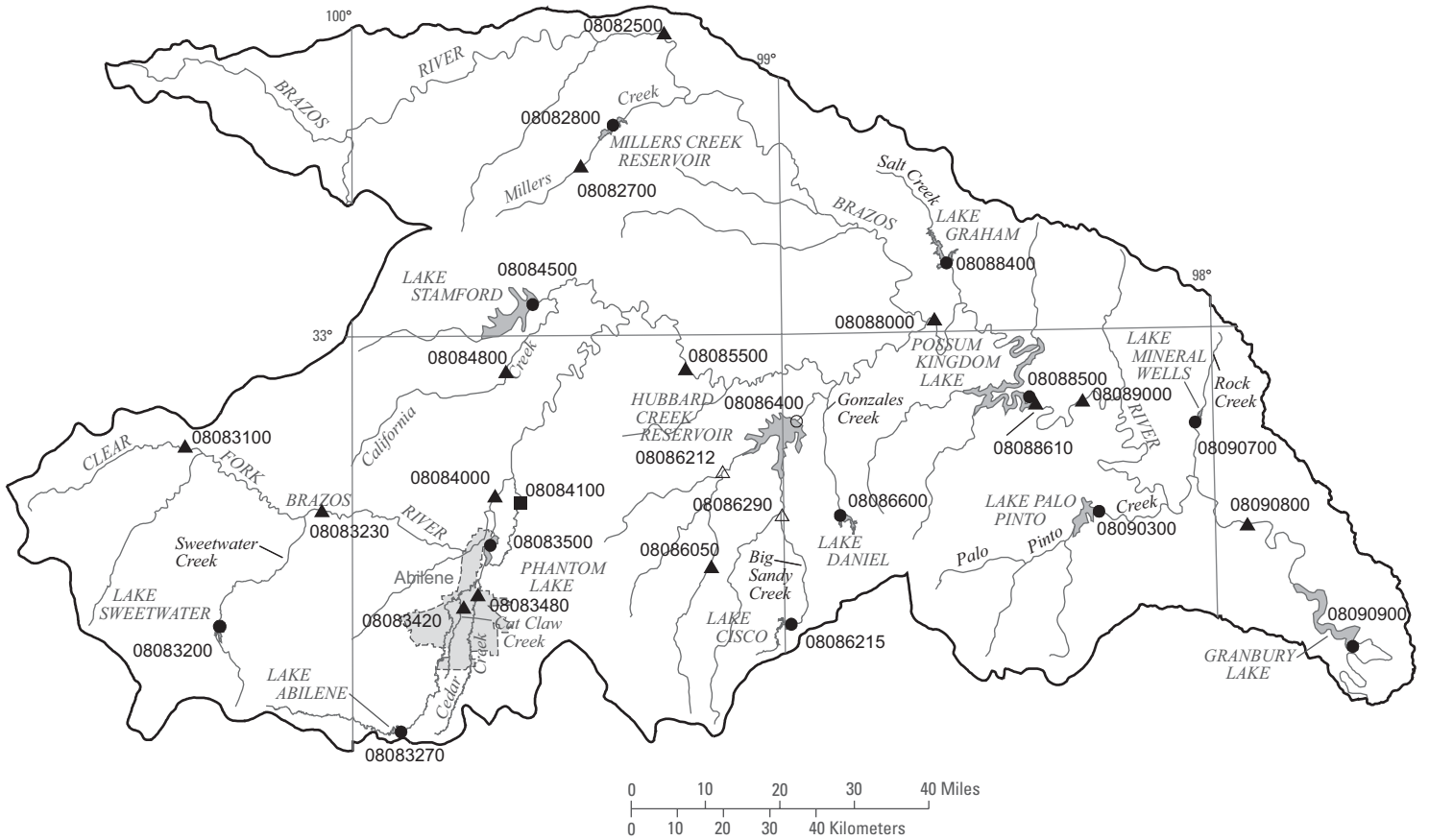


08082000 Salt Fork Brazos River near Aspermont, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004z	
ANNUAL TOTAL	6,955.48		27,333.19			
ANNUAL MEAN	19.1		74.7		63.3	
HIGHEST ANNUAL MEAN					212	1987
LOWEST ANNUAL MEAN					11.7	1998
HIGHEST DAILY MEAN	988	Jun 6	4,710	Jul 28	11,300	Aug 14, 1972
LOWEST DAILY MEAN	0.00	Jul 28	0.00	Oct 1	0.00	Jul 31, 1972
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 28	0.00	Oct 29	0.00	Oct 11, 1999
MAXIMUM PEAK FLOW			13,800	Jul 28	30,200	Aug 30, 1966
MAXIMUM PEAK STAGE			8.94	Jul 28	12.45	Aug 30, 1966
ANNUAL RUNOFF (AC-FT)	13,800		54,220		45,840	
10 PERCENT EXCEEDS	22		141		105	
50 PERCENT EXCEEDS	1.1		6.2		6.5	
90 PERCENT EXCEEDS	0.00		0.10		0.12	

z Period of regulated streamflow.  
 e Estimated  
 & Value was computed from affected unit values





EXPLANATION

- 08085500 ▲ Surface-water continuous station and number
- 08086212 △ Surface-water continuous/water-quality station and number
- 08083500 ● Reservoir station and number
- 08086400 ○ Reservoir/water-quality station and number
- 08084100 ■ Surface-water partial record/stage only station and number



Figure 6.--Map showing location of gaging stations in the second section of the Brazos River Basin

08082500	Brazos River at Seymour, TX . . . . .	272
08082700	Millers Creek near Munday, TX . . . . .	274
08082800	Millers Creek Reservoir near Bomarton, TX . . . . .	276
08083100	Clear Fork Brazos River near Roby, TX . . . . .	278
08083200	Lake Sweetwater near Sweetwater, TX . . . . .	280
08083230	Clear Fork Brazos River near Noodle, TX . . . . .	282
08083270	Lake Abilene near Buffalo Gap, TX . . . . .	284
08083420	Cat Claw Creek at Abilene, TX . . . . .	286
08083480	Cedar Creek at Interstate Highway 20 at Abilene, TX . . . . .	288
08083500	Fort Phantom Hill Reservoir near Nugent, TX . . . . .	290
08084000	Clear Fork Brazos River at Nugent, TX . . . . .	292
08084100	Deadman Creek near Nugent, TX . . . . .	531
08084500	Lake Stamford near Haskell, TX . . . . .	294
08084800	California Creek near Stamford, TX . . . . .	296
08085500	Clear Fork Brazos River at Fort Griffin, TX . . . . .	298
08086212	Hubbard Creek below Albany, TX . . . . .	300
08086215	Lake Cisco near Cisco, TX . . . . .	308
08086290	Big Sandy Creek above Breckenridge, TX . . . . .	310
08086400	Hubbard Creek Reservoir near Breckenridge, TX . . . . .	318
08086600	Lake Daniel near Breckenridge, TX . . . . .	324
08088000	Brazos River near South Bend, TX . . . . .	326
08088400	Lake Graham near Graham, TX . . . . .	328
08088500	Possum Kingdom Lake near Graford, TX . . . . .	330
08088610	Brazos River near Graford, TX . . . . .	332
08089000	Brazos River near Palo Pinto, TX . . . . .	334
08090300	Lake Palo Pinto near Santo, TX . . . . .	336
08090700	Lake Mineral Wells near Mineral Wells, TX . . . . .	338
08090800	Brazos River near Dennis, TX . . . . .	340
08090900	Lake Granbury near Granbury, TX . . . . .	342

## BRAZOS RIVER BASIN

08082500 Brazos River at Seymour, TX

LOCATION.--Lat 33°34'51", long 99°16'02", Baylor County, Hydrologic Unit 12060101, on left bank at downstream side of bridge on U.S. Highways 277 and 283, 0.8 mi upstream from Wichita Valley Railway bridge, 1.0 mi southwest of courthouse in Seymour, and at mile 847.4.

DRAINAGE AREA.--15,538 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--Dec. 1923 to current year. Water-quality records: Chemical data: Aug. 1942 to Sept. 1995, Oct. 1996 to Aug. 2002. Biochemical data: Oct. 1974 to Sept. 1977, Dec. 1996 to Aug. 2002. Pesticide data: Apr. 1975 to Aug. 1977. Sediment data: Oct. 1974 to Sept. 1977. Specific conductance: Aug. 1959 to Sept. 1995. Water temperature: Aug. 1959 to Sept. 1995.

REVISED RECORDS.--WSP 808: 1924-29. WSP 1312: 1933. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,238.97 ft above NGVD of 1929. Prior to Apr. 6, 1972, at datum 2.00 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1964, at least 10% of contributing drainage area has been regulated. Small diversions upstream from station for irrigation and oil field operations. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--39 years (water years 1925-63) prior to regulation, 434 ft<sup>3</sup>/s (314,100 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in 1906 and in Sept. 1955 both reached peak stages of 23.0 ft, from information by local residents.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS, 1924-1963: Maximum discharge, 95,400 ft<sup>3</sup>/s Oct. 16, 1926 (gage height, 15.16 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	5.7	1.7	3.3	4.5	12	64	71	85	20	746	2,560	95
2	5.6	2.2	3.6	5.0	11	44	66	77	26	622	1,880	87
3	5.0	1.6	3.5	4.8	11	47	134	63	48	414	1,430	101
4	4.8	1.0	3.6	4.5	11	174	159	52	37	403	948	666
5	5.6	1.1	3.3	4.1	11	386	109	50	61	326	731	427
6	5.2	1.1	3.3	3.6	12	727	105	48	848	241	606	262
7	5.7	6.2	3.4	4.2	11	2,160	167	45	850	196	734	170
8	4.7	21	3.4	4.2	12	1,300	248	40	780	127	558	121
9	4.2	8.9	3.4	4.2	11	751	821	35	478	114	529	101
10	4.1	6.8	3.3	4.3	11	442	1,220	33	991	101	408	81
11	4.3	5.9	3.4	4.5	14	271	731	30	676	83	415	68
12	4.0	23	3.4	4.5	14	231	462	27	1,470	69	391	59
13	4.0	18	4.1	4.9	13	214	344	31	1,750	57	332	52
14	6.0	14	4.4	5.2	15	164	309	24	1,750	44	289	46
15	6.9	13	4.4	6.0	15	181	284	43	854	35	263	41
16	6.3	11	3.4	7.9	16	139	236	64	460	29	630	39
17	5.3	11	3.4	11	14	195	210	49	307	26	325	34
18	5.0	8.8	3.3	16	14	191	190	35	249	24	299	24
19	4.2	7.2	3.4	19	14	193	165	27	222	21	291	19
20	4.2	6.7	3.7	19	11	130	149	22	161	18	299	15
21	3.6	5.7	3.8	18	11	98	132	20	291	14	338	13
22	3.1	5.9	3.7	19	12	93	115	18	330	12	294	12
23	2.8	4.9	3.5	17	21	95	105	16	300	11	220	35
24	2.7	4.5	3.7	16	70	88	96	15	317	14	210	90
25	2.5	4.3	3.9	15	108	83	90	16	248	92	203	45
26	2.1	4.2	4.2	12	65	80	157	15	193	89	180	26
27	1.7	3.8	4.2	11	45	79	112	14	203	172	153	20
28	1.5	3.6	3.7	11	43	95	114	14	375	10,200	137	16
29	1.4	3.5	3.6	9.8	66	122	112	13	464	18,400	124	20
30	1.0	3.4	3.4	10	---	102	87	24	928	8,320	112	23
31	1.2	---	3.2	12	---	81	---	26	---	3,980	103	---
TOTAL	124.4	214.0	111.9	292.2	694	9,020	7,300	1,071	15,687	45,000	15,992	2,808
MEAN	4.01	7.13	3.61	9.43	23.9	291	243	34.5	523	1,452	516	93.6
MAX	6.9	23	4.4	19	108	2,160	1,220	85	1,750	18,400	2,560	666
MIN	1.0	1.0	3.2	3.6	11	44	66	13	20	11	103	12
AC-FT	247	424	222	580	1,380	17,890	14,480	2,120	31,120	89,260	31,720	5,570

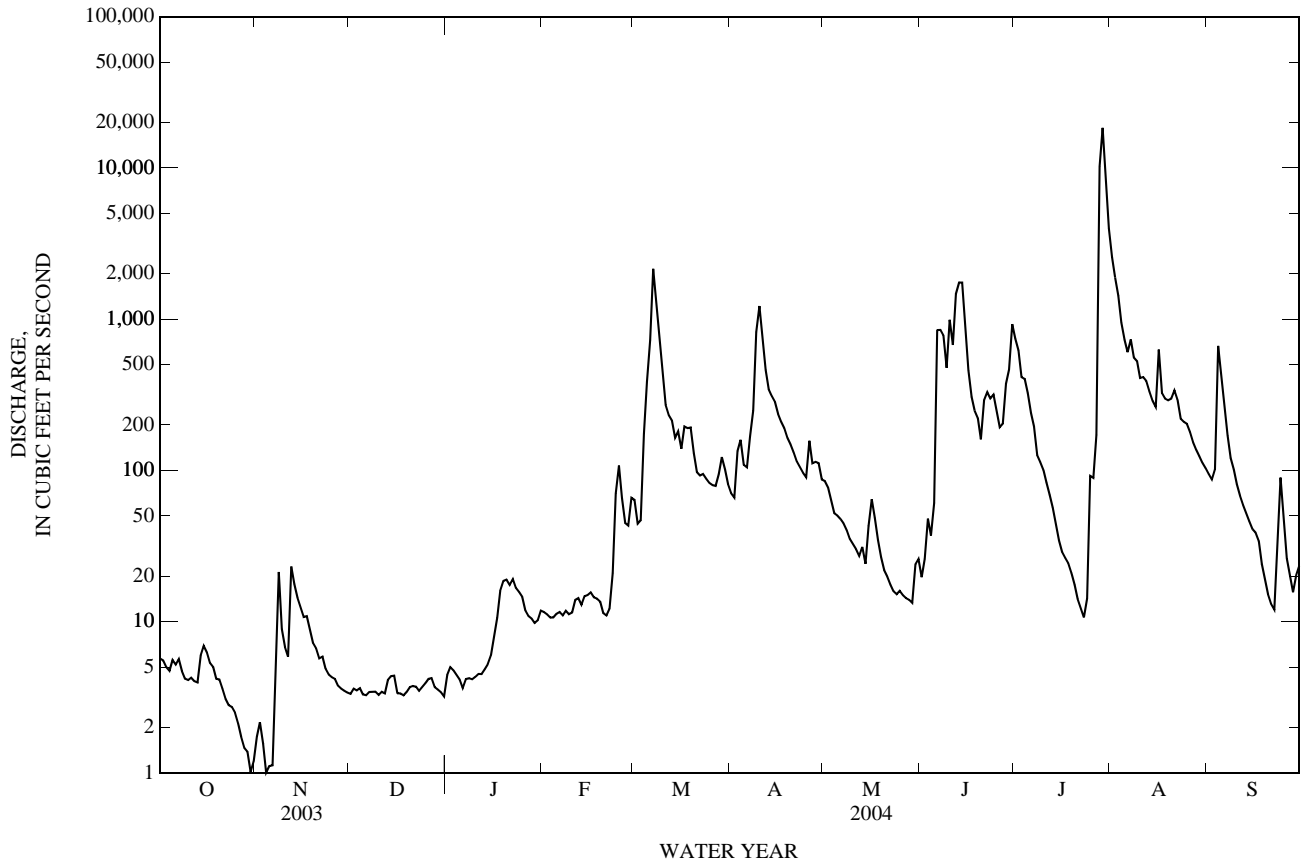
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004z, BY WATER YEAR (WY)

MEAN	323	125	73.7	68.1	109	164	174	512	720	212	333	417
MAX	2,449	679	603	434	1,246	960	1,318	2,450	3,505	1,452	3,373	2,336
(WY)	(1984)	(1973)	(1992)	(1992)	(1992)	(2000)	(1990)	(1982)	(1990)	(2004)	(1972)	(1966)
MIN	0.25	2.72	3.02	4.49	4.20	2.28	1.21	3.68	8.03	0.24	0.00	0.00
(WY)	(1980)	(1978)	(1999)	(1971)	(1971)	(1971)	(1978)	(1996)	(1984)	(1970)	(1970)	(2000)

08082500 Brazos River at Seymour, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004z	
ANNUAL TOTAL	31,409.42		98,314.5			
ANNUAL MEAN	86.1		269		269	
HIGHEST ANNUAL MEAN					742	1987
LOWEST ANNUAL MEAN					61.1	1998
HIGHEST DAILY MEAN	2,980	Jun 7	18,400	Jul 29	30,700	Jun 4, 1990
LOWEST DAILY MEAN	0.00	Aug 16	1.0	Oct 30	0.00	May 24, 1964
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 16	1.4	Oct 30	0.00	Jul 12, 1964
MAXIMUM PEAK FLOW			21,800	Jul 28	42,700	Aug 16, 1972
MAXIMUM PEAK STAGE			14.94	Jul 28	18.35	Aug 16, 1972
ANNUAL RUNOFF (AC-FT)	62,300		195,000		195,100	
10 PERCENT EXCEEDS	93		463		503	
50 PERCENT EXCEEDS	15		30		48	
90 PERCENT EXCEEDS	1.5		3.6		2.7	

z Period of regulated streamflow.



BRAZOS RIVER BASIN

08082700 Millers Creek near Munday, TX

LOCATION.--Lat 33°19'45", long 99°27'53", Throckmorton County, Hydrologic Unit 12060101, near right bank at downstream side of bridge on Farm Road 1720, 12.7 mi southeast of Munday, and 24.6 mi upstream from mouth.

DRAINAGE AREA.--104 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1963 to current year. Water-quality records: Sediment data: Oct. 1976 to Sept. 1978.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,350 ft above NGVD of 1929 (from topographic map). Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1883 occurred June 13, 1930, and exceeded 18.0 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	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.13	0.00	57	13	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	15	7.7	0.00
3	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	7.9	3.9	0.00
4	0.00	0.00	0.00	0.00	0.00	1.6	0.00	0.00	0.00	4.9	1.9	0.00
5	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	4.4	1.3	0.00
6	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	1.0	1.0	0.74	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18	0.18	0.32	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15	0.05	0.13	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.00	0.04	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.80	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.73	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	8.2	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.4	0.00	3.7	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.7	0.00	3.6	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	1.8	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	24	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	26	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	3.5	0.00	0.02	0.00	8.7	0.00
24	0.00	0.00	0.00	0.00	0.01	0.00	2.5	0.00	0.00	0.00	3.7	0.00
25	0.00	0.00	0.00	0.00	0.06	0.00	6.6	0.00	0.00	0.00	1.5	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	11	0.00	0.00	0.00	0.82	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	3.4	0.00	0.00	0.00	0.37	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00	23	0.20	0.00
29	0.00	0.00	0.00	0.00	0.28	0.00	0.43	0.00	108	346	0.13	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.22	0.00	212	126	0.08	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	27	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.35	2.14	28.64	0.18	374.65	612.43	113.36	0.00
MEAN	0.00	0.00	0.00	0.00	0.01	0.07	0.95	0.01	12.5	19.8	3.66	0.00
MAX	0.00	0.00	0.00	0.00	0.28	1.6	11	0.13	212	346	26	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	0.7	4.2	57	0.4	743	1,210	225	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2004, BY WATER YEAR (WY)

MEAN	4.13	1.96	0.66	1.52	4.79	3.23	4.97	12.3	26.9	3.46	13.6	5.12
MAX	92.7	37.7	13.1	34.8	94.5	31.5	128	182	420	44.5	403	72.1
(WY)	(1987)	(1973)	(1992)	(1968)	(1992)	(2001)	(1990)	(1982)	(1982)	(1998)	(1978)	(1988)
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)	(1964)	(1966)	(1964)	(1964)	(1966)	(1964)	(1964)	(1967)	(1966)	(1964)	(1964)	(1963)

SUMMARY STATISTICS

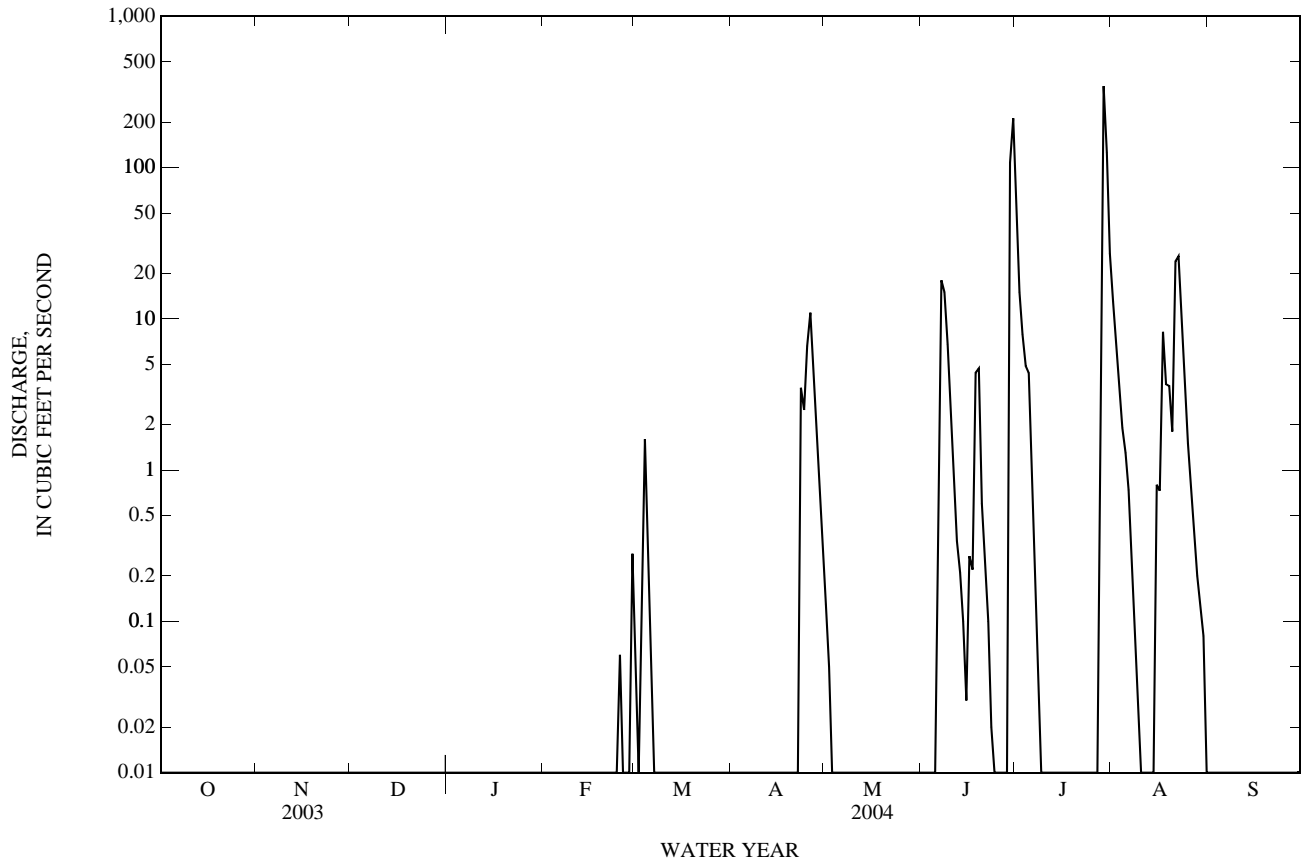
FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1963 - 2004

ANNUAL TOTAL	894.59	1,131.75	
ANNUAL MEAN	2.45	3.09	6.90
HIGHEST ANNUAL MEAN			50.7
LOWEST ANNUAL MEAN			0.03
HIGHEST DAILY MEAN	367	Jun 12	346
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
MAXIMUM PEAK FLOW			415
MAXIMUM PEAK STAGE			8.28
ANNUAL RUNOFF (AC-FT)	1,770	2,240	5,000
10 PERCENT EXCEEDS	0.12	1.4	1.3
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

08082700 Millers Creek near Munday, TX—Continued



## 08082800 Millers Creek Reservoir near Bomarton, TX

LOCATION.--Lat 33°24'32", long 99°23'19", Baylor County, Hydrologic Unit 12060101, on left bank at intake tower of Millers Creek, 1.1 mi upstream from dam, 7.1 mi southeast of Bomarton, and 13.2 mi upstream from mouth.

DRAINAGE AREA.--240 mi<sup>2</sup>.

PERIOD OF RECORD.--Aug. 1974 to Oct. 1994, July 1998 to Sept. 2002 (daily mean contents), Oct. 2002 to current year. Water-quality records: Chemical data: Oct. 1975 to Sept. 1984.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Freese and Nichols). Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 9,250 ft long. The dam was completed in 1974 and storage began in July 1974. Dead storage, 1,240 acre-ft below elevation 1,303.4 ft. The reservoir is used for municipal and industrial water supply. The uncontrolled spillway is an open cut 3,000 ft wide located on left bank about 800 ft upstream from levee. The service spillway is an uncontrolled morning-glory-type drop inlet, 16.5 ft square, that discharges through a 5.0-ft-square concrete conduit. Low-flow releases are made by valves in the outlet vault of the drop inlet. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	1,355.0
Crest of spillway	1,334.4
Lowest gated outlet (invert)	1,305.0

COOPERATION.--The area-capacity tables, prepared from data of July 12, 1993, were provided by the Texas Water Development Board. Records of diversions may be obtained from North Central Texas Municipal Water Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 53,850 acre-ft, June 26, 1982, elevation, 1,341.42 ft; minimum contents were below dead storage elevation prior to Apr. 20, 1977, and July 17 to Aug. 3, 1978.

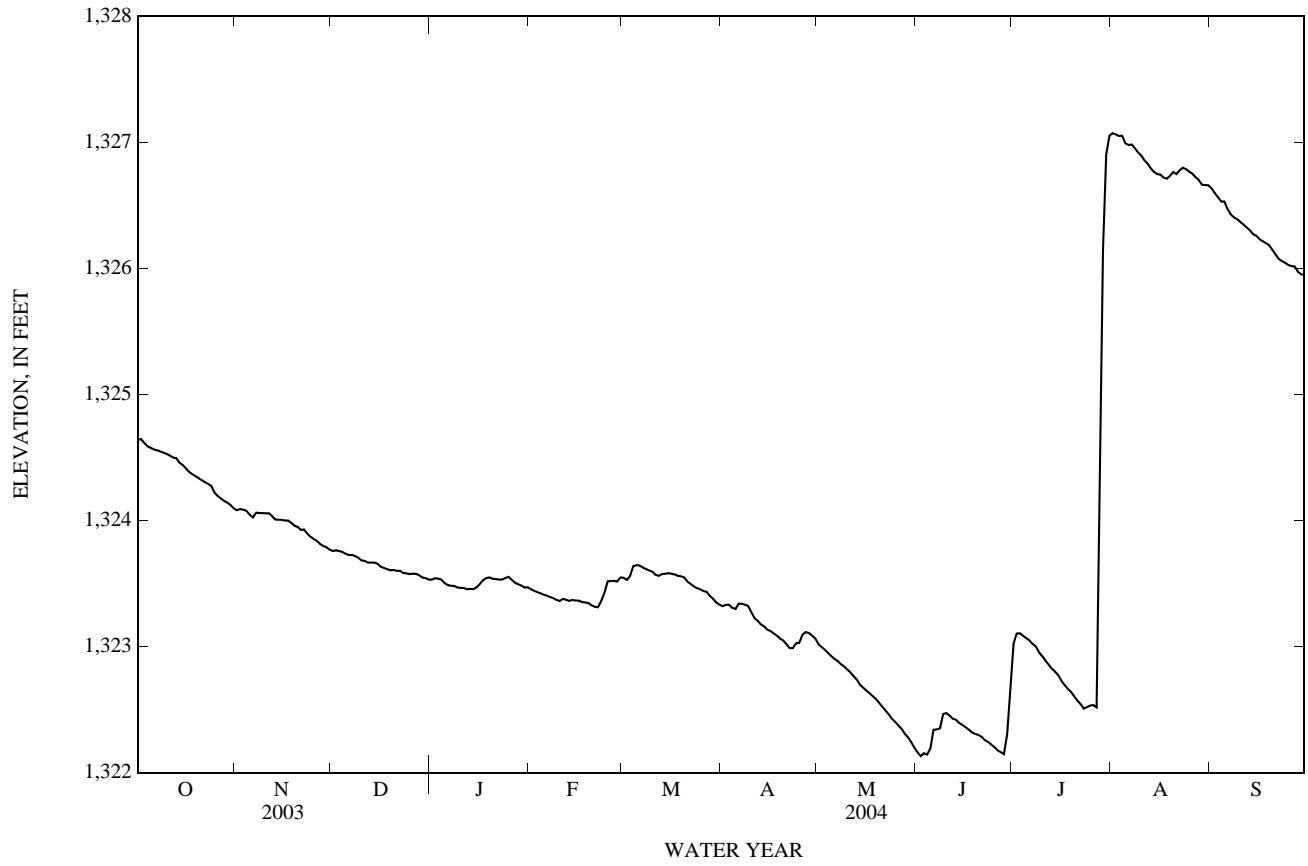
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,327.10 ft, Aug. 1; minimum elevation, 1,322.12 ft, June 2, 5.

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	1,324.64	1,324.08	1,323.76	1,323.53	1,323.45	1,323.55	1,323.32	1,323.02	1,322.16	1,323.02	1,327.07	1,326.64
2	1,324.65	1,324.09	1,323.76	1,323.54	1,323.44	1,323.53	1,323.33	1,323.00	1,322.13	1,323.10	1,327.06	1,326.60
3	1,324.62	1,324.09	1,323.76	1,323.54	1,323.43	1,323.56	1,323.33	1,322.97	1,322.15	1,323.11	1,327.05	1,326.56
4	1,324.59	1,324.08	1,323.75	1,323.53	1,323.42	1,323.64	1,323.31	1,322.95	1,322.14	1,323.09	1,327.05	1,326.53
5	1,324.58	1,324.05	1,323.74	1,323.50	1,323.41	1,323.65	1,323.30	1,322.92	1,322.19	1,323.07	1,326.99	1,326.53
6	1,324.56	1,324.02	1,323.73	1,323.49	1,323.40	1,323.64	1,323.34	1,322.90	1,322.34	1,323.05	1,326.98	1,326.47
7	1,324.56	1,324.06	1,323.73	1,323.48	1,323.39	1,323.63	1,323.34	1,322.89	1,322.34	1,323.02	1,326.98	1,326.43
8	1,324.55	1,324.06	1,323.72	1,323.48	1,323.38	1,323.62	1,323.33	1,322.86	1,322.35	1,323.00	1,326.95	1,326.40
9	1,324.54	1,324.06	1,323.70	1,323.47	1,323.37	1,323.60	1,323.32	1,322.84	1,322.46	1,322.95	1,326.92	1,326.39
10	1,324.53	1,324.06	1,323.68	1,323.47	1,323.36	1,323.59	1,323.27	1,322.82	1,322.47	1,322.92	1,326.89	1,326.37
11	1,324.52	1,324.06	1,323.68	1,323.46	1,323.38	1,323.57	1,323.22	1,322.79	1,322.45	1,322.89	1,326.86	1,326.35
12	1,324.50	1,324.04	1,323.67	1,323.45	1,323.37	1,323.56	1,323.20	1,322.77	1,322.43	1,322.86	1,326.83	1,326.32
13	1,324.49	1,324.01	1,323.67	1,323.46	1,323.36	1,323.58	1,323.17	1,322.74	1,322.42	1,322.83	1,326.79	1,326.30
14	1,324.46	1,324.01	1,323.67	1,323.46	1,323.37	1,323.58	1,323.16	1,322.69	1,322.39	1,322.80	1,326.77	1,326.27
15	1,324.44	1,324.01	1,323.66	1,323.47	1,323.37	1,323.58	1,323.13	1,322.67	1,322.38	1,322.77	1,326.75	1,326.26
16	1,324.42	1,324.00	1,323.63	1,323.49	1,323.36	1,323.58	1,323.12	1,322.65	1,322.36	1,322.73	1,326.74	1,326.23
17	1,324.39	1,324.00	1,323.62	1,323.53	1,323.35	1,323.57	1,323.10	1,322.63	1,322.34	1,322.69	1,326.72	1,326.22
18	1,324.37	1,323.98	1,323.61	1,323.54	1,323.35	1,323.56	1,323.09	1,322.61	1,322.32	1,322.66	1,326.71	1,326.20
19	1,324.35	1,323.96	1,323.60	1,323.55	1,323.35	1,323.56	1,323.06	1,322.58	1,322.31	1,322.64	1,326.73	1,326.18
20	1,324.34	1,323.95	1,323.61	1,323.54	1,323.33	1,323.55	1,323.05	1,322.55	1,322.30	1,322.61	1,326.77	1,326.15
21	1,324.32	1,323.93	1,323.60	1,323.54	1,323.32	1,323.52	1,323.02	1,322.52	1,322.29	1,322.57	1,326.75	1,326.11
22	1,324.31	1,323.93	1,323.60	1,323.53	1,323.31	1,323.50	1,322.99	1,322.49	1,322.26	1,322.54	1,326.78	1,326.08
23	1,324.29	1,323.90	1,323.58	1,323.53	1,323.36	1,323.48	1,322.99	1,322.46	1,322.24	1,322.51	1,326.80	1,326.06
24	1,324.27	1,323.87	1,323.58	1,323.54	1,323.43	1,323.46	1,323.03	1,322.43	1,322.22	1,322.52	1,326.79	1,326.05
25	1,324.22	1,323.85	1,323.58	1,323.55	1,323.52	1,323.45	1,323.03	1,322.40	1,322.20	1,322.53	1,326.77	1,326.03
26	1,324.19	1,323.84	1,323.58	1,323.53	1,323.52	1,323.44	1,323.09	1,322.38	1,322.18	1,322.54	1,326.75	1,326.02
27	1,324.18	1,323.82	1,323.58	1,323.51	1,323.52	1,323.43	1,323.12	1,322.35	1,322.16	1,322.52	1,326.72	1,326.02
28	1,324.15	1,323.80	1,323.57	1,323.49	1,323.52	1,323.40	1,323.11	1,322.31	1,322.15	1,323.58	1,326.70	1,325.97
29	1,324.14	1,323.79	1,323.55	1,323.48	1,323.55	1,323.38	1,323.09	1,322.28	1,322.31	1,326.14	1,326.66	1,325.95
30	1,324.12	1,323.77	1,323.54	1,323.47	---	1,323.35	1,323.06	1,322.24	1,322.70	1,326.90	1,326.66	1,325.95
31	1,324.10	---	1,323.53	1,323.47	---	1,323.33	---	1,322.20	---	1,327.05	1,326.66	---
MEAN	1,324.40	1,323.97	1,323.65	1,323.50	1,323.40	1,323.53	1,323.17	1,322.64	1,322.31	1,323.20	1,326.83	1,326.26
MAX	1,324.65	1,324.09	1,323.76	1,323.55	1,323.55	1,323.65	1,323.34	1,323.02	1,322.70	1,327.05	1,327.07	1,326.64
MIN	1,324.10	1,323.77	1,323.53	1,323.45	1,323.31	1,323.33	1,322.99	1,322.20	1,322.13	1,322.51	1,326.66	1,325.95
WTR YR	2004	MEAN	1,323.91	MAX	1,327.07	MIN	1,322.13					



08082800 Millers Creek Reservoir near Bomarton, TX—Continued



## BRAZOS RIVER BASIN

08083100 Clear Fork Brazos River near Roby, TX

LOCATION.--Lat 32°47'15", long 100°23'18", Fisher County, Hydrologic Unit 12060102, on right bank at downstream side of pier of bridge on State Highway 70, 3.0 mi north of Roby, 3.2 mi upstream from Cottonwood Creek, and 255.7 mi upstream from mouth.

DRAINAGE AREA.--228 mi<sup>2</sup>.

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,885.09 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. There are several small diversions above station. No flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since the 1890's, about 22 ft in May and June 1935, 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	0.00	0.00	0.00	0.00	0.08	0.12	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.02	0.03	0.00
4	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.12	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	1.8	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.04	0.09	0.00	6.3	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.02	0.05	0.00	4.1	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.67	0.00	1.2	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.25	0.00	0.16	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24	0.00	0.08	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.3	0.00	0.04	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.3	0.00	0.02	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	4.0	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.89	0.00	1.5	0.00
16	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.40	0.00	0.37	0.00
17	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.21	0.00	0.11	0.00
18	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.10	0.00	0.04	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.05	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	1.7	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.17	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.05	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.03	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.18	0.01	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.43	0.08	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.69	3.2	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.37	4.3	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.20	1.9	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.01	0.13	0.83	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.33	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.82	0.19	0.43	79.14	10.96	5.76	0.00
MEAN	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.01	2.64	0.35	0.19	0.00
MAX	0.00	0.00	0.00	0.00	0.00	0.56	0.09	0.16	24	4.3	1.7	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	0.00	1.6	0.4	0.9	157	22	11	0.00

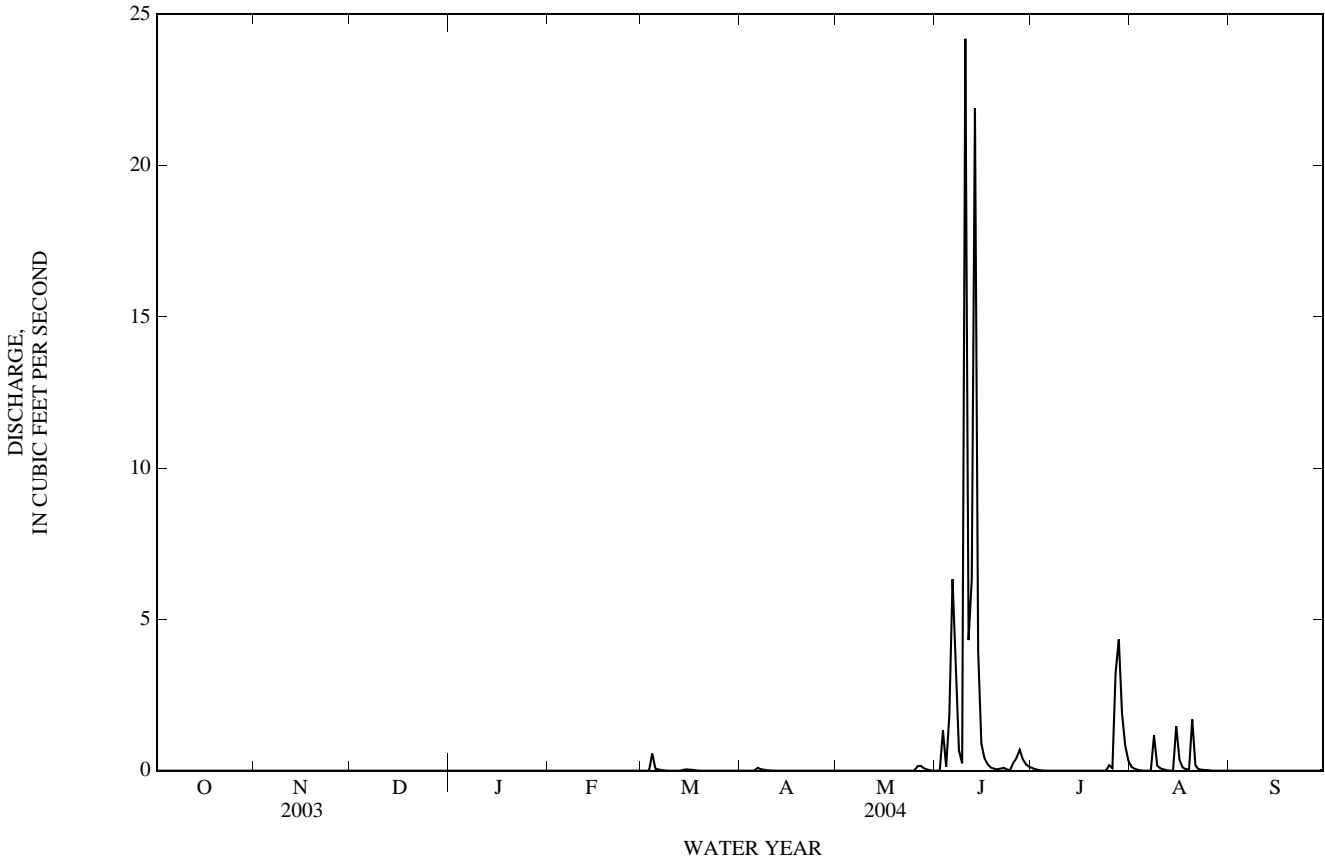
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004, BY WATER YEAR (WY)

MEAN	9.03	2.23	2.39	2.34	3.04	7.16	5.22	22.0	14.9	5.15	7.64	16.8
MAX	142	17.6	15.8	12.7	23.9	180	51.6	257	84.4	60.6	141	249
(WY)	(1966)	(1987)	(1987)	(1987)	(1992)	(2000)	(1981)	(1982)	(1981)	(1975)	(1971)	(1969)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.00	0.00	0.00
(WY)	(2000)	(2000)	(2000)	(2000)	(2000)	(2003)	(2001)	(2004)	(1998)	(2001)	(1998)	(1998)

08083100 Clear Fork Brazos River near Roby, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004	
ANNUAL TOTAL	927.48		97.30		8.16	
ANNUAL MEAN	2.54		0.27		0.27	
HIGHEST ANNUAL MEAN					29.6	1982
LOWEST ANNUAL MEAN					0.27	2004
HIGHEST DAILY MEAN	638	Jun 5	24	Jun 10	4,420	Mar 23, 2000
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Apr 24, 1963
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Aug 3, 1964
MAXIMUM PEAK FLOW			76	Jun 10	9,000	Mar 23, 2000
MAXIMUM PEAK STAGE			5.58	Jun 10	a22.35	Mar 23, 2000
ANNUAL RUNOFF (AC-FT)	1,840		193		5,920	
10 PERCENT EXCEEDS	0.01		0.12		6.1	
50 PERCENT EXCEEDS	0.00		0.00		1.4	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a From floodmark.



## BRAZOS RIVER BASIN

08083200 Lake Sweetwater near Sweetwater, TX

LOCATION.--Lat 32°26'19", long 100°18'12", Nolan County, Hydrologic Unit 12060102, 0.2 mi right of intake structure to pump station, on upstream side of dam on Bitter Creek, 6.5 mi southeast of Sweetwater, and 8.5 mi upstream from mouth.

DRAINAGE AREA.--104 mi<sup>2</sup>.

PERIOD OF RECORD.--Jan. 1936 to Sept. 1969 (end of month contents only), Sept. 1969 to Sept. 1974, Mar. 1999 to Sept. 2002 (contents), Oct. 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Freese and Nichols Inc.). Prior to Oct. 1974, nonrecording gages at same site at datum 0.53 ft lower. Satellite telemeter at station.

REMARKS.--Records good. Interruption in the record was due to malfunction of the instrument. The lake is formed by a rolled earthfill dam 2,600 ft long. Dam was completed and storage began in 1930. Lake first filled to spillway elevation in 1936. Dam is property of city of Sweetwater and was built to impound water for municipal use; however, none has been used since 1967. Emergency spillway is located just to left of left end of dam and has a concrete ogee-type crest 607.5 ft long. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	2,128.5
Crest of spillway	2,116.5
Top of design flood pool	2,116.5

COOPERATION.--Record of diversions may be obtained from city of Sweetwater.

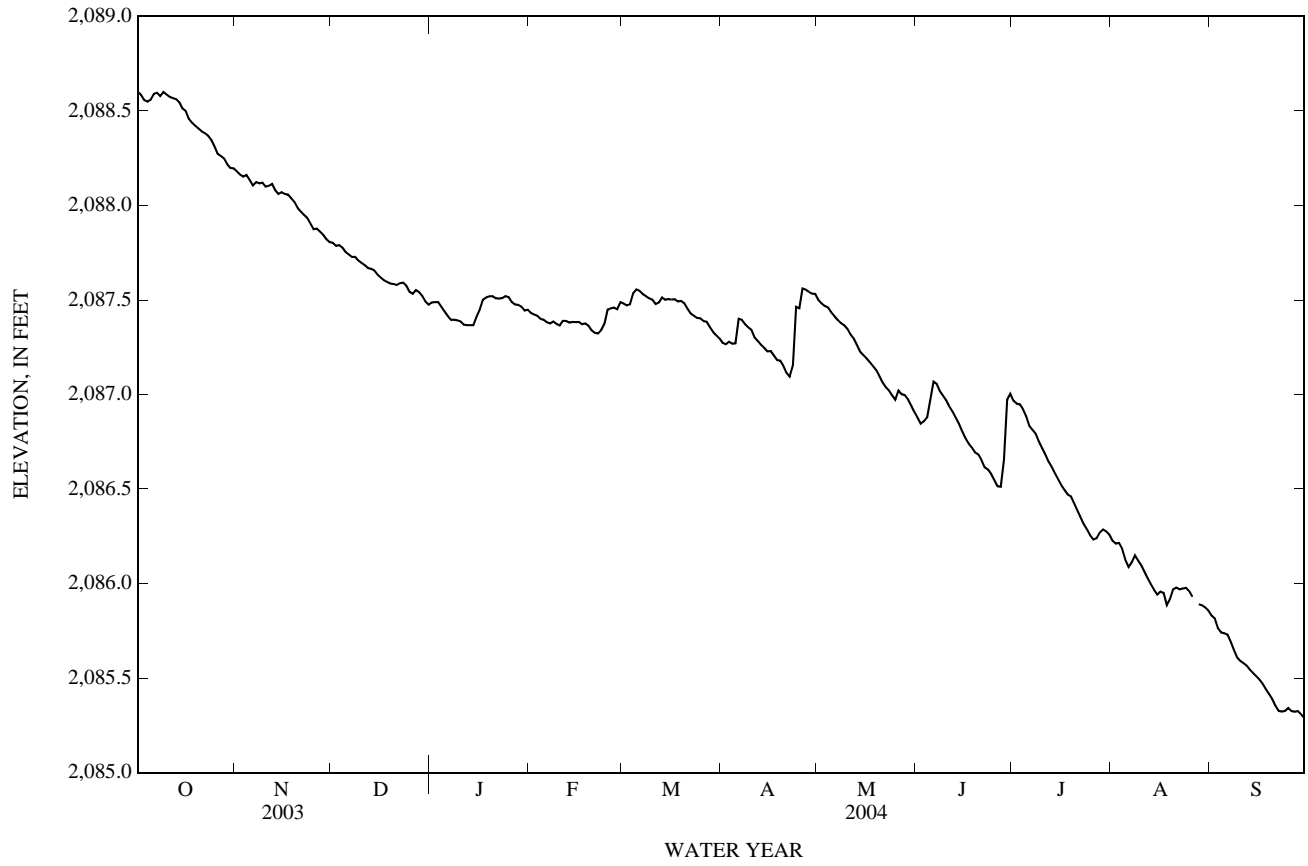
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 12,360 acre-ft, June 1, 1957, elevation, 2,117.23 ft; minimum observed, 780 acre-ft, Aug. 17, 1953, elevation, 2,083.07 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,088.62 ft, Oct. 7, 9; minimum elevation, 2,085.28 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	2,088.60	2,088.18	2,087.80	2,087.49	2,087.43	2,087.48	2,087.27	2,087.50	2,086.88	2,086.97	2,086.23	2,085.83
2	2,088.59	2,088.16	2,087.79	2,087.49	2,087.42	2,087.47	2,087.26	2,087.48	2,086.85	2,086.95	2,086.21	2,085.82
3	2,088.56	2,088.15	2,087.79	2,087.49	2,087.42	2,087.48	2,087.28	2,087.47	2,086.86	2,086.95	2,086.22	2,085.76
4	2,088.55	2,088.16	2,087.78	2,087.46	2,087.40	2,087.53	2,087.27	2,087.46	2,086.88	2,086.92	2,086.18	2,085.74
5	2,088.56	2,088.13	2,087.75	2,087.44	2,087.40	2,087.56	2,087.27	2,087.43	2,086.97	2,086.89	2,086.13	2,085.74
6	2,088.59	2,088.11	2,087.74	2,087.41	2,087.38	2,087.55	2,087.40	2,087.41	2,087.07	2,086.83	2,086.09	2,085.73
7	2,088.60	2,088.12	2,087.73	2,087.39	2,087.38	2,087.53	2,087.39	2,087.39	2,087.06	2,086.81	2,086.11	2,085.69
8	2,088.58	2,088.12	2,087.73	2,087.40	2,087.39	2,087.52	2,087.37	2,087.38	2,087.02	2,086.79	2,086.15	2,085.65
9	2,088.60	2,088.12	2,087.71	2,087.39	2,087.37	2,087.51	2,087.36	2,087.37	2,086.99	2,086.75	2,086.12	2,085.61
10	2,088.59	2,088.10	2,087.70	2,087.39	2,087.36	2,087.50	2,087.34	2,087.35	2,086.97	2,086.72	2,086.10	2,085.59
11	2,088.57	2,088.10	2,087.68	2,087.37	2,087.39	2,087.48	2,087.30	2,087.32	2,086.93	2,086.68	2,086.06	2,085.58
12	2,088.57	2,088.11	2,087.67	2,087.37	2,087.39	2,087.49	2,087.28	2,087.30	2,086.91	2,086.64	2,086.03	2,085.57
13	2,088.56	2,088.08	2,087.66	2,087.37	2,087.38	2,087.51	2,087.26	2,087.26	2,086.88	2,086.62	2,086.00	2,085.54
14	2,088.55	2,088.06	2,087.66	2,087.37	2,087.38	2,087.50	2,087.25	2,087.23	2,086.84	2,086.58	2,085.97	2,085.53
15	2,088.51	2,088.07	2,087.63	2,087.41	2,087.38	2,087.51	2,087.23	2,087.21	2,086.80	2,086.55	2,085.94	2,085.51
16	2,088.50	2,088.06	2,087.62	2,087.45	2,087.38	2,087.50	2,087.23	2,087.19	2,086.77	2,086.52	2,085.96	2,085.49
17	2,088.46	2,088.06	2,087.61	2,087.50	2,087.37	2,087.50	2,087.21	2,087.17	2,086.74	2,086.49	2,085.95	2,085.47
18	2,088.44	2,088.04	2,087.59	2,087.51	2,087.38	2,087.49	2,087.18	2,087.15	2,086.72	2,086.47	2,085.89	2,085.44
19	2,088.42	2,088.02	2,087.59	2,087.52	2,087.36	2,087.49	2,087.18	2,087.13	2,086.69	2,086.46	2,085.92	2,085.42
20	2,088.41	2,087.99	2,087.58	2,087.52	2,087.34	2,087.48	2,087.15	2,087.10	2,086.68	2,086.43	2,085.97	2,085.39
21	2,088.39	2,087.97	2,087.58	2,087.51	2,087.33	2,087.45	2,087.11	2,087.07	2,086.65	2,086.39	2,085.98	2,085.35
22	2,088.38	2,087.95	2,087.59	2,087.51	2,087.32	2,087.43	2,087.09	2,087.04	2,086.61	2,086.35	2,085.97	2,085.33
23	2,088.37	2,087.93	2,087.59	2,087.51	2,087.34	2,087.42	2,087.15	2,087.02	2,086.60	2,086.31	2,085.97	2,085.32
24	2,088.35	2,087.90	2,087.58	2,087.52	2,087.37	2,087.41	2,087.46	2,086.99	2,086.58	2,086.29	2,085.98	2,085.33
25	2,088.31	2,087.88	2,087.54	2,087.51	2,087.45	2,087.40	2,087.46	2,086.97	2,086.55	2,086.26	2,085.96	2,085.34
26	2,088.27	2,087.88	2,087.53	2,087.49	2,087.45	2,087.39	2,087.56	2,087.02	2,086.51	2,086.23	2,085.93	2,085.33
27	2,088.26	2,087.86	2,087.55	2,087.48	2,087.46	2,087.39	2,087.55	2,087.00	2,086.51	2,086.24	---	2,085.32
28	2,088.25	2,087.84	2,087.54	2,087.47	2,087.45	2,087.36	2,087.54	2,087.00	2,086.65	2,086.27	2,085.89	2,085.33
29	2,088.22	2,087.82	2,087.52	2,087.47	2,087.49	2,087.33	2,087.53	2,086.97	2,086.97	2,086.29	2,085.89	2,085.31
30	2,088.20	2,087.81	2,087.49	2,087.45	---	2,087.31	2,087.53	2,086.94	2,087.00	2,086.28	2,085.87	2,085.29
31	2,088.20	---	2,087.47	2,087.45	---	2,087.30	---	2,086.91	---	2,086.26	2,085.86	---
MEAN	2,088.45	2,088.03	2,087.64	2,087.45	2,087.39	2,087.46	2,087.32	2,087.20	2,086.80	2,086.55	---	2,085.51
MAX	2,088.60	2,088.18	2,087.80	2,087.52	2,087.49	2,087.56	2,087.56	2,087.50	2,087.07	2,086.97	---	2,085.83
MIN	2,088.20	2,087.81	2,087.47	2,087.37	2,087.32	2,087.30	2,087.09	2,086.91	2,086.51	2,086.23	---	2,085.29
CAL YR	2003	MEAN	2,090.31	MAX	2,092.60	MIN	2,087.47					

08083200 Lake Sweetwater near Sweetwater, TX—Continued



## BRAZOS RIVER BASIN

08083230 Clear Fork Brazos River near Noodle, TX

LOCATION.--Lat 32°40'28", long 100°04'20", Jones County, Hydrologic Unit 12060102, on right bank at upstream end of bridge on Farm Road 126, 2.4 mi downstream from Sweetwater Creek, 4.0 mi upstream from Noodle Creek, and 5.1 mi north of Noodle.

DRAINAGE AREA.--1,176 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 2001 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,750 ft above NGVD of 1929, from topographic map. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No known regulation. There are several small diversions 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	0.01	0.02	0.02	0.02	0.07	0.13	0.01	0.92	0.47	4.7	5.5	0.02
2	0.01	0.02	0.02	0.02	0.07	0.13	0.01	0.44	0.23	1.7	2.1	0.01
3	0.01	0.02	0.02	0.02	0.07	0.16	0.01	0.34	0.31	0.81	0.99	0.01
4	0.01	0.01	0.02	0.02	0.07	1.2	0.01	0.26	17	0.39	0.49	0.01
5	0.02	0.01	0.02	0.02	0.07	e0.90	0.03	0.21	8.9	0.17	0.25	0.01
6	0.02	0.01	0.02	0.02	0.08	e0.70	4.3	0.19	94	0.06	0.10	0.01
7	0.02	0.02	0.02	0.02	0.08	e0.50	6.9	0.18	29	0.02	0.06	0.01
8	0.02	0.01	0.02	0.02	0.09	e0.35	2.4	0.16	10	0.01	0.03	0.00
9	0.02	0.02	0.02	0.02	0.09	0.18	0.85	0.13	6.4	0.01	0.02	0.00
10	0.02	0.02	0.02	0.02	0.09	0.11	0.50	0.11	6.7	0.01	0.01	0.00
11	0.02	0.02	0.02	0.02	0.09	0.05	0.33	0.10	2.9	0.01	0.01	0.01
12	0.02	0.01	0.02	0.02	0.09	0.01	0.26	0.07	1.5	0.01	0.01	0.00
13	0.02	0.01	0.02	0.02	0.09	0.01	0.15	8.8	3.2	0.01	0.02	0.01
14	0.02	0.01	0.02	0.02	0.09	0.01	0.12	3.7	10	0.01	0.02	0.00
15	0.01	0.02	0.02	0.02	0.10	0.01	0.16	0.28	15	0.01	0.01	0.00
16	0.02	0.02	0.02	0.02	0.10	0.00	0.19	0.13	4.6	0.01	0.01	0.00
17	0.01	0.02	0.02	0.03	0.10	0.00	0.14	0.09	1.7	0.01	0.01	0.00
18	0.01	0.02	0.02	0.03	0.10	0.00	0.09	0.07	0.84	0.01	0.01	0.00
19	0.02	0.02	0.02	0.03	0.11	0.01	0.09	0.04	0.48	0.02	0.02	0.00
20	0.02	0.02	0.02	0.03	0.11	0.01	0.08	0.04	0.60	0.01	137	0.00
21	0.02	0.02	0.02	0.03	0.10	0.01	0.06	0.05	0.84	0.01	32	0.00
22	0.01	0.02	0.02	0.04	0.10	0.01	0.02	0.04	0.50	0.01	4.8	0.00
23	0.01	0.02	0.02	0.04	0.13	0.01	11	0.04	0.22	0.01	9.3	0.00
24	0.01	0.02	0.02	0.04	0.15	0.01	60	0.04	0.09	4.1	6.0	0.00
25	0.01	0.02	0.02	0.04	0.16	0.01	10	0.04	0.04	1.4	2.7	0.01
26	0.01	0.02	0.02	0.04	0.13	0.01	5.2	0.06	0.04	0.22	1.3	0.01
27	0.01	0.02	0.02	0.04	0.12	0.01	13	0.05	0.05	0.05	0.73	0.01
28	0.01	0.02	0.02	0.06	0.13	0.01	2.7	1.3	3.3	0.39	0.47	0.01
29	0.01	0.02	0.02	0.06	0.15	0.01	1.1	5.0	9.2	2.3	0.28	0.01
30	0.01	0.02	0.02	0.07	---	0.01	0.75	3.5	22	27	0.21	0.01
31	0.01	---	0.02	0.07	---	0.01	---	0.98	---	16	0.09	---
TOTAL	0.45	0.53	0.62	0.97	2.93	4.58	120.46	27.36	250.11	59.48	204.55	0.16
MEAN	0.01	0.02	0.02	0.03	0.10	0.15	4.02	0.88	8.34	1.92	6.60	0.01
MAX	0.02	0.02	0.02	0.07	0.16	1.2	60	8.8	94	27	137	0.02
MIN	0.01	0.01	0.02	0.02	0.07	0.00	0.01	0.04	0.04	0.01	0.01	0.00
AC-FT	0.9	1.1	1.2	1.9	5.8	9.1	239	54	496	118	406	0.3

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2004, BY WATER YEAR (WY)

MEAN	7.02	0.29	0.33	0.21	0.28	1.85	2.02	6.78	38.9	7.70	2.22	0.39
MAX	20.0	0.61	0.62	0.39	0.53	4.98	4.02	19.5	107	21.0	6.60	1.12
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2004)	(2002)	(2003)	(2002)	(2004)	(2002)
MIN	0.01	0.02	0.02	0.03	0.10	0.15	0.08	0.01	0.93	0.16	0.03	0.01
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)	(2002)	(2003)	(2003)	(2004)

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

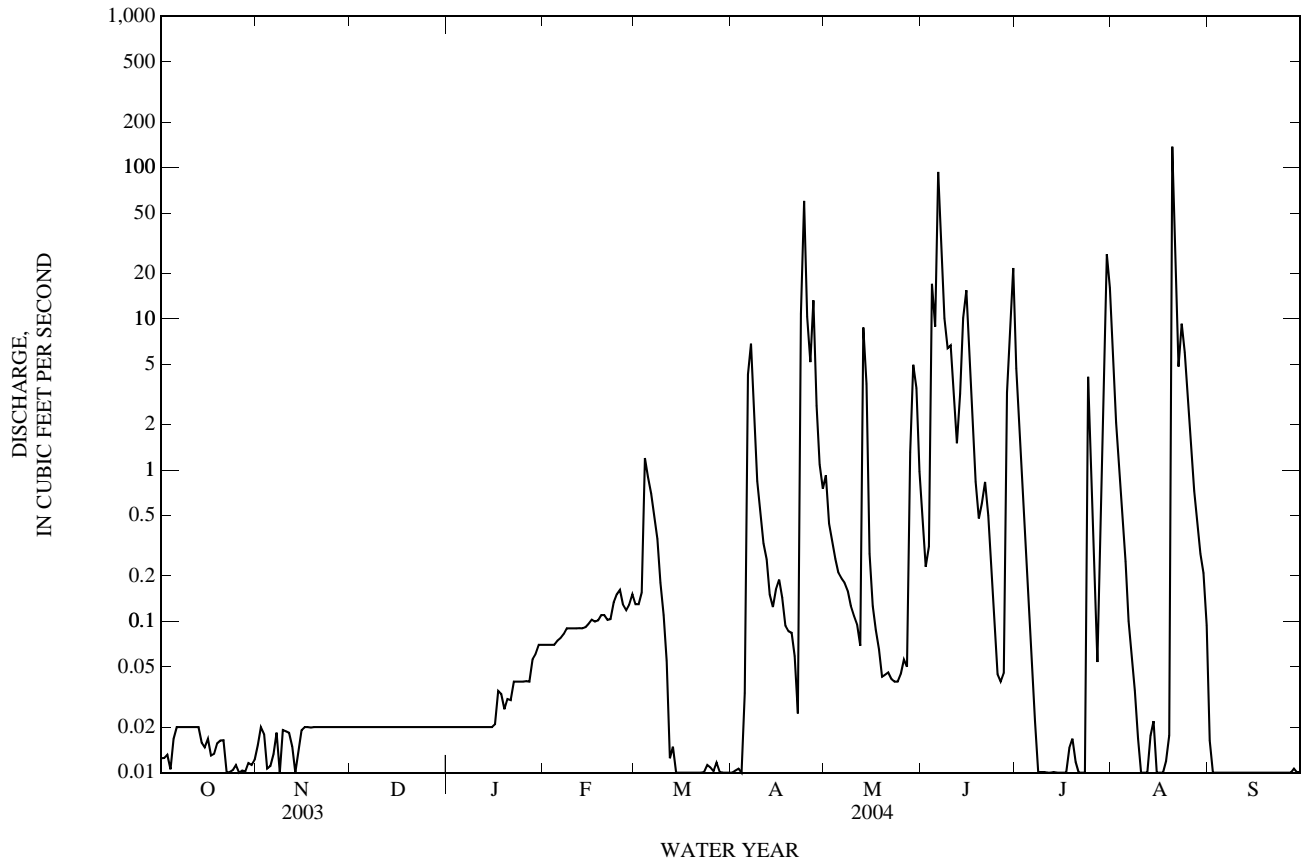
## WATER YEARS 2001 - 2004

ANNUAL TOTAL	3,255.92		672.20			
ANNUAL MEAN	8.92		1.84			
HIGHEST ANNUAL MEAN					5.65	
LOWEST ANNUAL MEAN					9.06	2003
HIGHEST DAILY MEAN	1,150	Jun 6	137	Aug 20	1.84	2004
LOWEST DAILY MEAN	0.01	Apr 27	0.00	Mar 16	0.00	Jun 6, 2003
ANNUAL SEVEN-DAY MINIMUM	0.01	Apr 30	0.00	Sep 14	0.00	Mar 16, 2004
MAXIMUM PEAK FLOW			465	Aug 20	1,860	Sep 14, 2004
MAXIMUM PEAK STAGE			9.55	Aug 20	a19.05	Jun 6, 2003
ANNUAL RUNOFF (AC-FT)	6,460		1,330		4,090	
10 PERCENT EXCEEDS	0.61		2.8		2.0	
50 PERCENT EXCEEDS	0.02		0.02		0.18	
90 PERCENT EXCEEDS	0.01		0.01		0.01	

a From floodmark.

e Estimated

08083230 Clear Fork Brazos River near Noodle, TX—Continued



## BRAZOS RIVER BASIN

08083270 Lake Abilene near Buffalo Gap, TX

LOCATION.--Lat 32°14'04", long 99°53'19", Taylor County, Hydrologic Unit 12060102, 72 ft downstream from service outlet structure at Abilene Dam on Elm Creek, 0.5 mi upstream from Abilene State Park, 5.1 mi upstream from Buffalo Gap.

DRAINAGE AREA.--102 mi<sup>2</sup>.

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 5,040 ft long. The dam was completed in May 1921 and impoundment began Aug. 1, 1921. Extensive repairs were made to the dam in 1941 and 1957. The dam and reservoir are owned and operated by the city of Abilene. The uncontrolled emergency spillway, 1,000 ft long across natural earth, is located at the left end of dam. The uncontrolled concrete ogee service spillway, 250 ft long, is located to the right of the emergency spillway at left end of dam. An earth ridge upstream of concrete ogee at approximate elevation 2,018 ft controls the flow to service spillway. A service outlet is provided for small releases downstream through a 24-inch diameter pipe. Water may be pumped from reservoir for city of Abilene municipal use. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	2,024.1
Crest of emergency spillway and earth ridge	2,018.3
Top of outlet structure	2,012.3
Crest of service spillway	2,009.7
Lowest gated outlet (invert)	1,968.8

COOPERATION.--Record of diversions may be obtained from city of Abilene.

EXTREMES FOR PERIOD OF RECORD.--Mar. 1999 to Sept. 2002: Maximum contents, 3,050 acre-ft, July 10, 2002; minimum contents, 6.8 acre-ft, May 2, 2001; Mar. 1999 to current year: Maximum elevation, 2,006.45 ft, July 10, 2002; minimum elevation, 1,988.69 ft, May 2, 2001.

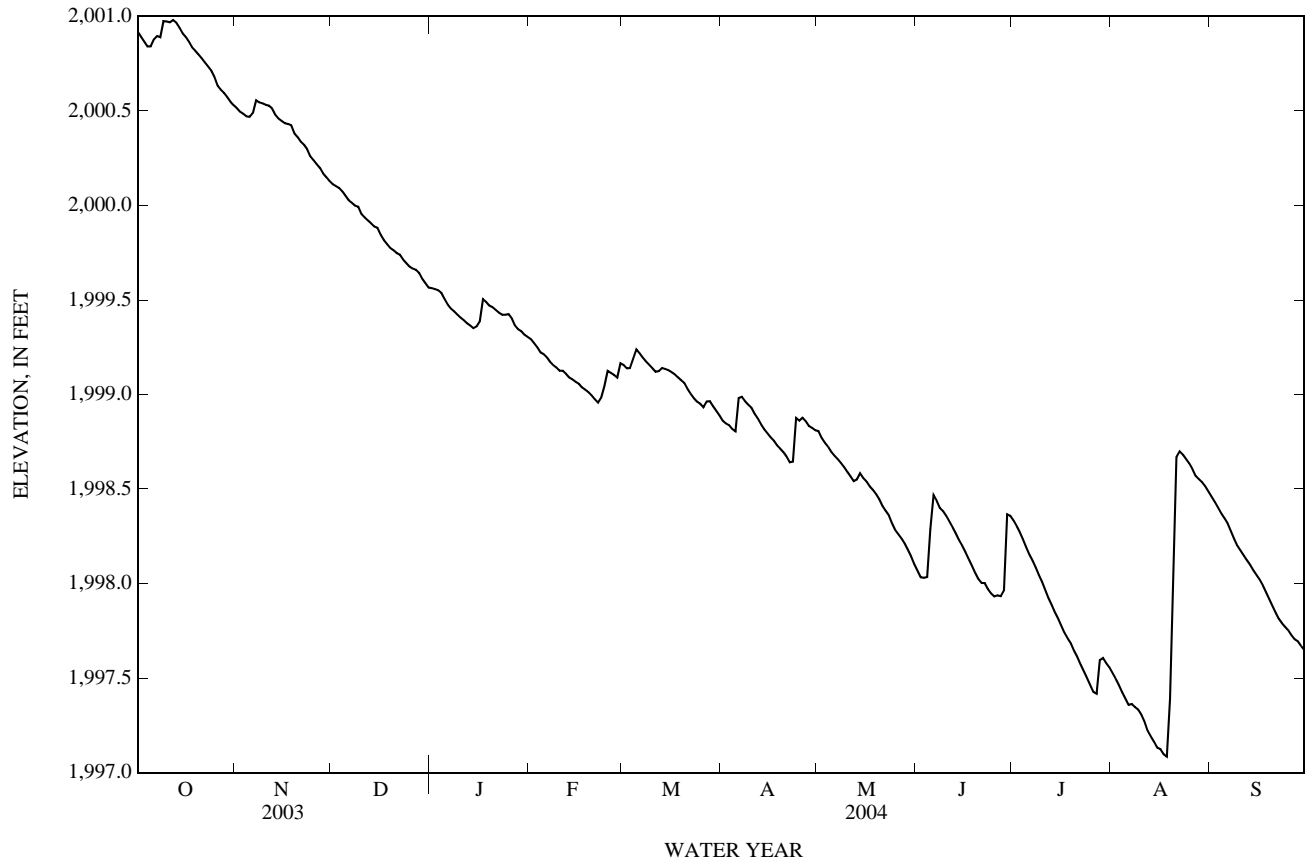
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,000.99 ft, Oct. 12; minimum elevation, 1,997.06 ft, Aug. 18.

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	2,000.92	2,000.51	2,000.11	1,999.56	1,999.29	1,999.16	1,998.86	1,998.81	1,998.07	1,998.33	1,997.53	1,998.46
2	2,000.89	2,000.50	2,000.10	1,999.56	1,999.27	1,999.14	1,998.85	1,998.77	1,998.03	1,998.30	1,997.50	1,998.43
3	2,000.87	2,000.48	2,000.09	1,999.55	1,999.25	1,999.14	1,998.84	1,998.74	1,998.03	1,998.27	1,997.46	1,998.40
4	2,000.84	2,000.47	2,000.07	1,999.54	1,999.22	1,999.19	1,998.82	1,998.72	1,998.04	1,998.23	1,997.43	1,998.37
5	2,000.84	2,000.47	2,000.05	1,999.51	1,999.21	1,999.24	1,998.81	1,998.70	1,998.29	1,998.19	1,997.39	1,998.35
6	2,000.88	2,000.49	2,000.03	1,999.47	1,999.20	1,999.22	1,998.98	1,998.68	1,998.47	1,998.15	1,997.36	1,998.32
7	2,000.90	2,000.56	2,000.01	1,999.45	1,999.17	1,999.19	1,998.99	1,998.66	1,998.44	1,998.12	1,997.36	1,998.28
8	2,000.89	2,000.55	2,000.00	1,999.44	1,999.15	1,999.17	1,998.96	1,998.64	1,998.40	1,998.09	1,997.35	1,998.24
9	2,000.97	2,000.54	1,999.99	1,999.42	1,999.14	1,999.16	1,998.95	1,998.62	1,998.38	1,998.05	1,997.33	1,998.20
10	2,000.97	2,000.53	1,999.95	1,999.41	1,999.13	1,999.14	1,998.93	1,998.59	1,998.36	1,998.01	1,997.31	1,998.17
11	2,000.97	2,000.53	1,999.94	1,999.39	1,999.13	1,999.12	1,998.90	1,998.57	1,998.33	1,997.97	1,997.27	1,998.15
12	2,000.98	2,000.51	1,999.92	1,999.38	1,999.11	1,999.12	1,998.87	1,998.54	1,998.30	1,997.92	1,997.22	1,998.12
13	2,000.97	2,000.48	1,999.90	1,999.37	1,999.09	1,999.14	1,998.84	1,998.55	1,998.26	1,997.89	1,997.19	1,998.10
14	2,000.94	2,000.46	1,999.89	1,999.35	1,999.08	1,999.13	1,998.82	1,998.58	1,998.23	1,997.85	1,997.16	1,998.07
15	2,000.91	2,000.45	1,999.88	1,999.36	1,999.07	1,999.13	1,998.80	1,998.56	1,998.20	1,997.82	1,997.13	1,998.05
16	2,000.89	2,000.43	1,999.85	1,999.39	1,999.06	1,999.12	1,998.77	1,998.54	1,998.17	1,997.78	1,997.12	1,998.02
17	2,000.87	2,000.43	1,999.82	1,999.50	1,999.04	1,999.11	1,998.76	1,998.52	1,998.13	1,997.74	1,997.10	1,997.99
18	2,000.84	2,000.42	1,999.80	1,999.49	1,999.03	1,999.09	1,998.73	1,998.50	1,998.10	1,997.71	1,997.09	1,997.96
19	2,000.82	2,000.38	1,999.78	1,999.47	1,999.01	1,999.08	1,998.71	1,998.47	1,998.06	1,997.68	1,997.39	1,997.92
20	2,000.80	2,000.36	1,999.76	1,999.46	1,998.99	1,999.06	1,998.70	1,998.45	1,998.03	1,997.64	1,998.17	1,997.88
21	2,000.78	2,000.34	1,999.75	1,999.45	1,998.97	1,999.03	1,998.67	1,998.41	1,998.00	1,997.61	1,998.67	1,997.85
22	2,000.76	2,000.32	1,999.74	1,999.43	1,998.96	1,999.00	1,998.64	1,998.38	1,998.00	1,997.57	1,998.70	1,997.82
23	2,000.73	2,000.30	1,999.71	1,999.42	1,998.98	1,998.98	1,998.64	1,998.36	1,997.97	1,997.54	1,998.68	1,997.79
24	2,000.71	2,000.26	1,999.69	1,999.42	1,999.05	1,998.96	1,998.88	1,998.32	1,997.95	1,997.50	1,998.66	1,997.77
25	2,000.68	2,000.24	1,999.68	1,999.42	1,999.12	1,998.95	1,998.86	1,998.28	1,997.93	1,997.46	1,998.64	1,997.75
26	2,000.63	2,000.22	1,999.67	1,999.40	1,999.12	1,998.93	1,998.88	1,998.26	1,997.94	1,997.43	1,998.61	1,997.73
27	2,000.61	2,000.20	1,999.66	1,999.37	1,999.10	1,998.96	1,998.86	1,998.24	1,997.93	1,997.42	1,998.57	1,997.71
28	2,000.60	2,000.17	1,999.64	1,999.35	1,999.09	1,998.96	1,998.83	1,998.21	1,997.96	1,997.60	1,998.55	1,997.69
29	2,000.57	2,000.15	1,999.61	1,999.34	1,999.16	1,998.94	1,998.82	1,998.18	1,998.37	1,997.61	1,998.54	1,997.67
30	2,000.55	2,000.13	1,999.59	1,999.32	---	1,998.91	1,998.81	1,998.14	1,998.36	1,997.58	1,998.52	1,997.65
31	2,000.53	---	1,999.57	1,999.30	---	1,998.89	---	1,998.10	---	1,997.56	1,998.49	---
MEAN	2,000.81	2,000.40	1,999.85	1,999.43	1,999.11	1,999.08	1,998.83	1,998.49	1,998.16	1,997.83	1,997.79	1,998.03
MAX	2,000.98	2,000.56	2,000.11	1,999.56	1,999.29	1,999.24	1,998.99	1,998.81	1,998.47	1,998.33	1,998.70	1,998.46
MIN	2,000.53	2,000.13	1,999.57	1,999.30	1,998.96	1,998.89	1,998.64	1,998.10	1,997.93	1,997.42	1,997.09	1,997.65
CAL YR	2003	MEAN	2,001.95	MAX	2,003.61	MIN	1,999.57					
WTR YR	2004	MEAN	1,998.98	MAX	2,000.98	MIN	1,997.09					



08083270 Lake Abilene near Buffalo Gap, TX—Continued



08083420 Cat Claw Creek at Abilene, TX

LOCATION.--Lat 32°28'31", long 99°44'56", Taylor County, Hydrologic Unit 12060102, on left bank in Sears Park 320 ft downstream from bridge on Ambler Street in Abilene and 1.8 mi upstream from mouth.

DRAINAGE AREA.--13.0 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1970 to Sept. 1979 (daily mean discharge), May 1993 to Sept. 2000 (periodic discharge measurements), June 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,682.32 ft above NGVD of 1929 (U.S. Army Corps of Engineers benchmark). Oct. 1970 to Sept. 1979, water-stage recorder at site 50 ft downstream and 250 ft right at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversions. No flow many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood on Oct. 17, 2000 reached a stage of 9.50 ft, present site and datum from floodmark, discharge not determined.

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	1.8	0.00	12	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.64	2.4	0.53	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	1.1	0.99	0.07	20	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	37	0.04	0.00	0.75	0.00	0.00	0.00
5	0.00	0.64	0.00	0.00	0.00	4.6	24	0.00	44	0.00	0.00	0.00
6	51	11	0.00	0.00	0.00	1.4	69	0.00	4.8	0.00	0.00	0.00
7	2.0	44	0.00	0.00	0.00	0.23	0.56	0.00	0.37	0.03	0.00	0.00
8	0.41	1.2	0.00	0.00	0.00	0.01	0.51	0.00	0.06	0.00	0.00	0.00
9	23	0.70	0.00	0.00	0.00	0.00	0.14	0.00	0.01	0.00	0.00	0.00
10	1.1	0.14	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
11	0.16	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.15	2.7	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.01	3.3	0.00	35	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.25	0.00	2.9	0.00	0.00	0.03	0.00
15	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.07	0.00	0.00	0.17	0.00
16	0.00	0.00	0.00	26	0.00	0.00	0.00	0.01	0.00	0.00	0.19	0.00
17	0.00	0.00	0.00	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	2.9	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
19	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00	37	0.00
20	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	236	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11	0.00
23	0.00	0.00	0.00	0.00	21	0.00	47	0.00	0.00	0.00	3.8	0.00
24	0.00	0.00	0.00	0.00	53	0.00	23	0.00	0.00	4.2	0.20	0.00
25	0.00	0.00	0.00	0.00	18	0.00	0.38	3.9	0.00	0.38	0.00	0.00
26	0.00	0.00	0.00	0.00	0.86	0.00	47	13	0.09	0.01	0.00	0.00
27	0.00	0.00	0.00	0.00	0.47	0.00	0.61	0.14	0.23	2.0	0.00	0.00
28	0.00	0.00	0.12	0.00	0.14	0.00	0.15	0.54	36	12	96	0.00
29	0.00	0.00	0.00	0.00	39	0.00	0.14	0.04	9.1	0.65	4.9	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.01	0.00	0.07	0.05	0.08	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
MEAN	2.51	1.92	0.00	1.69	4.58	1.71	7.20	2.20	3.85	0.62	13.3	0.00
MAX	51	44	0.12	26	53	37	69	35	44	12	236	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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2004h, BY WATER YEAR (WY)

MEAN	4.30	1.30	0.45	0.55	1.41	2.73	2.02	2.29	2.58	5.53	5.70	6.15
MAX	12.7	4.51	2.32	3.24	4.58	14.2	7.20	8.09	13.1	51.7	17.9	32.2
(WY)	(2003)	(2002)	(2003)	(1973)	(2004)	(1979)	(2004)	(2002)	(2003)	(2002)	(1978)	(1974)
MIN	0.16	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.72	0.00	0.11	0.00
(WY)	(1971)	(1971)	(1973)	(1972)	(1976)	(1971)	(2003)	(1977)	(1976)	(2003)	(1973)	(1979)

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

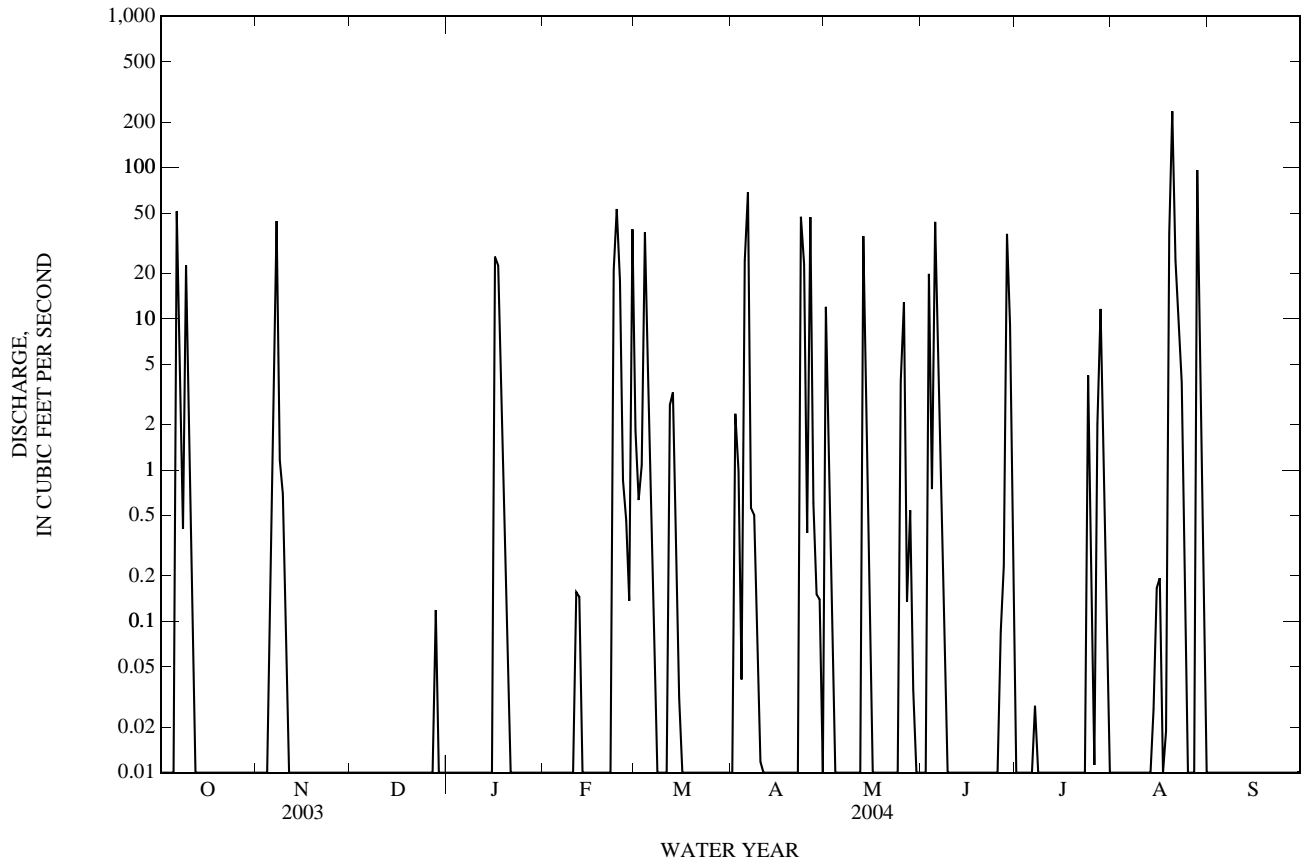
## FOR 2004 WATER YEAR

## WATER YEARS 1971 - 2004h

ANNUAL MEAN	2.10		3.30		2.98	
HIGHEST ANNUAL MEAN					6.86	
LOWEST ANNUAL MEAN					1.70	
HIGHEST DAILY MEAN	142	Jun 13	236	Aug 20	682	Jul 6, 2002
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1970
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 12	0.00	Oct 27, 1970
MAXIMUM PEAK FLOW			990		1,940	
MAXIMUM PEAK STAGE			6.61		9.56	
10 PERCENT EXCEEDS	1.1		3.0	Aug 28	2.5	Jul 7, 2002
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

h See PERIOD OF RECORD paragraph.

08083420 Cat Claw Creek at Abilene, TX—Continued



08083480 Cedar Creek at Interstate Highway 20 at Abilene, TX

LOCATION.--Lat 32°29'58", long 99°42'57", Taylor County, Hydrologic Unit 12060102, on right bank at upstream side of the south Interstate Highway 20 service road bridge at Abilene, 2.8 mi downstream from Lytle Creek, 3.3 mi upstream from Rainy Creek, 6.7 mi downstream from Buttonwillow Creek, 7.2 mi upstream from mouth, and 8.8 mi downstream from Kirby Lake.

DRAINAGE AREA.--136 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1993 to Aug. 2000 (periodic discharge measurements), June 2001 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,640 ft above NGVD of 1929, from topographic map. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood on Oct. 17, 2000 reached a stage of 7.72 ft, from floodmark, discharge not determined.

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	0.12	11	0.23	18	0.05	2.8	0.19	0.21
2	0.00	0.00	0.00	0.00	0.12	5.0	11	3.0	0.04	1.2	0.05	0.15
3	0.00	0.00	0.00	0.00	0.13	3.5	3.3	1.7	19	0.52	0.01	0.11
4	0.00	0.00	0.00	0.00	0.15	37	0.72	1.2	6.1	0.24	0.00	0.08
5	0.00	0.00	0.00	0.00	0.15	20	15	1.5	29	0.09	0.00	0.06
6	13	0.20	0.00	0.00	0.13	6.8	113	1.5	32	0.03	0.00	0.05
7	1.9	47	0.00	0.00	0.12	3.2	13	1.3	13	0.40	1.6	0.08
8	0.05	14	0.00	0.00	0.13	1.9	5.9	1.2	3.9	0.10	5.7	0.03
9	16	6.5	0.00	0.00	0.13	1.1	2.9	0.96	1.9	0.09	1.1	0.03
10	2.6	2.4	0.00	0.00	0.12	0.95	1.9	0.92	1.0	0.04	0.07	0.04
11	0.18	1.2	0.00	0.00	0.87	0.81	2.0	0.70	0.52	0.01	0.02	0.03
12	0.02	0.54	0.00	0.00	0.65	3.1	0.37	0.48	0.37	0.00	0.02	0.03
13	0.01	0.25	0.00	0.00	0.26	5.5	0.66	60	0.21	0.00	0.01	0.02
14	0.00	0.23	0.00	0.00	0.19	1.7	0.65	36	0.11	0.00	0.23	0.02
15	0.00	e0.23	0.00	0.00	0.17	1.1	1.6	9.8	0.06	0.00	0.08	0.02
16	0.00	e0.18	0.00	2.3	0.15	0.75	2.3	4.7	0.08	0.00	2.5	0.02
17	0.00	e0.18	0.00	29	0.13	1.8	2.3	2.5	0.08	0.00	0.11	0.02
18	0.00	e0.15	0.00	4.0	0.12	0.47	2.4	1.7	0.20	0.00	0.02	0.02
19	0.00	e0.15	0.00	1.4	0.10	0.49	2.5	1.4	0.05	0.00	49	0.01
20	0.00	e0.12	0.00	0.56	0.09	0.57	2.5	1.1	0.03	0.00	e320	0.00
21	0.00	0.09	0.00	0.41	0.09	0.35	2.3	0.96	0.01	0.00	e29	0.00
22	0.00	0.06	0.00	0.34	0.09	0.32	2.2	0.70	0.00	0.00	e15	0.00
23	0.00	0.04	0.00	0.28	28	0.41	62	0.62	0.00	0.00	e6.0	0.00
24	0.00	0.02	0.00	0.23	47	0.33	178	0.76	0.00	5.4	e3.0	0.00
25	0.00	0.02	0.00	0.37	59	0.26	51	0.85	2.0	1.0	e1.5	0.00
26	0.00	0.02	0.00	0.18	14	0.27	124	16	12	0.07	0.69	0.00
27	0.00	0.00	0.00	0.15	6.2	0.64	23	2.0	2.4	0.31	0.27	0.00
28	0.00	0.00	0.00	0.15	2.9	0.69	13	2.2	43	23	102	0.02
29	0.00	0.00	0.00	0.15	35	0.36	8.1	0.58	93	9.3	6.5	0.05
30	0.00	0.00	0.00	0.15	---	0.31	4.5	0.23	12	2.7	0.86	0.02
31	0.00	---	0.00	0.15	---	0.39	---	0.10	---	0.48	0.35	---
TOTAL	33.76	73.58	0.00	39.82	196.31	111.07	652.33	174.66	272.11	47.78	545.88	1.12
MEAN	1.09	2.45	0.00	1.28	6.77	3.58	21.7	5.63	9.07	1.54	17.6	0.04
MAX	16	47	0.00	29	59	37	178	60	93	23	320	0.21
MIN	0.00	0.00	0.00	0.00	0.09	0.26	0.23	0.10	0.00	0.00	0.00	0.00
AC-FT	67	146	0.00	79	389	220	1,290	346	540	95	1,080	2.2

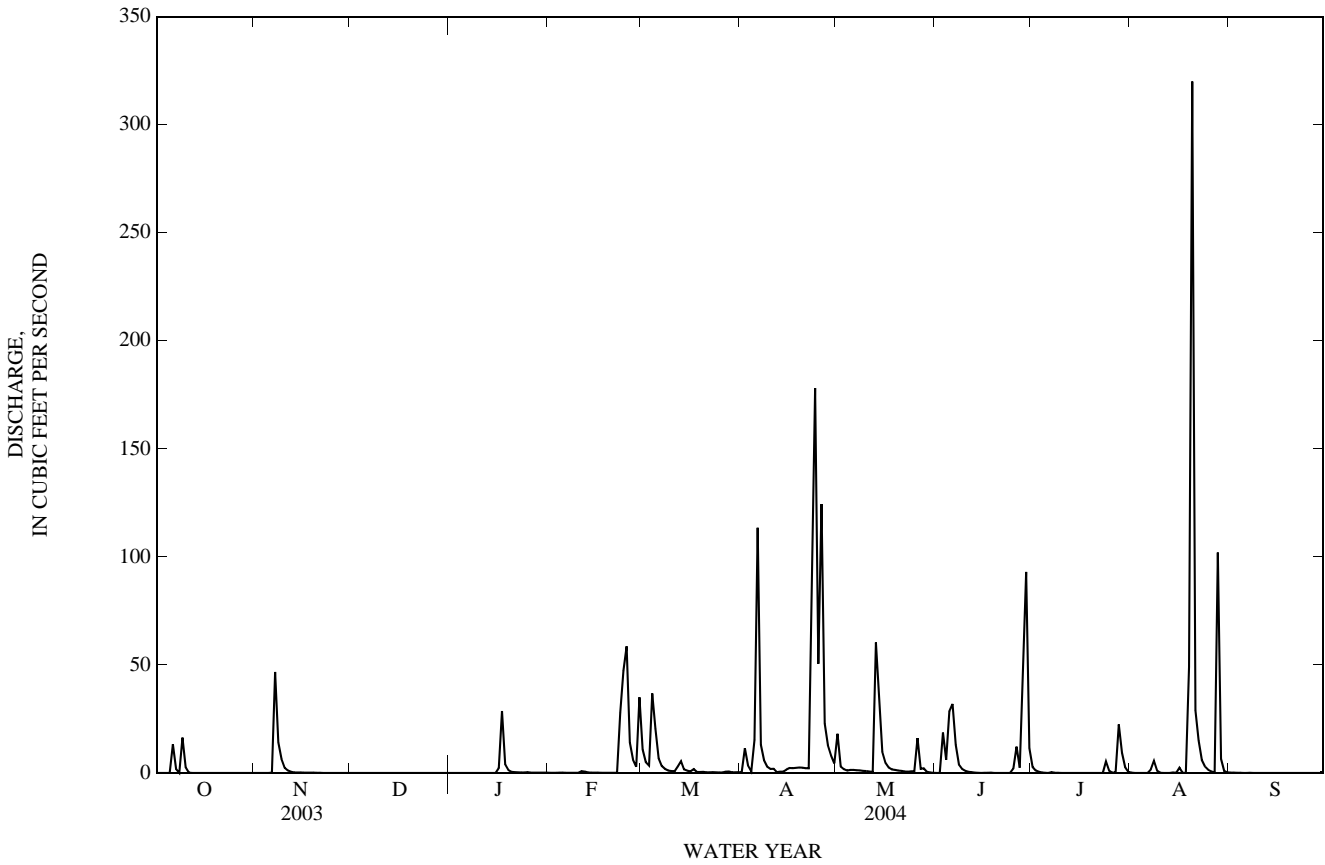
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2004, BY WATER YEAR (WY)

MEAN	6.39	3.37	1.78	0.84	4.19	4.91	8.20	5.67	10.7	29.8	6.02	2.37
MAX	17.7	4.93	3.70	1.28	6.77	10.7	21.7	10.2	30.7	118	17.6	4.09
(WY)	(2003)	(2002)	(2003)	(2004)	(2004)	(2002)	(2004)	(2002)	(2003)	(2002)	(2004)	(2001)
MIN	0.42	2.45	0.00	0.46	2.37	0.48	0.34	1.16	0.80	0.00	0.52	0.04
(WY)	(2002)	(2004)	(2004)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2003)	(2001)	(2004)

08083480 Cedar Creek at Interstate Highway 20 at Abilene, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2001 - 2004	
ANNUAL TOTAL	1,280.41		2,148.42		8.24	
ANNUAL MEAN	3.51		5.87		13.6	
HIGHEST ANNUAL MEAN					5.25	2002
LOWEST ANNUAL MEAN					2,110	Jul 6, 2002
HIGHEST DAILY MEAN	277	Jun 13	320	Aug 20	0.00	Jun 18, 2001
LOWEST DAILY MEAN	0.00	Feb 8	0.00	Oct 1	0.00	Jul 2, 2001
ANNUAL SEVEN-DAY MINIMUM	0.00	May 6	0.00	Oct 14	3,600	Jul 6, 2002
MAXIMUM PEAK FLOW			2,080	Aug 20	8.05	Jul 6, 2002
MAXIMUM PEAK STAGE			a6.63	Aug 20	5,970	
ANNUAL RUNOFF (AC-FT)	2,540		4,260		9.7	
10 PERCENT EXCEEDS	2.8		13		0.13	
50 PERCENT EXCEEDS	0.02		0.15		0.00	
90 PERCENT EXCEEDS	0.00		0.00			

a From floodmark.  
e Estimated



## BRAZOS RIVER BASIN

08083500 Fort Phantom Hill Reservoir near Nugent, TX

LOCATION.--Lat 32°35'46", long 99°40'49", Jones County, Hydrologic Unit 12060102, at city of Abilene primary pump station on right bank, 1.4 mi upstream from Fort Phantom Hill Dam on Elm Creek, 5.8 mi upstream from mouth, and 6.9 mi south of Nugent.

DRAINAGE AREA.--470 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1940 to Sept. 1965 (end of month contents only), Oct. 1965 to Sept. 1986, Mar. 1999 to Sept. 2002 (contents), Oct. 2002 to current year. Water-quality records: Chemical data: Apr. 1964 to Jan. 1965, Sept. 1970 to Apr. 1984.

REVISED RECORDS.--WSP 1562: 1953-57 (figures of end of month contents). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Oct. 1986, nonrecording gage at same site at datum 0.78 ft lower. Satellite telemeter at station.

REMARKS.--Records good except those for May 17 to July 13, which are fair. The reservoir is formed by a rock-faced earthfill dam about 3,740 ft long. The dam was completed and storage began in Oct. 1938. The uncontrolled service spillway is a cut channel through natural ground with a concrete ogee weir located 0.7 mi from right end of dam. The service outlet works consists of a concrete tower with a 4.0 by 7.0 ft conduit. The service tower contains five gated openings at various elevations. The dam and reservoir are owned by the city of Abilene and were built to impound water for municipal use. Since July 1974, West Texas Utility Company has operated a steam generating powerplant on the reservoir. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	1,650.0
Crest of spillway	1,635.9
Highest gated outlet (invert)	1,608.8
Lowest gated outlet (invert)	1,582.4

COOPERATION.--Records of diversions may be obtained from the city of Abilene.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 89,910 acre-ft, May 25, 1957, elevation, 1,639.50 ft; minimum observed, 19,040 acre-ft, Apr. 23, 24, 25, 1953, elevation, 1,615.30 ft.

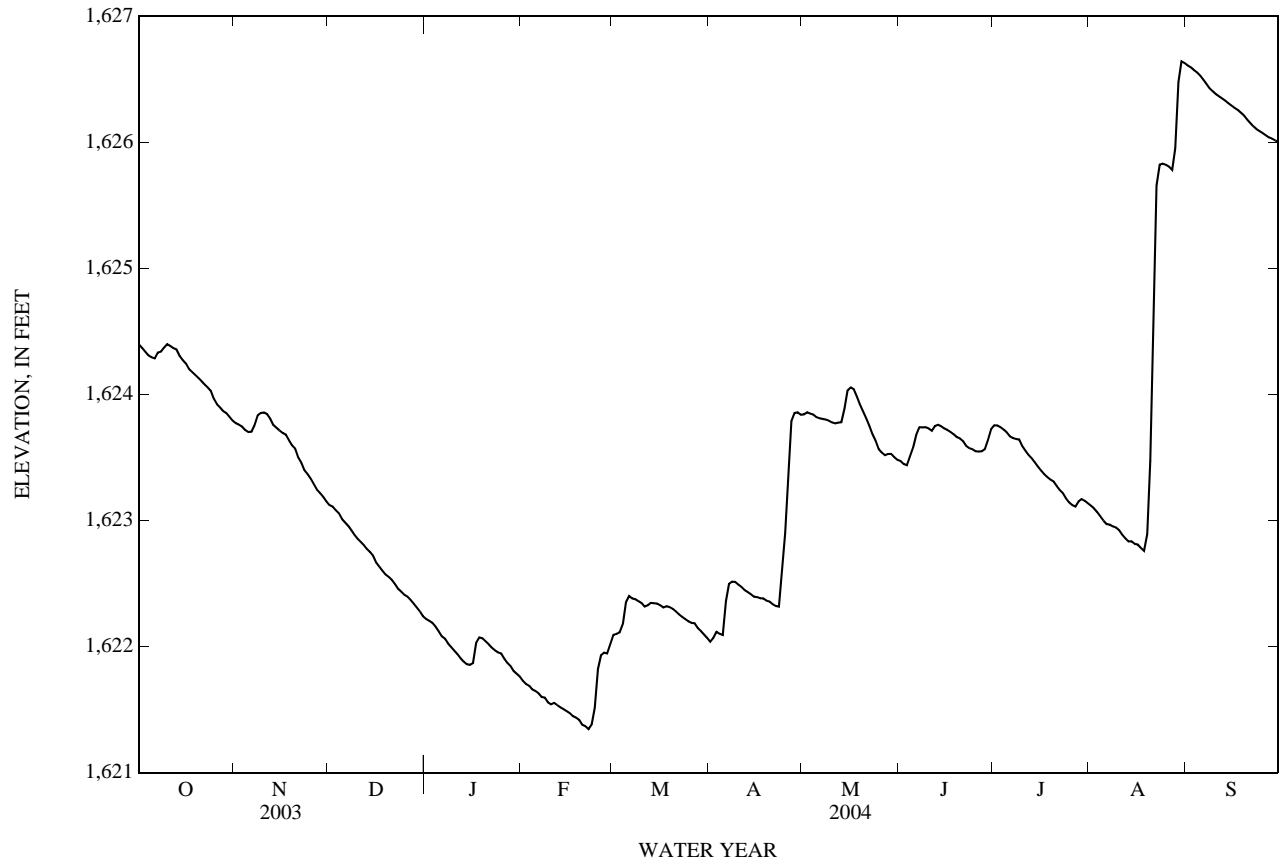
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,626.65 ft, Aug. 30; minimum elevation, 1,621.33 ft, Feb. 22, 23.

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	1,624.40	1,623.77	1,623.12	1,622.22	1,621.73	1,622.09	1,622.04	1,623.84	1,623.47	1,623.76	1,623.12	1,626.61
2	1,624.37	1,623.76	1,623.11	1,622.20	1,621.70	1,622.10	1,622.07	1,623.86	1,623.45	1,623.75	1,623.10	1,626.60
3	1,624.34	1,623.74	1,623.08	1,622.19	1,621.69	1,622.11	1,622.12	1,623.85	1,623.44	1,623.74	1,623.07	1,626.57
4	1,624.31	1,623.72	1,623.06	1,622.16	1,621.66	1,622.18	1,622.10	1,623.84	1,623.51	1,623.72	1,623.03	1,626.55
5	1,624.30	1,623.70	1,623.01	1,622.12	1,621.65	1,622.35	1,622.09	1,623.82	1,623.58	1,623.70	1,623.00	1,626.53
6	1,624.29	1,623.70	1,622.98	1,622.08	1,621.63	1,622.40	1,622.36	1,623.81	1,623.68	1,623.67	1,622.97	1,626.50
7	1,624.33	1,623.76	1,622.96	1,622.06	1,621.60	1,622.38	1,622.50	1,623.81	1,623.74	1,623.65	1,622.97	1,626.46
8	1,624.34	1,623.83	1,622.92	1,622.03	1,621.60	1,622.38	1,622.52	1,623.80	1,623.74	1,623.65	1,622.95	1,626.43
9	1,624.37	1,623.85	1,622.89	1,622.00	1,621.56	1,622.36	1,622.51	1,623.79	1,623.74	1,623.64	1,622.94	1,626.40
10	1,624.40	1,623.86	1,622.86	1,621.97	1,621.54	1,622.35	1,622.49	1,623.78	1,623.73	1,623.59	1,622.92	1,626.38
11	1,624.38	1,623.84	1,622.83	1,621.94	1,621.55	1,622.32	1,622.47	1,623.77	1,623.71	1,623.55	1,622.89	1,626.37
12	1,624.37	1,623.81	1,622.81	1,621.91	1,621.54	1,622.33	1,622.45	1,623.78	1,623.75	1,623.52	1,622.86	1,626.35
13	1,624.36	1,623.76	1,622.78	1,621.88	1,621.52	1,622.35	1,622.43	1,623.78	1,623.76	1,623.49	1,622.83	1,626.33
14	1,624.31	1,623.74	1,622.75	1,621.86	1,621.50	1,622.34	1,622.41	1,623.89	1,623.75	1,623.46	1,622.84	1,626.31
15	1,624.27	1,623.71	1,622.72	1,621.86	1,621.49	1,622.34	1,622.40	1,624.03	1,623.73	1,623.43	1,622.82	1,626.29
16	1,624.25	1,623.69	1,622.66	1,621.87	1,621.47	1,622.33	1,622.39	1,624.06	1,623.72	1,623.40	1,622.81	1,626.27
17	1,624.20	1,623.68	1,622.63	1,622.03	1,621.45	1,622.31	1,622.38	1,624.04	1,623.70	1,623.37	1,622.78	1,626.26
18	1,624.18	1,623.64	1,622.60	1,622.07	1,621.44	1,622.32	1,622.38	&1,623.98	1,623.68	1,623.35	1,622.76	1,626.24
19	1,624.15	1,623.60	1,622.57	1,622.07	1,621.42	1,622.31	1,622.37	&1,623.92	1,623.66	1,623.33	1,622.89	1,626.21
20	1,624.13	1,623.57	1,622.55	1,622.04	1,621.38	1,622.30	1,622.36	&1,623.86	1,623.65	1,623.31	1,623.47	1,626.18
21	1,624.11	1,623.50	1,622.53	1,622.02	1,621.37	1,622.28	1,622.34	1,623.81	1,623.63	1,623.28	1,624.95	1,626.15
22	1,624.08	1,623.46	1,622.49	1,621.99	1,621.35	1,622.26	1,622.32	1,623.75	1,623.59	1,623.24	1,625.66	1,626.13
23	1,624.06	1,623.40	1,622.46	1,621.97	1,621.38	1,622.24	1,622.32	1,623.69	1,623.57	1,623.22	1,625.82	1,626.11
24	1,624.03	1,623.37	1,622.43	1,621.95	1,621.51	1,622.22	1,622.64	1,623.63	1,623.57	1,623.17	1,625.83	1,626.09
25	1,623.96	1,623.33	1,622.41	1,621.95	1,621.82	1,622.20	1,622.90	1,623.57	1,623.55	1,623.14	1,625.82	1,626.07
26	1,623.92	1,623.29	1,622.40	1,621.90	1,621.93	1,622.19	1,623.35	1,623.54	1,623.55	1,623.12	1,625.81	1,626.06
27	1,623.90	1,623.24	1,622.37	1,621.87	1,621.95	1,622.18	1,623.79	1,623.52	1,623.55	1,623.11	1,625.78	1,626.04
28	1,623.87	1,623.22	1,622.34	1,621.85	1,621.95	1,622.15	1,623.85	1,623.53	1,623.57	1,623.15	1,625.95	1,626.03
29	1,623.85	1,623.19	1,622.31	1,621.81	1,622.02	1,622.12	1,623.86	1,623.53	1,623.64	1,623.17	1,626.48	1,626.02
30	1,623.82	1,623.15	1,622.28	1,621.78	---	1,622.10	1,623.84	1,623.50	1,623.72	1,623.16	1,626.64	1,626.00
31	1,623.79	---	1,622.24	1,621.76	---	1,622.07	---	1,623.48	---	1,623.14	1,626.63	---
MEAN	1,624.18	1,623.60	1,622.68	1,621.98	1,621.60	1,622.26	1,622.60	1,623.77	1,623.64	1,623.42	1,624.01	1,626.29
MAX	1,624.40	1,623.86	1,623.12	1,622.22	1,622.02	1,622.40	1,623.86	1,624.06	1,623.76	1,623.76	1,626.64	1,626.61
MIN	1,623.79	1,623.15	1,622.24	1,621.76	1,621.35	1,622.07	1,622.04	1,623.48	1,623.44	1,623.11	1,622.76	1,626.00
CAL YR	2003	MEAN	1,625.73	MAX	1,628.10	MIN	1,622.24					
WTR YR	2004	MEAN	1,623.34	MAX	1,626.64	MIN	1,621.35					

& Value was computed from affected unit values

08083500 Fort Phantom Hill Reservoir near Nugent, TX—Continued



## 08084000 Clear Fork Brazos River at Nugent, TX

LOCATION.--Lat 32°41'24", long 99°40'09", Jones County, Hydrologic Unit 12060102, on right bank 33 ft downstream from bridge on Farm Road 600 at Nugent, 2.0 mi downstream from Elm Creek, 4.0 mi upstream from Deadman Creek, and 167.8 mi upstream from mouth.

DRAINAGE AREA.--2,199 mi<sup>2</sup>.

PERIOD OF RECORD.--Feb. 1924 to current year. Water-quality records: Chemical data: Aug. 1948 to Sept. 1953, Feb. 1968 to Sept. 1981. Biochemical data: Feb. 1968 to Sept. 1981.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,531.91 ft above NGVD of 1929 (levels by Brazos River Authority). Prior to Dec. 12, 1933, nonrecording gage at site 575 ft downstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those for Oct. 1 to Nov. 20, which are fair. Since water year 1930, at least 10% of contributing drainage area has been regulated. There are numerous diversions above station for municipal supply and oil field operations that affect streamflow. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--5 years (water years 1925-29) prior to completion of Lake Sweetwater, 145 ft<sup>3</sup>/s (105,200 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 30 ft in 1876; floods in 1900 and May 1923 reached stages of 24 and 24.5 ft, respectively, from information by local residents.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1925-1929: Maximum discharge observed, 11,500 ft<sup>3</sup>/s May 20, 1928 (gage height, 18.00 ft), site then in 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	0.12	0.40	1.4	0.74	2.1	5.2	2.1	5.9	1.3	25	4.0	65
2	0.20	0.43	1.4	0.83	2.1	3.8	8.8	4.3	3.9	22	21	14
3	0.21	0.41	1.2	0.80	2.2	3.2	12	2.6	2.9	9.2	11	8.1
4	0.21	0.48	1.2	0.85	2.1	5.9	3.4	1.9	2.4	4.8	5.1	4.9
5	0.27	0.50	1.00	0.98	2.1	39	2.5	1.6	10	2.8	2.4	3.6
6	0.32	0.54	1.4	0.74	2.1	22	35	1.6	136	1.7	1.3	2.8
7	0.32	1.1	1.5	0.73	2.1	12	37	1.3	257	1.1	0.78	2.5
8	0.33	1.0	1.3	0.72	2.2	7.6	33	1.0	206	0.85	0.37	2.3
9	0.65	0.79	1.2	0.73	2.1	4.0	14	0.93	78	0.46	0.32	1.8
10	0.50	0.73	1.0	0.73	2.4	2.7	10	0.88	35	0.24	0.18	1.6
11	0.50	0.70	1.0	0.75	3.0	2.4	5.7	1.1	18	0.12	0.09	1.5
12	0.50	0.69	1.2	0.78	3.0	2.9	3.9	0.98	20	0.08	0.09	1.7
13	0.54	0.58	1.4	0.98	2.8	3.1	2.9	1.9	23	0.07	0.17	2.0
14	0.45	0.61	1.5	0.99	3.0	3.0	2.1	57	9.2	0.06	0.71	2.0
15	0.38	0.70	1.2	1.1	3.0	2.8	1.8	88	4.3	0.06	5.3	1.8
16	0.43	0.61	0.76	1.1	3.0	2.7	1.7	46	12	0.05	9.6	1.6
17	0.37	0.66	0.74	19	2.9	2.5	1.5	36	19	0.06	1.8	1.6
18	0.49	0.72	0.72	10	2.6	2.4	1.4	14	9.8	0.11	0.74	1.8
19	0.49	0.73	0.76	4.2	2.6	2.1	1.4	6.9	4.8	0.17	62	1.8
20	0.50	0.73	0.95	2.8	3.3	5.3	1.4	3.9	2.9	0.11	512	1.8
21	0.50	0.74	0.86	2.2	3.4	7.7	1.3	2.5	2.1	0.09	132	1.8
22	0.34	0.84	0.72	1.9	3.0	2.6	1.4	1.7	1.6	0.07	99	1.8
23	0.33	0.72	0.73	1.9	3.9	2.0	1.5	0.94	1.1	0.06	144	1.8
24	0.34	0.76	0.73	2.1	5.3	1.8	3.3	0.70	0.81	0.08	38	2.1
25	0.30	0.82	0.80	2.1	17	1.6	55	0.49	0.65	0.22	29	2.3
26	0.32	0.90	0.74	2.1	18	1.7	264	0.46	1.0	0.45	17	2.4
27	0.34	0.91	0.67	2.1	9.2	1.8	84	52	0.90	1.0	9.6	2.5
28	0.36	1.0	0.55	1.9	4.8	1.7	28	19	0.87	1.1	10	2.7
29	0.34	1.3	0.59	1.6	4.8	2.0	24	5.8	4.1	0.53	145	2.9
30	0.33	1.2	0.74	1.5	---	1.9	11	3.9	16	0.47	178	3.1
31	0.32	---	0.73	1.9	---	2.0	---	1.9	---	0.38	123	---
TOTAL	11.60	22.30	30.69	70.85	120.1	161.4	655.1	367.18	884.63	73.49	1,563.55	147.6
MEAN	0.37	0.74	0.99	2.29	4.14	5.21	21.8	11.8	29.5	2.37	50.4	4.92
MAX	0.65	1.3	1.5	19	18	39	264	88	257	25	512	65
MIN	0.12	0.40	0.55	0.72	2.1	1.6	1.3	0.46	0.65	0.05	0.09	1.5
AC-FT	23	44	61	141	238	320	1,300	728	1,750	146	3,100	293

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2004z, BY WATER YEAR (WY)

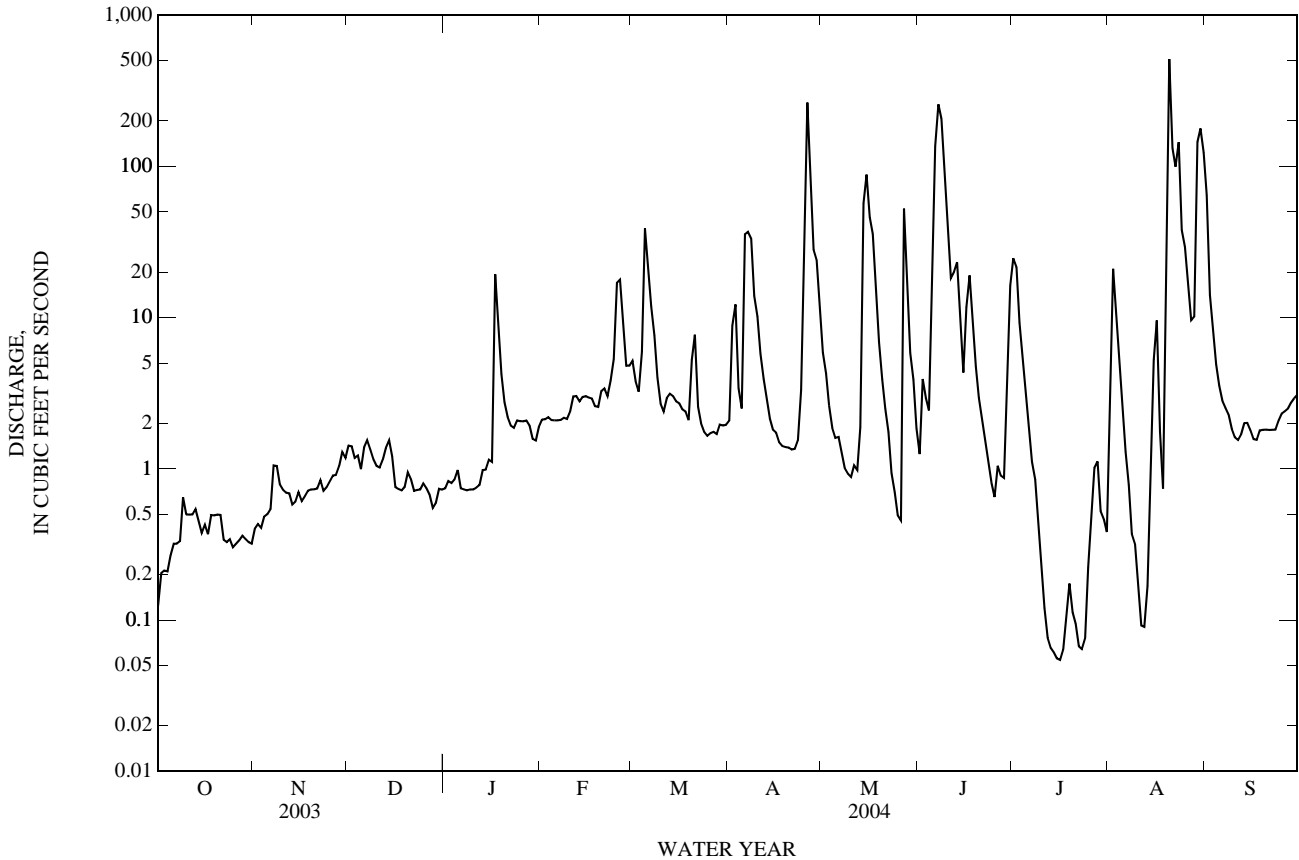
MEAN	128	36.0	40.0	22.6	55.5	39.2	66.2	249	179	85.2	51.1	159
MAX	1,438	516	683	244	1,370	389	1,159	4,694	1,761	1,190	496	3,978
(WY)	(1987)	(1975)	(1992)	(1992)	(1992)	(1987)	(1957)	(1957)	(1935)	(1938)	(1940)	(1932)
MIN	0.00	0.08	0.09	0.03	0.05	0.01	0.02	1.16	1.28	0.03	0.00	0.00
(WY)	(1953)	(2000)	(1955)	(1957)	(1954)	(1955)	(1955)	(2000)	(1998)	(2001)	(1931)	(1956)



08084000 Clear Fork Brazos River at Nugent, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1930 - 2004z	
ANNUAL TOTAL	3,949.40		4,108.49		92.6	
ANNUAL MEAN	10.8		11.2		713	
HIGHEST ANNUAL MEAN					6.45	1932
LOWEST ANNUAL MEAN					30,800	Sep 8, 1932
HIGHEST DAILY MEAN	628	Jun 6	512	Aug 20	0.00	Jul 27, 1930
LOWEST DAILY MEAN	0.06	Sep 9	0.05	Jul 16	0.00	Jul 27, 1930
ANNUAL SEVEN-DAY MINIMUM	0.07	Sep 4	0.07	Jul 12	0.00	Jul 27, 1930
MAXIMUM PEAK FLOW			1,170	Aug 20	47,000	Sep 8, 1932
MAXIMUM PEAK STAGE			6.19	Aug 20	p27.05	Sep 8, 1932
ANNUAL RUNOFF (AC-FT)	7,830		8,150		67,120	
10 PERCENT EXCEEDS	7.0		19		112	
50 PERCENT EXCEEDS	2.0		1.8		12	
90 PERCENT EXCEEDS	0.18		0.34		0.50	

z Period of regulated streamflow.  
 p Observed.



## BRAZOS RIVER BASIN

08084500 Lake Stamford near Haskell, TX

LOCATION.--Lat 33°03'45", long 99°34'45", Haskell County, Hydrologic Unit 12060103, on right bank at city of Stamford pumping station at Lake Stamford on Paint Creek, 0.9 mi upstream from right end of dam, 2.3 mi upstream from California Creek, 10.0 mi southeast of Haskell, and 22.3 mi upstream from mouth.

DRAINAGE AREA.--368 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1953 to Sept. 1986, Feb. 1999 to Sept. 2002 (contents), Oct. 2002 to current year. Water-quality records: Chemical data: Aug. 1965, Mar. 1970 to July 1984.

REVISED RECORDS.--WDR TX-77-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Oct. 1986, nonrecording gage at site on left bank, 1.0 mi upstream from dam at datum 2.77 ft lower. Satellite telemeter at station.

REMARKS.--Records fair. Interruptions in the record were due to malfunction of the instrument. The lake is formed by a rolled earthfill dam 3,600 ft long. The dam was completed in Mar. 1953, and deliberate impoundment began in June 1953. The right spillway is an uncontrolled natural channel located near the right end of dam. The left spillway is an uncontrolled channel excavated through natural ground, 169 ft wide, located 900 ft to left of left end of dam. The service outlet is a controlled 24-inch diameter concrete pipe that is used for low-flow releases. Capacity table in use when station was discontinued in Sept. 1986 was based on sedimentation survey of 1966. The dam is owned by the city of Stamford. Water is diverted for municipal supply for the cities of Stamford and Hamlin. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	1,436.8
Crest of emergency spillway	1,425.8
Crest of service spillway	1,417.0
Lowest gated outlet (invert)	1,382.8

COOPERATION.--Records of diversions may be obtained from the city of Stamford.

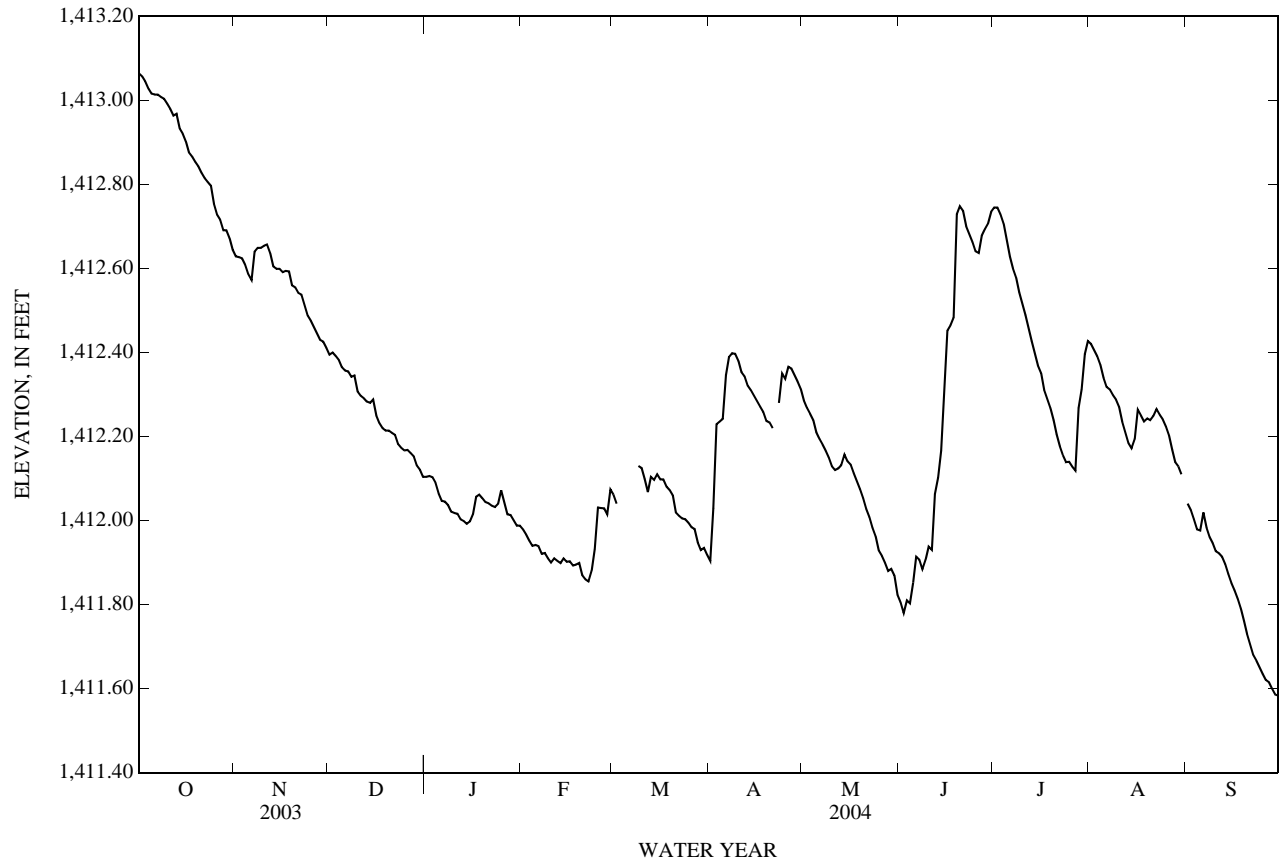
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 103,700 acre-ft, Aug. 5, 1978, elevation, 1,425.0 ft; minimum contents, 6,740 acre-ft, Oct. 15, 2000, elevation, 1,400.98 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,413.08 ft, Oct. 1; minimum elevation, 1,411.57 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	1,413.06	1,412.63	1,412.39	1,412.10	1,411.98	1,412.06	1,411.90	1,412.29	1,411.81	1,412.74	1,412.42	1,412.04
2	1,413.06	1,412.63	1,412.40	1,412.11	1,411.97	1,412.04	1,412.03	1,412.27	1,411.78	1,412.74	1,412.41	1,412.03
3	1,413.05	1,412.62	1,412.39	1,412.10	1,411.95	---	1,412.23	1,412.25	1,411.81	1,412.73	1,412.39	1,412.00
4	1,413.03	1,412.61	1,412.38	1,412.09	1,411.94	---	1,412.23	1,412.24	1,411.80	1,412.71	1,412.37	1,411.98
5	1,413.02	1,412.59	1,412.37	1,412.06	1,411.94	---	1,412.24	1,412.21	1,411.85	1,412.67	1,412.34	1,411.98
6	1,413.01	1,412.57	1,412.36	1,412.05	1,411.94	---	1,412.35	1,412.19	1,411.91	1,412.63	1,412.32	1,412.02
7	1,413.01	1,412.64	1,412.36	1,412.05	1,411.92	---	1,412.39	1,412.18	1,411.91	1,412.60	1,412.31	1,411.98
8	1,413.01	1,412.65	1,412.34	1,412.04	1,411.92	---	1,412.40	1,412.17	1,411.88	1,412.58	1,412.30	1,411.96
9	1,413.00	1,412.65	1,412.35	1,412.02	1,411.91	1,412.13	1,412.40	1,412.15	1,411.91	1,412.54	1,412.29	1,411.95
10	1,412.99	1,412.65	1,412.31	1,412.02	1,411.90	1,412.12	1,412.38	1,412.13	1,411.94	1,412.52	1,412.27	1,411.93
11	1,412.98	1,412.66	1,412.30	1,412.02	1,411.91	1,412.10	1,412.35	1,412.12	1,411.93	1,412.49	1,412.23	1,411.92
12	1,412.96	1,412.64	1,412.29	1,412.00	1,411.90	1,412.07	1,412.34	1,412.12	1,412.06	1,412.46	1,412.21	1,411.91
13	1,412.97	1,412.61	1,412.28	1,412.00	1,411.90	1,412.10	1,412.32	1,412.13	1,412.10	1,412.43	1,412.18	1,411.90
14	1,412.93	1,412.60	1,412.28	1,411.99	1,411.91	1,412.10	1,412.31	1,412.16	1,412.17	1,412.40	1,412.17	1,411.87
15	1,412.92	1,412.60	1,412.29	1,412.00	1,411.90	1,412.11	1,412.30	1,412.14	1,412.33	1,412.37	1,412.19	1,411.85
16	1,412.90	1,412.59	1,412.25	1,412.02	1,411.90	1,412.10	1,412.28	1,412.13	1,412.45	1,412.35	1,412.26	1,411.83
17	1,412.88	1,412.59	1,412.23	1,412.06	1,411.89	1,412.10	1,412.27	1,412.11	1,412.46	1,412.31	1,412.25	1,411.81
18	1,412.87	1,412.59	1,412.22	1,412.06	1,411.89	1,412.08	1,412.26	1,412.09	1,412.48	1,412.29	1,412.24	1,411.79
19	1,412.85	1,412.56	1,412.21	1,412.05	1,411.90	1,412.07	1,412.24	1,412.08	1,412.73	1,412.27	1,412.24	1,411.76
20	1,412.84	1,412.56	1,412.21	1,412.04	1,411.87	1,412.06	1,412.23	1,412.05	1,412.75	1,412.24	1,412.24	1,411.73
21	1,412.83	1,412.54	1,412.21	1,412.04	1,411.86	1,412.02	1,412.22	1,412.03	1,412.74	1,412.20	1,412.25	1,411.70
22	1,412.82	1,412.54	1,412.20	1,412.04	1,411.86	1,412.01	---	1,412.01	1,412.70	1,412.18	1,412.27	1,411.68
23	1,412.81	1,412.51	1,412.18	1,412.03	1,411.88	1,412.01	1,412.28	1,411.98	1,412.68	1,412.16	1,412.25	1,411.67
24	1,412.80	1,412.49	1,412.17	1,412.04	1,411.93	1,412.00	1,412.35	1,411.96	1,412.66	1,412.14	1,412.24	1,411.65
25	1,412.75	1,412.48	1,412.17	1,412.07	1,412.03	1,411.99	1,412.34	1,411.93	1,412.64	1,412.14	1,412.22	1,411.63
26	1,412.73	1,412.46	1,412.17	1,412.04	1,412.03	1,411.98	1,412.37	1,411.92	1,412.64	1,412.13	1,412.20	1,411.62
27	1,412.72	1,412.45	1,412.16	1,412.02	1,412.03	1,411.98	1,412.36	1,411.90	1,412.68	1,412.12	1,412.17	1,411.62
28	1,412.69	1,412.43	1,412.15	1,412.01	1,412.02	1,411.95	1,412.35	1,411.88	1,412.69	1,412.27	1,412.14	1,411.60
29	1,412.69	1,412.43	1,412.13	1,412.00	1,412.07	1,411.93	1,412.33	1,411.88	1,412.71	1,412.31	1,412.13	1,411.59
30	1,412.67	1,412.41	1,412.12	1,411.99	---	1,411.93	1,412.31	1,411.87	1,412.73	1,412.40	1,412.11	1,411.58
31	1,412.64	---	1,412.10	1,411.99	---	1,411.92	---	1,411.82	---	1,412.43	---	---
MEAN	1,412.89	1,412.57	1,412.26	1,412.04	1,411.93	---	---	1,412.08	1,412.30	1,412.40	---	1,411.82
MAX	1,413.06	1,412.66	1,412.40	1,412.11	1,412.07	---	---	1,412.29	1,412.75	1,412.74	---	1,412.04
MIN	1,412.64	1,412.41	1,412.10	1,411.99	1,411.86	---	---	1,411.82	1,411.78	1,412.12	---	1,411.58
CAL YR	2003	MEAN	1,413.50	MAX	1,414.75	MIN	1,412.10					

08084500 Lake Stamford near Haskell, TX—Continued



## BRAZOS RIVER BASIN

08084800 California Creek near Stamford, TX

LOCATION.--Lat 32°55'51", long 99°38'32", Jones County, Hydrologic Unit 12060103, near right bank at downstream side of bridge on Farm Road 142, 6.0 mi northeast of Avoca, 9.0 mi east of Stamford, and 19.4 mi upstream from Paint Creek.

DRAINAGE AREA.--478 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1962 to current year. Water-quality records: Chemical data: Oct. 1962 to Sept. 1979. Specific conductance: Oct. 1962 to Sept. 1979. Water temperature: Oct. 1962 to Sept. 1979.

REVISED RECORDS.--WSP 2122: 1965. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,470 ft above NGVD of 1929, from topographic map. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, 29.6 ft, present datum, on June 10, 1962, from floodmark; second highest flood in July 1961 (stage unknown); third highest flood in May 1957 (stage unknown) was about equal to flood on June 24, 1915; flood of Sept. 1962 reached a stage of 28.1 ft, present datum, from information by local residents. Another large flood is reported to have occurred in June 1909.

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	0.50	0.50	0.56	0.66	0.84	1.9	1.1	&12	16	12	12	0.11
2	0.53	0.47	0.73	1.1	0.89	1.0	5.4	7.9	11	9.9	6.0	0.11
3	0.62	0.50	0.64	0.87	0.71	1.3	3.9	5.7	9.0	6.4	3.6	0.10
4	0.50	0.51	7.1	0.73	0.69	2.7	1.7	4.7	6.1	4.2	2.4	0.12
5	0.63	0.50	2.7	0.72	0.94	3.4	2.9	4.7	21	4.3	1.8	0.23
6	0.61	0.58	0.72	0.54	0.82	3.7	19	4.7	45	3.9	2.0	0.14
7	0.96	2.2	0.59	0.69	0.73	3.6	37	4.3	218	3.6	1.9	0.20
8	1.1	1.8	0.67	0.74	0.83	2.8	26	4.0	287	2.6	2.1	0.17
9	1.3	1.0	0.63	0.70	0.71	2.3	22	3.3	113	1.6	3.3	0.10
10	1.3	0.83	0.59	0.59	0.91	1.7	14	2.9	49	1.1	1.6	0.15
11	0.91	0.69	0.54	0.55	1.2	1.3	8.1	3.5	28	0.74	1.0	0.15
12	0.99	0.55	0.59	0.53	1.4	1.4	4.7	4.2	19	0.47	0.63	0.15
13	1.2	0.50	0.75	0.98	1.3	1.8	3.0	9.9	131	0.34	0.37	0.16
14	1.1	0.50	0.77	0.97	1.7	1.5	2.4	71	313	e0.30	0.36	0.18
15	0.74	0.50	0.82	1.3	1.7	1.6	2.2	362	298	e0.25	31	0.18
16	0.98	0.50	0.92	1.7	1.4	1.8	2.0	189	136	e0.25	53	0.15
17	0.55	0.59	0.59	2.9	1.5	2.2	1.6	22	38	e0.20	11	0.09
18	0.61	0.51	0.53	6.2	1.3	1.8	1.3	5.1	21	e0.20	2.5	0.08
19	0.64	0.50	0.72	4.4	1.2	1.4	1.6	2.4	12	e0.15	71	0.08
20	0.59	0.50	0.58	3.6	0.97	1.1	1.5	0.79	12	e0.15	94	0.08
21	0.77	0.50	0.55	2.8	1.2	1.9	1.7	0.22	12	e0.07	33	0.09
22	0.52	0.57	0.67	2.5	0.86	1.5	1.1	0.12	7.4	0.07	105	0.09
23	0.50	0.51	0.76	2.3	1.6	1.2	1.2	0.54	6.2	0.00	29	0.12
24	0.50	0.53	0.54	2.5	3.4	1.3	1.4	3.8	5.2	0.08	9.0	0.15
25	0.50	0.54	0.70	2.2	6.4	1.2	1.00	3.1	3.4	0.31	4.0	0.10
26	0.56	0.53	0.76	0.78	3.7	1.2	4.5	1.8	23	0.34	2.0	0.13
27	0.90	0.58	0.69	0.57	3.0	1.6	105	35	265	0.37	0.86	0.11
28	2.8	0.69	0.50	0.68	2.4	1.5	199	319	48	235	0.46	0.13
29	1.6	0.62	0.51	0.64	4.0	1.6	31	212	32	270	0.34	0.06
30	0.78	0.55	0.63	0.61	---	1.3	18	59	19	47	0.19	0.09
31	0.50	---	0.52	0.71	---	1.3	---	25	---	18	0.11	---
TOTAL	26.29	19.85	28.57	46.76	48.30	55.9	525.30	1,383.67	2,204.3	623.89	485.52	3.80
MEAN	0.85	0.66	0.92	1.51	1.67	1.80	17.5	44.6	73.5	20.1	15.7	0.13
MAX	2.8	2.2	7.1	6.2	6.4	3.7	199	362	313	270	105	0.23
MIN	0.50	0.47	0.50	0.53	0.69	1.0	1.0	0.12	3.4	0.00	0.11	0.06
AC-FT	52	39	57	93	96	111	1,040	2,740	4,370	1,240	963	7.5
CFSM	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.09	0.15	0.04	0.03	0.00

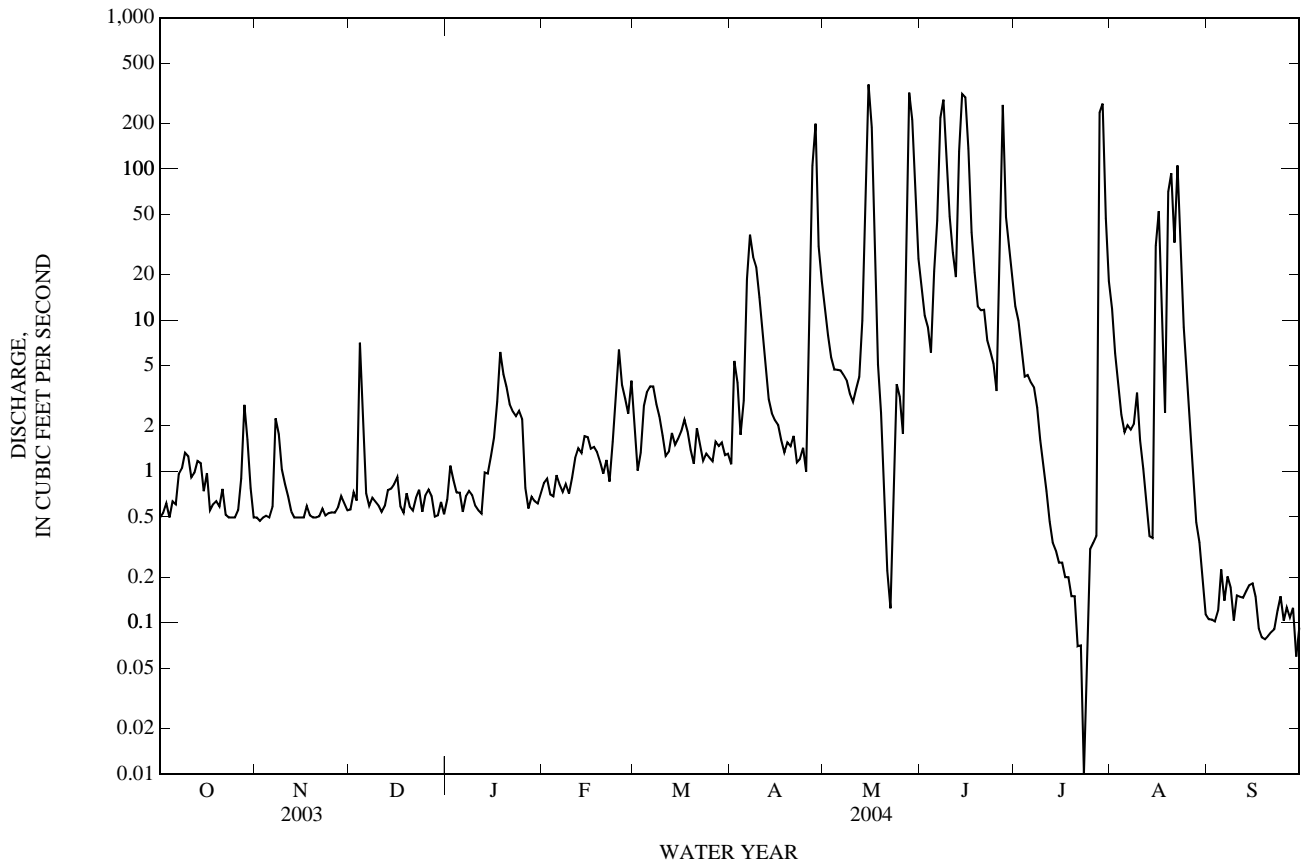
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2004, BY WATER YEAR (WY)

	38.0	13.8	10.9	9.82	33.1	14.6	20.8	70.9	80.6	25.1	52.9	45.0
MEAN												
MAX	481	229	169	84.0	750	132	174	741	546	293	930	575
(WY)	(1987)	(1973)	(1992)	(1968)	(1992)	(1973)	(1985)	(1982)	(2003)	(2002)	(1971)	(1980)
MIN	0.00	0.11	0.10	0.08	0.13	0.09	0.25	0.12	0.15	0.00	0.00	0.02
(WY)	(1969)	(1971)	(1965)	(1965)	(2000)	(1966)	(1967)	(2000)	(1976)	(1964)	(1965)	(1968)

08084800 California Creek near Stamford, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1963 - 2004	
ANNUAL TOTAL	17,626.46		5,452.15		34.6	
ANNUAL MEAN	48.3		14.9		156	
HIGHEST ANNUAL MEAN					1.95	
LOWEST ANNUAL MEAN					20,400	
HIGHEST DAILY MEAN	4,180	Jun 6	362	May 15	0.00	Aug 4, 1978
LOWEST DAILY MEAN	0.03	Jun 4	0.00	Jul 23	0.00	Sep 11, 1963
ANNUAL SEVEN-DAY MINIMUM	0.09	May 8	0.09	Sep 17	0.00	May 17, 1964
MAXIMUM PEAK FLOW			578	Jun 27	e40,000	Aug 4, 1978
MAXIMUM PEAK STAGE			11.84	Jun 27	a31.00	Aug 4, 1978
ANNUAL RUNOFF (AC-FT)	34,960		10,810		25,050	
ANNUAL RUNOFF (CFSM)	0.101		0.031		0.072	
10 PERCENT EXCEEDS	11		25		27	
50 PERCENT EXCEEDS	1.2		1.2		2.3	
90 PERCENT EXCEEDS	0.50		0.19		0.09	

a From floodmark.  
 & Value was computed from affected unit values  
 e Estimated



## 08085500 Clear Fork Brazos River at Fort Griffin, TX

LOCATION.--Lat 32°56'04", long 99°13'27", Shackelford County, Hydrologic Unit 12060104, on right bank just downstream from pier of bridge on old Fort Griffin-Throckmorton Road, 0.4 mi northeast of Fort Griffin, 1.0 mi upstream from bridge on U.S. Highway 283, 1.7 mi upstream from Mill Creek, and 74.6 mi upstream from mouth.

DRAINAGE AREA.--3,988 mi<sup>2</sup>.

PERIOD OF RECORD.--Dec. 1923 to current year. Water-quality records: Chemical data: Nov. 1949 to Sept. 1951, Nov. 1967 to Sept. 1979, Nov. 1981 to Sept. 1984. Suspended sediment discharge: Nov. 1949 to Sept. 1951. Specific conductance: Nov. 1949 to Sept. 1951, Nov. 1967 to Sept. 1979, Oct. 1981 to Sept. 1984. Water temperature: Nov. 1949 to Sept. 1951, Nov. 1967 to Sept. 1979, Oct. 1981 to Sept. 1984.

REVISED RECORDS.--WSP 1392: 1949. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,174.09 ft above NGVD of 1929. Prior to June 23, 1932, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records fair. Since water year 1939, at least 10% of contributing drainage area has been regulated. There are diversions upstream from station for irrigation, municipal supply, and oil field operations. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--14 years (water years 1925-38) prior to completion of Fort Phantom Hill Reservoir, 303 ft<sup>3</sup>/s (219,500 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Sept. 1900 reached a stage of 38.0 ft, from information by local resident.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS 1925-1938: Maximum discharge, 33,600 ft<sup>3</sup>/s Sept. 10, 1932 (gage height, 35.09 ft) from rating curve extended above 31,500 ft<sup>3</sup>/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	0.67	0.20	2.5	3.1	8.8	65	12	145	110	63	123	148
2	0.75	0.24	2.7	3.4	9.3	49	13	93	71	71	59	172
3	0.55	0.39	2.7	3.3	8.4	37	13	70	50	42	30	112
4	0.48	0.52	2.2	3.1	8.0	33	13	54	37	30	19	79
5	0.35	0.37	2.1	2.6	9.5	39	49	41	31	32	14	46
6	0.41	0.98	2.1	2.1	8.9	38	98	30	112	33	11	31
7	0.64	1.2	2.4	2.1	7.9	30	64	23	68	26	9.2	23
8	0.74	e1.0	2.6	2.0	8.3	27	44	19	31	20	9.7	18
9	0.69	e1.0	2.6	1.8	8.8	44	134	16	357	18	20	15
10	0.56	e1.0	2.3	1.8	8.7	42	97	14	401	16	17	14
11	0.61	e1.0	2.3	1.8	10	31	81	12	288	13	12	12
12	0.75	0.97	2.0	1.7	10	31	60	12	225	12	9.6	12
13	0.92	0.45	2.0	1.7	9.6	32	46	18	180	11	8.0	10
14	0.74	0.34	2.7	1.2	11	31	37	18	103	8.8	7.6	9.2
15	0.57	0.29	2.7	1.1	13	27	33	20	125	7.3	7.6	8.8
16	0.48	0.22	2.0	1.2	12	24	29	20	159	9.4	11	11
17	0.25	0.15	1.8	1.7	11	25	24	112	193	10	7.6	10
18	0.20	3.0	1.4	1.9	11	30	24	227	148	8.0	5.1	7.7
19	0.22	4.9	1.3	2.5	11	29	22	171	85	7.1	338	6.3
20	0.19	3.4	1.3	9.1	11	29	19	125	66	5.9	760	5.6
21	1.6	2.7	1.2	13	11	26	17	66	84	4.0	930	5.2
22	1.3	2.5	1.1	17	10	19	15	42	49	3.1	799	5.2
23	1.3	2.3	1.1	22	13	18	19	30	35	2.2	378	5.3
24	3.1	2.4	1.9	18	18	19	632	23	27	2.7	276	5.3
25	3.2	2.7	3.8	14	34	37	534	18	27	4.0	269	4.7
26	1.2	2.5	3.8	12	30	33	183	16	26	4.6	153	4.2
27	0.86	2.4	3.7	11	24	25	177	14	25	3.5	86	3.9
28	0.68	2.7	3.3	9.1	31	20	372	14	21	3,450	54	4.0
29	0.47	2.3	2.8	8.6	63	17	208	16	65	1,080	40	4.1
30	0.51	2.3	2.4	8.2	---	14	207	42	99	212	35	3.5
31	0.29	---	2.6	8.5	---	13	---	146	---	224	26	---
TOTAL	25.28	46.42	71.4	190.6	430.2	934	3,276	1,667	3,298	5,433.6	4,524.4	796.0
MEAN	0.82	1.55	2.30	6.15	14.8	30.1	109	53.8	110	175	146	26.5
MAX	3.2	4.9	3.8	22	63	65	632	227	401	3,450	930	172
MIN	0.19	0.15	1.1	1.1	7.9	13	12	12	21	2.2	5.1	3.5
AC-FT	50	92	142	378	853	1,850	6,500	3,310	6,540	10,780	8,970	1,580

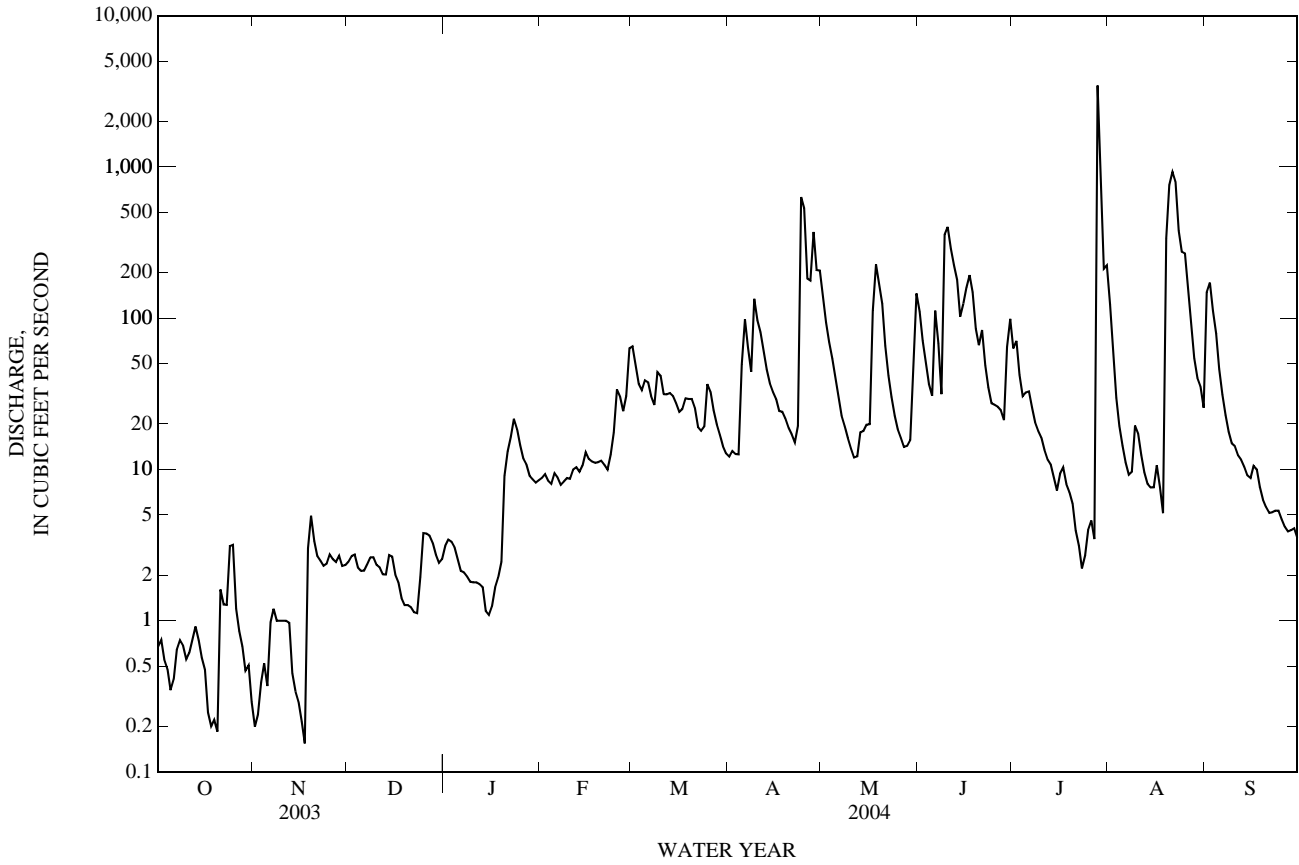
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004z, BY WATER YEAR (WY)

	243	77.1	73.0	57.6	152	92.6	167	505	408	159	190	226
MEAN	2,866	1,010	1,593	689	4,268	1,066	3,098	7,312	2,205	1,417	6,071	1,997
(WY)	(1942)	(1975)	(1992)	(1992)	(1992)	(1992)	(1957)	(1957)	(1957)	(1953)	(1978)	(1962)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.90	0.08	0.00	0.00	0.00
(WY)	(1944)	(1944)	(1944)	(1950)	(1950)	(1950)	(1952)	(1960)	(1974)	(1952)	(1952)	(1943)

08085500 Clear Fork Brazos River at Fort Griffin, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004z	
ANNUAL TOTAL	23,803.02		20,692.90			
ANNUAL MEAN	65.2		56.5		196	
HIGHEST ANNUAL MEAN					1,177	1957
LOWEST ANNUAL MEAN					8.78	1952
HIGHEST DAILY MEAN	4,100	Jun 27	3,450	Jul 28	72,800	Aug 4, 1978
LOWEST DAILY MEAN	0.15	Aug 8	0.15	Nov 17	0.00	May 11, 1939
ANNUAL SEVEN-DAY MINIMUM	0.26	Aug 5	0.36	Oct 30	0.00	Sep 12, 1939
MAXIMUM PEAK FLOW			6,160	Jul 28	i149,000	Aug 4, 1978
MAXIMUM PEAK STAGE			18.58	Jul 28	a38.88	Aug 4, 1978
ANNUAL RUNOFF (AC-FT)	47,210		41,040		142,000	
10 PERCENT EXCEEDS	45		124		258	
50 PERCENT EXCEEDS	6.9		12		24	
90 PERCENT EXCEEDS	0.67		0.98		0.00	

- z Period of regulated streamflow.
- i From contracted opening measurement of peak flow.
- a From floodmark.
- e Estimated



08086212 Hubbard Creek below Albany, TX

LOCATION.--Lat 32°43'58", long 99°08'25", Shackelford County, Hydrologic Unit 12060105, on left bank 0.5 mi downstream from Salt Prong Hubbard Creek, 2.8 mi upstream from Newcomb Creek, 4.5 mi upstream from U.S. Highway 180, 9.1 mi east of Albany, 22.6 mi upstream from Hubbard Creek Reservoir, and 35.2 mi upstream from mouth.

DRAINAGE AREA.--613 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1966 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,184.99 ft above NGVD of 1929. Prior to June 12, 1968, water-stage recorder at site 2.1 mi downstream at datum 7.63 ft lower. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records 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	0.22	0.02	0.01	0.00	0.00	24	0.02	226	0.37	0.59	0.82	5.5
2	0.25	0.01	0.01	0.00	0.00	24	0.05	72	0.34	0.36	0.65	2.8
3	0.23	0.01	0.01	0.00	0.00	7.1	0.05	41	0.51	0.28	0.50	1.7
4	0.18	0.01	0.01	0.00	0.00	3.7	0.04	28	65	0.24	0.37	1.0
5	0.14	0.01	0.01	0.00	0.00	3.9	0.11	18	117	0.21	0.30	0.83
6	0.12	0.02	0.00	0.00	0.00	19	0.17	14	21	0.20	0.24	0.77
7	0.09	0.09	0.00	0.00	0.00	9.0	5.3	10	32	0.24	0.19	0.64
8	0.08	0.07	0.00	0.00	0.00	2.8	6.2	8.2	12	0.38	0.15	0.69
9	0.16	0.06	0.00	0.00	0.00	1.4	4.6	6.7	29	0.39	0.13	0.93
10	0.19	0.03	0.00	0.00	0.00	1.1	3.2	5.4	7.3	0.37	0.11	1.1
11	0.16	0.02	0.00	0.00	0.00	0.88	1.8	4.3	2.5	0.39	0.11	1.1
12	0.16	0.02	0.00	0.00	0.00	0.68	1.5	3.5	1.2	0.41	0.11	1.1
13	0.13	0.02	0.00	0.00	0.00	0.47	1.2	2.8	0.78	0.49	0.10	0.98
14	0.11	0.02	0.00	0.00	0.00	0.36	0.76	2.5	0.56	0.45	0.10	1.5
15	0.09	0.02	0.00	0.00	0.00	0.30	0.45	2.0	0.43	0.52	0.17	1.8
16	0.07	0.02	0.00	0.00	0.00	0.25	0.23	1.8	0.44	0.44	0.18	2.6
17	0.05	0.02	0.00	0.00	0.00	0.18	0.09	1.6	0.47	0.40	0.09	3.1
18	0.04	0.02	0.00	0.00	0.00	0.10	0.05	1.6	0.42	0.39	0.08	4.1
19	0.02	0.02	0.00	0.00	0.00	0.09	0.06	1.4	0.49	0.44	0.38	4.1
20	0.02	0.02	0.00	0.00	0.00	0.06	0.08	1.1	0.52	0.43	183	3.7
21	0.03	0.02	0.00	0.00	0.00	0.06	0.09	0.93	0.43	0.40	1,100	3.5
22	0.03	0.01	0.00	0.00	0.00	0.06	0.11	0.82	0.34	0.41	79	2.6
23	0.03	0.01	0.00	0.00	0.00	0.05	0.77	0.73	0.35	0.43	30	2.7
24	0.03	0.01	0.00	0.00	0.02	0.03	3,110	0.60	0.39	0.63	14	3.1
25	0.02	0.01	0.00	0.00	12	0.02	441	0.55	0.41	0.72	7.5	2.9
26	0.02	0.01	0.00	0.00	71	0.02	219	0.49	19	0.84	4.1	2.5
27	0.02	0.01	0.00	0.00	17	0.03	301	0.39	5.3	0.88	2.4	2.5
28	0.02	0.01	0.00	0.00	4.6	0.04	109	0.40	1.1	1.0	118	2.2
29	0.02	0.01	0.00	0.00	3.6	0.03	59	0.39	0.89	1.6	15	1.1
30	0.02	0.01	0.00	0.00	---	0.02	36	0.35	0.78	1.6	14	0.97
31	0.02	---	0.00	0.00	---	0.02	---	0.34	---	1.1	13	---
TOTAL	2.77	0.64	0.05	0.00	108.22	99.75	4,301.93	457.89	321.32	17.23	1,584.78	64.11
MEAN	0.09	0.02	0.00	0.00	3.73	3.22	143	14.8	10.7	0.56	51.1	2.14
MAX	0.25	0.09	0.01	0.00	71	24	3,110	226	117	1.6	1,100	5.5
MIN	0.02	0.01	0.00	0.00	0.00	0.02	0.02	0.34	0.34	0.20	0.08	0.64
AC-FT	5.5	1.3	0.1	0.00	215	198	8,530	908	637	34	3,140	127
CFSM	0.00	0.00	0.00	0.00	0.01	0.01	0.23	0.02	0.02	0.00	0.08	0.00
IN.	0.00	0.00	0.00	0.00	0.01	0.01	0.26	0.03	0.02	0.00	0.10	0.00

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

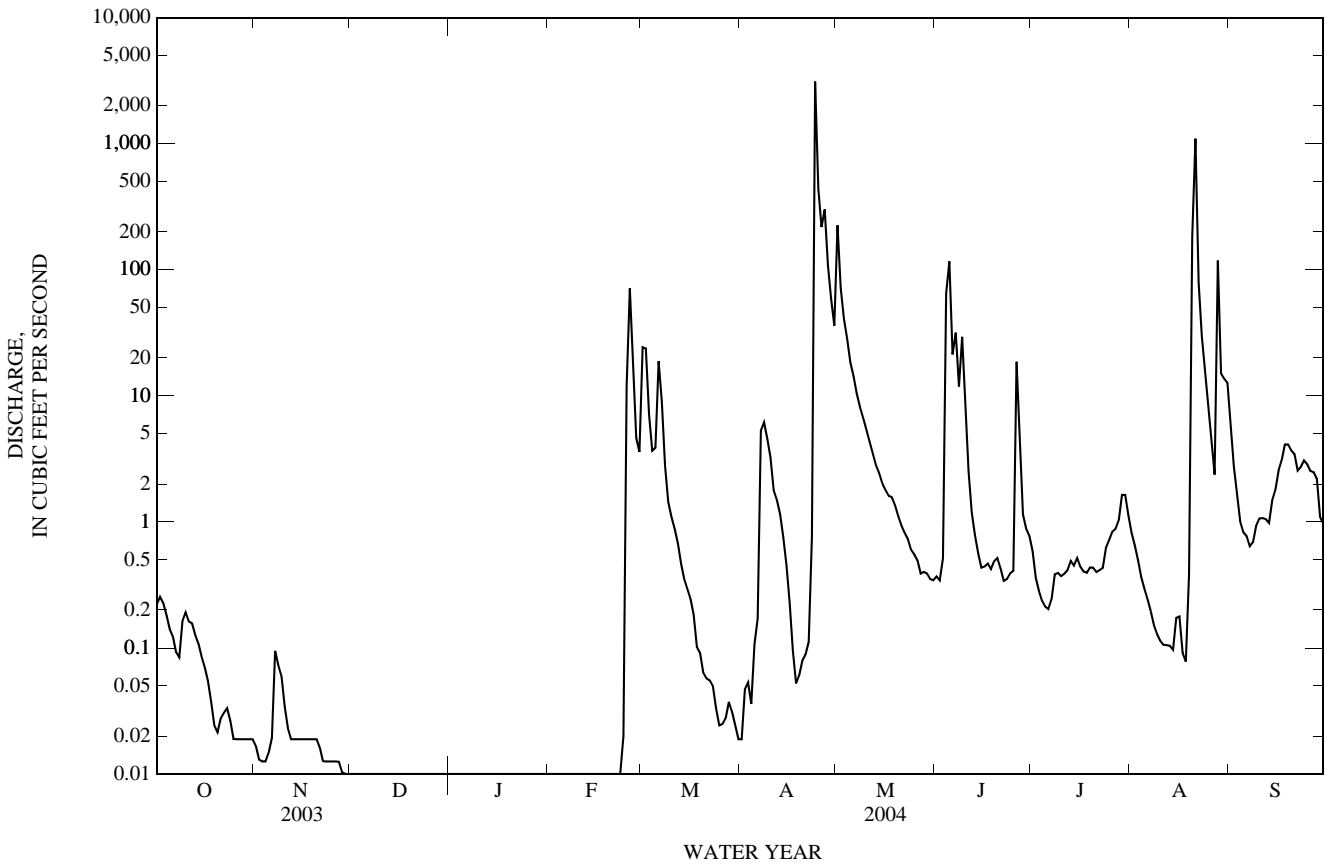
MEAN	81.2	14.5	41.9	51.3	71.8	46.4	55.3	117	60.7	16.3	101	65.6
MAX	1,483	228	1,161	1,544	1,532	284	502	906	628	400	3,365	1,170
(WY)	(1982)	(1975)	(1992)	(1968)	(1992)	(1998)	(1968)	(1969)	(1997)	(2002)	(1978)	(1974)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1969)	(1971)	(1971)	(1969)	(1971)	(1971)	(1971)	(1984)	(1984)	(1974)	(1968)	(1968)



08086212 Hubbard Creek below Albany, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1967 - 2004	
ANNUAL TOTAL	5,011.37		6,958.69		60.3	
ANNUAL MEAN	13.7		19.0		303	
HIGHEST ANNUAL MEAN					1992	
LOWEST ANNUAL MEAN					0.49	
HIGHEST DAILY MEAN	3,460	Jun 5	3,110	Apr 24	94,700	Aug 4, 1978
LOWEST DAILY MEAN	0.00	Aug 16	0.00	Dec 6	0.00	Apr 5, 1967
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 16	0.00	Dec 6	0.00	Apr 24, 1967
MAXIMUM PEAK FLOW			5,700	Apr 24	1330,000	Aug 4, 1978
MAXIMUM PEAK STAGE			14.34	Apr 24	41.41	Aug 4, 1978
ANNUAL RUNOFF (AC-FT)	9,940		13,800		43,660	
ANNUAL RUNOFF (CFSM)	0.022		0.031		0.098	
ANNUAL RUNOFF (INCHES)	0.30		0.42		1.34	
10 PERCENT EXCEEDS	2.0		9.3		41	
50 PERCENT EXCEEDS	0.29		0.19		0.99	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

- a From floodmark.
- i From indirect measurement at site 4.5 mi downstream.



08086212 Hubbard Creek below Albany, TX—Continued

## WATER-QUALITY RECORDS

## PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1966 to current year.

PESTICIDE DATA: Nov. 1972.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1966 to Nov. 1970 (local observer), Dec. 1970 to current year.

WATER TEMPERATURE: Oct. 1966 to July 1980 (local observer), Mar. 1982 to current year.

INSTRUMENTATION.--Specific conductance monitor since Dec. 1970. Water-temperature monitor since Mar. 1982.

REMARKS.--No estimated daily specific conductance or water temperature. Records good. Interruptions in the record were due to malfunction of the instrument and to no flow. No flow Dec. 6 to Feb. 24. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous years using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 21,200 microsiemens/cm, Feb. 15, 21, 1978; minimum recorded, 144 microsiemens/cm, Sept. 8, 2001; minimum estimated, 129 microsiemens/cm, Aug. 4, 1978.

WATER TEMPERATURE: Maximum, 37.5°C, July 20, 1986; minimum, 0.0°C, on several days during winter months.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 3,320 microsiemens/cm, Mar. 2; minimum, 164 microsiemens/cm, Aug. 21.

WATER TEMPERATURE: Maximum, 35.6°C, Aug. 2; minimum, 5.4°C, Dec. 6.

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

Date	Time	Instantaneous discharge, cfs (00061)	Dis-solved oxygen, mg/L (00300)	Dis-solved 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)	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)
OCT 22...	1100	E.02	7.8	90	E7.6	978	20.1	200	57.0	14.2	5.77	3	112
FEB 25...	1420	1.1	E9.5	--	E8.2	2,140	9.4	360	96.9c	28.4c	5.52c	7	290c
FEB 26...	1050	69	E9.6	--	E7.9	810	8.2	210	61.7	14.7	5.83	2	82.3
MAR 30...	1200	.02	8.3	98	8.1	1,770	21.9	410	98.1	40.0	6.14	4	202
MAY 12...	1040	3.6	6.9	86	8.0	908	23.8	230	65.0	16.3	4.50	3	88.0

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

Date	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)
OCT 22...	183	.2	5.5	55.1	512
FEB 25...	518d	.2	1.5	113d	1,140
FEB 26...	106	.2	4.9	81.8	448
MAR 30...	374d	.2	2.2	163d	967
MAY 12...	159	.3	9.2	46.4	472

Remark codes used in this table:

E -- Estimated value

Value qualifier codes used in this table:

c -- See laboratory comment

d -- Diluted sample: method hi range exceeded

08086212 Hubbard Creek below Albany, 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	957	806	842	1,130	1,090	1,110	1,470	1,410	1,440	---	---	---
2	926	820	860	1,130	1,090	1,110	1,540	1,420	1,480	---	---	---
3	928	834	877	1,150	1,100	1,120	1,490	1,440	1,470	---	---	---
4	939	834	864	1,180	1,110	1,140	1,510	1,440	1,460	---	---	---
5	982	847	894	1,140	1,060	1,120	1,470	1,430	1,450	---	---	---
6	1,060	879	975	1,160	1,130	1,140	---	---	---	---	---	---
7	1,050	887	966	1,220	975	1,150	---	---	---	---	---	---
8	1,060	902	964	1,290	1,050	1,180	---	---	---	---	---	---
9	1,060	936	996	1,430	1,220	1,280	---	---	---	---	---	---
10	1,150	936	1,040	1,450	1,260	1,360	---	---	---	---	---	---
11	1,070	932	997	1,360	1,230	1,290	---	---	---	---	---	---
12	1,060	950	980	1,450	1,250	1,300	---	---	---	---	---	---
13	1,060	961	998	1,320	1,270	1,290	---	---	---	---	---	---
14	1,050	944	976	1,400	1,260	1,300	---	---	---	---	---	---
15	1,050	958	983	1,500	1,280	1,350	---	---	---	---	---	---
16	1,010	958	975	1,410	1,280	1,300	---	---	---	---	---	---
17	1,050	965	992	1,400	1,280	1,340	---	---	---	---	---	---
18	1,030	969	996	1,440	1,310	1,380	---	---	---	---	---	---
19	1,010	983	998	1,350	1,310	1,330	---	---	---	---	---	---
20	1,150	989	1,030	1,460	1,320	1,350	---	---	---	---	---	---
21	1,140	992	1,040	1,460	1,330	1,370	---	---	---	---	---	---
22	1,140	964	1,040	1,440	1,320	1,380	---	---	---	---	---	---
23	1,180	988	1,070	1,380	1,340	1,350	---	---	---	---	---	---
24	1,180	1,020	1,070	1,440	1,360	1,380	---	---	---	---	---	---
25	1,040	1,010	1,020	1,470	1,400	1,420	---	---	---	---	---	---
26	1,110	1,030	1,060	1,490	1,380	1,420	---	---	---	---	---	---
27	1,220	1,050	1,100	1,460	1,380	1,400	---	---	---	---	---	---
28	1,170	1,070	1,090	1,470	1,380	1,410	---	---	---	---	---	---
29	1,180	1,090	1,120	1,500	1,410	1,450	---	---	---	---	---	---
30	1,200	1,090	1,130	1,460	1,420	1,440	---	---	---	---	---	---
31	1,140	1,090	1,120	---	---	---	---	---	---	---	---	---
MONTH	1,220	806	1,000	1,500	975	1,300	1,540	1,410	1,460	---	---	---
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	1,990	1,840	1,900	1,240	690	901
2	---	---	---	3,320	3,080	3,230	2,050	1,760	1,900	708	669	680
3	---	---	---	3,200	3,010	3,070	2,300	1,880	2,060	753	708	726
4	---	---	---	3,090	2,570	2,830	2,470	1,930	2,110	828	753	807
5	---	---	---	2,800	2,690	2,760	2,480	2,000	2,150	866	809	840
6	---	---	---	2,730	2,250	2,530	2,280	1,950	2,100	894	854	876
7	---	---	---	2,460	2,130	2,310	1,960	1,700	1,860	927	893	907
8	---	---	---	2,360	1,640	1,900	1,850	1,730	1,770	934	910	920
9	---	---	---	1,900	1,570	1,690	1,900	1,760	1,810	969	933	947
10	---	---	---	1,880	1,730	1,790	2,010	1,750	1,860	983	958	967
11	---	---	---	1,750	1,720	1,720	2,160	2,010	2,100	998	981	986
12	---	---	---	1,760	1,740	1,750	2,160	2,020	2,090	1,020	922	970
13	---	---	---	1,740	1,720	1,730	2,040	1,930	2,000	996	948	978
14	---	---	---	1,730	1,700	1,720	1,930	1,790	1,850	1,020	992	1,000
15	---	---	---	1,730	1,700	1,720	1,830	1,780	1,810	1,040	1,020	1,030
16	---	---	---	1,720	1,700	1,710	1,830	1,800	1,820	1,050	1,020	1,040
17	---	---	---	1,730	1,700	1,710	1,860	1,820	1,830	1,050	1,030	1,040
18	---	---	---	1,740	1,680	1,720	1,880	1,850	1,870	1,060	1,030	1,050
19	---	---	---	1,760	1,710	1,740	1,890	1,870	1,880	1,080	1,040	1,060
20	---	---	---	1,770	1,700	1,740	1,910	1,860	1,890	1,100	1,060	1,080
21	---	---	---	1,820	1,730	1,780	1,930	1,860	1,900	1,120	1,080	1,100
22	---	---	---	1,860	1,750	1,790	1,960	1,860	1,910	1,140	1,090	1,120
23	---	---	---	1,900	1,810	1,840	1,930	743	1,780	1,170	1,100	1,140
24	---	---	---	1,880	1,810	1,840	1,670	339	696	1,200	1,120	1,160
25	---	---	---	1,850	1,790	1,820	531	403	461	1,240	1,150	1,200
26	---	---	---	1,840	1,780	1,810	657	531	582	1,240	1,160	1,200
27	---	---	---	1,880	1,820	1,830	666	555	611	1,270	1,180	1,230
28	---	---	---	1,910	1,780	1,840	681	621	659	1,280	1,180	1,220
29	---	---	---	1,900	1,810	1,840	722	604	667	1,330	1,200	1,270
30	---	---	---	1,980	1,810	1,870	836	708	751	1,340	1,220	1,290
31	---	---	---	2,000	1,820	1,890	---	---	---	1,350	1,230	1,290
MONTH	---	---	---	3,320	1,570	1,980	2,480	339	1,620	1,350	669	1,030

## BRAZOS RIVER BASIN

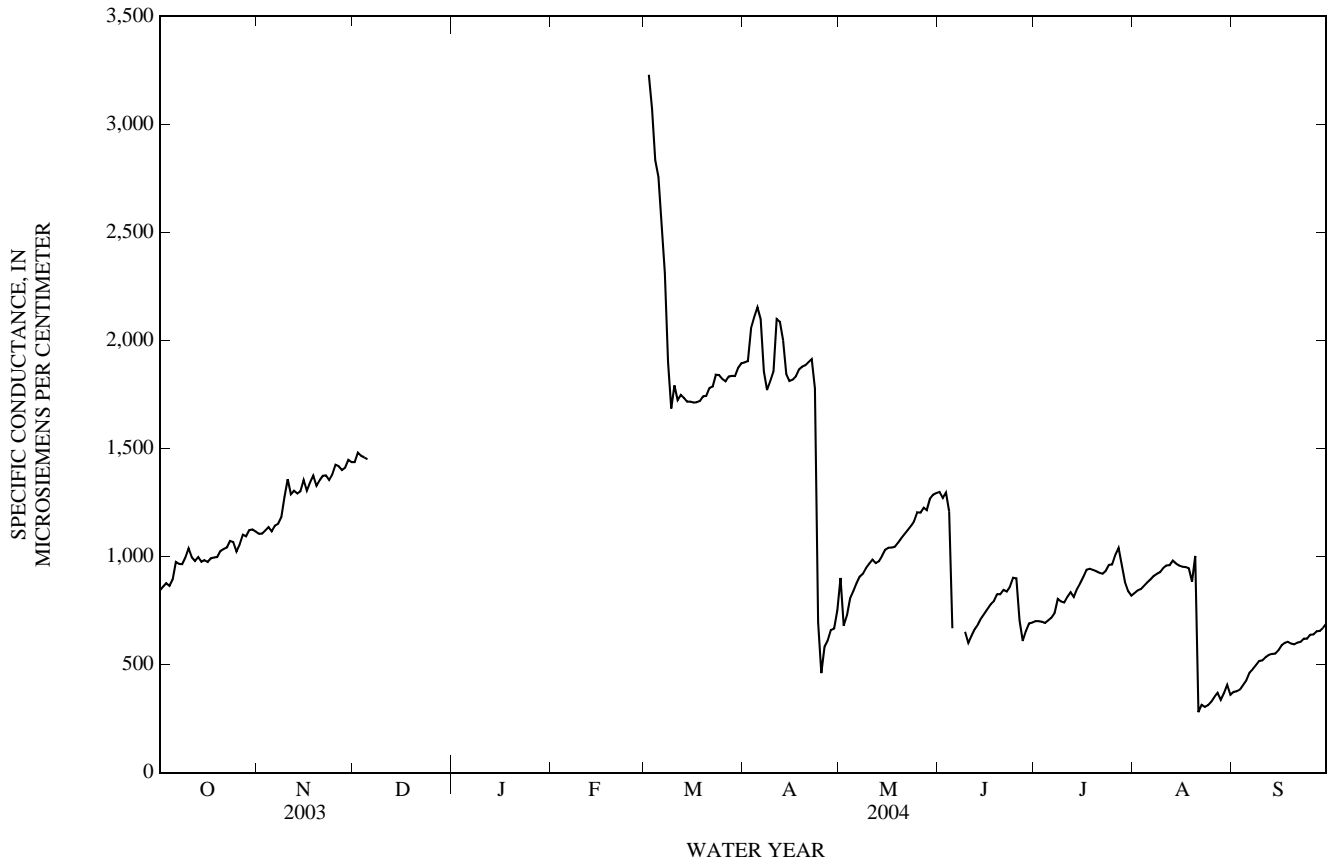
08086212 Hubbard Creek below Albany, TX—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1,360	1,220	1,300	729	648	701	840	817	830	382	353	374
2	1,330	1,230	1,270	749	649	701	855	834	843	382	371	377
3	1,380	1,230	1,300	756	654	698	864	838	850	392	375	385
4	1,350	497	1,210	762	666	692	884	855	866	418	392	407
5	754	528	668	743	671	704	902	863	881	445	408	428
6	---	---	---	812	668	717	921	878	895	493	437	464
7	---	---	---	831	686	739	922	901	910	534	437	479
8	---	761	---	1,000	707	804	941	904	921	563	449	497
9	761	595	651	909	723	793	950	911	927	563	477	517
10	614	594	600	873	745	787	972	915	947	544	493	520
11	649	614	633	938	758	814	988	928	959	554	504	534
12	687	649	664	908	789	835	1,000	926	960	562	518	545
13	717	671	686	884	776	813	1,020	940	981	578	507	550
14	746	682	714	989	788	849	1,020	933	968	586	517	551
15	773	696	737	989	805	876	1,010	745	958	599	524	566
16	807	717	758	984	847	906	1,000	925	953	625	548	589
17	824	728	779	1,020	857	939	1,000	919	951	638	552	600
18	838	740	794	1,020	877	943	983	924	946	647	566	606
19	869	781	826	1,000	865	938	958	561	884	621	578	598
20	869	781	826	991	878	932	1,780	707	1,000	609	580	594
21	878	791	846	955	891	925	831	164	280	613	594	602
22	890	808	838	952	898	921	349	305	314	618	599	606
23	924	818	860	985	899	933	307	301	304	647	603	621
24	937	850	902	1,070	911	962	324	306	312	639	610	620
25	940	857	900	990	942	963	341	323	328	662	619	638
26	933	226	703	1,090	965	1,010	360	340	350	661	624	640
27	647	549	610	1,080	1,000	1,040	377	359	369	665	638	655
28	669	646	655	1,020	897	959	388	288	337	695	639	656
29	723	669	691	939	825	882	382	355	368	704	646	670
30	718	650	694	879	782	840	469	355	406	707	672	689
31	---	---	---	828	808	819	376	348	361	---	---	---
MONTH	1,380	226	819	1,090	648	853	1,780	164	715	707	353	553
YEAR	3,320	164	1,100									

Remarkcodes used in this report:  
E -- Estimated value

08086212 Hubbard Creek below Albany, TX—Continued



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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	25.0	20.3	22.1	19.9	17.7	18.6	14.1	7.8	10.8	---	---	---
2	22.2	19.6	21.0	20.4	18.8	19.5	13.1	11.4	11.8	---	---	---
3	21.9	19.7	20.8	21.2	19.5	20.1	15.1	9.8	12.2	---	---	---
4	22.1	19.7	20.9	22.4	19.9	21.0	12.9	8.7	10.6	---	---	---
5	26.6	20.4	22.5	20.2	16.6	18.2	12.6	7.7	9.9	---	---	---
6	24.4	22.0	23.1	16.6	13.9	15.2	---	---	8.0	---	---	---
7	24.3	21.2	22.5	13.9	11.9	12.9	---	---	---	---	---	---
8	22.9	21.1	22.0	12.5	12.1	12.3	---	---	---	---	---	---
9	25.1	21.5	22.9	13.8	12.2	12.9	---	---	---	---	---	---
10	23.4	22.0	22.5	15.2	13.3	13.9	---	---	---	---	---	---
11	22.3	21.1	21.8	17.0	14.3	15.6	---	---	---	---	---	---
12	23.7	20.5	21.6	19.2	15.2	16.8	---	---	---	---	---	---
13	23.3	20.5	21.8	15.2	13.1	13.8	---	---	---	---	---	---
14	24.0	19.8	21.7	14.6	13.1	13.7	---	---	---	---	---	---
15	21.0	18.3	19.5	16.3	14.0	14.9	---	---	---	---	---	---
16	21.3	18.3	19.8	18.2	13.5	15.2	---	---	---	---	---	---
17	22.7	18.7	20.5	16.8	15.6	16.3	---	---	---	---	---	---
18	20.9	17.5	19.1	15.6	12.7	14.1	---	---	---	---	---	---
19	20.7	17.5	19.1	14.8	11.7	13.2	---	---	---	---	---	---
20	20.5	17.7	19.3	15.4	11.4	13.1	---	---	---	---	---	---
21	21.5	18.0	19.8	15.5	11.8	13.5	---	---	---	---	---	---
22	25.8	18.2	21.3	16.4	13.2	14.6	---	---	---	---	---	---
23	21.3	18.2	20.1	15.0	10.9	13.3	---	---	---	---	---	---
24	21.4	18.4	20.0	12.9	9.2	10.7	---	---	---	---	---	---
25	20.5	16.4	18.6	11.7	8.3	9.7	---	---	---	---	---	---
26	17.2	14.8	16.2	13.9	9.2	11.1	---	---	---	---	---	---
27	18.0	13.9	15.8	12.9	9.1	10.7	---	---	---	---	---	---
28	19.7	14.2	16.6	13.2	7.7	10.1	---	---	---	---	---	---
29	18.0	14.3	16.1	11.6	7.0	9.1	---	---	---	---	---	---
30	18.7	15.6	17.0	12.4	7.4	9.6	---	---	---	---	---	---
31	22.0	16.7	18.8	---	---	---	---	---	---	---	---	---
MONTH	26.6	13.9	20.2	22.4	7.0	14.1	15.1	7.7	10.6	---	---	---

## BRAZOS RIVER BASIN

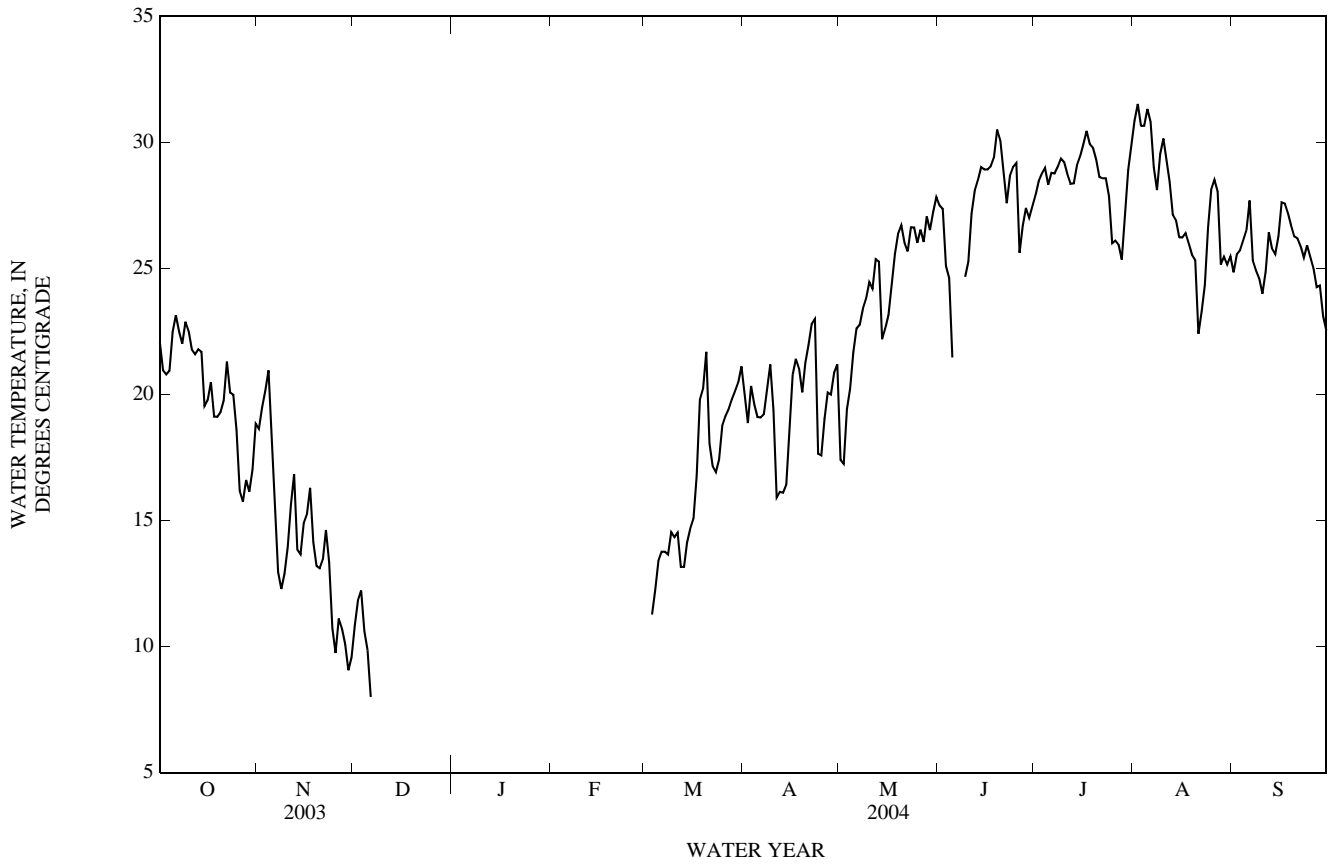
08086212 Hubbard Creek below Albany, TX—Continued

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	---	---	---	---	---	---	21.9	17.0	20.0	20.9	16.1	17.4
2	---	---	---	11.7	---	---	20.2	18.2	18.9	19.8	15.5	17.3
3	---	---	---	11.7	11.0	11.3	24.6	17.3	20.3	23.1	16.9	19.4
4	---	---	---	14.4	11.1	12.2	22.0	17.6	19.6	22.7	18.1	20.2
5	---	---	---	15.9	11.3	13.4	21.3	17.3	19.1	24.5	19.4	21.7
6	---	---	---	15.7	11.9	13.8	21.3	17.3	19.1	24.0	21.2	22.6
7	---	---	---	15.0	12.7	13.8	21.1	17.6	19.2	24.4	21.5	22.8
8	---	---	---	16.1	11.0	13.7	23.4	17.9	20.2	25.6	21.7	23.4
9	---	---	---	17.3	12.2	14.5	23.8	19.0	21.2	25.8	21.8	23.8
10	---	---	---	16.8	11.7	14.3	21.8	17.1	19.4	26.5	22.8	24.5
11	---	---	---	16.6	13.0	14.5	17.1	15.3	15.9	25.4	23.2	24.2
12	---	---	---	13.9	12.7	13.2	18.2	14.5	16.1	28.3	23.1	25.4
13	---	---	---	14.1	12.4	13.2	19.7	13.4	16.1	26.9	23.2	25.3
14	---	---	---	15.2	13.5	14.1	19.3	13.1	16.4	23.8	20.6	22.2
15	---	---	---	16.7	13.4	14.7	21.6	15.7	18.8	26.2	20.0	22.6
16	---	---	---	17.3	12.5	15.1	22.8	18.7	20.8	25.0	21.0	23.2
17	---	---	---	19.6	13.9	16.8	23.6	19.2	21.4	26.6	21.8	24.3
18	---	---	---	26.2	15.4	19.8	23.1	19.7	21.0	27.6	23.7	25.6
19	---	---	---	22.0	18.2	20.2	20.9	19.1	20.1	28.9	23.9	26.4
20	---	---	---	26.2	19.0	21.7	24.1	18.8	21.2	28.7	24.7	26.7
21	---	---	---	21.2	16.1	18.1	24.8	19.6	22.0	27.7	24.4	26.0
22	---	---	---	18.9	15.6	17.2	25.4	20.7	22.8	27.6	23.7	25.7
23	---	---	---	19.0	14.8	16.9	25.1	18.9	23.0	29.9	24.2	26.6
24	---	---	---	18.6	16.5	17.4	22.8	15.5	17.7	28.6	24.5	26.6
25	---	---	---	21.2	17.2	18.8	18.8	16.6	17.6	27.8	24.2	26.0
26	---	---	---	20.4	18.0	19.1	20.5	17.9	19.0	28.8	24.5	26.5
27	---	---	---	21.4	18.2	19.4	21.0	19.1	20.1	28.1	24.6	26.1
28	---	---	---	23.1	18.2	19.8	20.8	19.6	20.0	32.2	23.4	27.1
29	---	---	---	24.8	16.6	20.1	23.1	19.4	20.9	28.3	25.0	26.5
30	---	---	---	25.3	16.7	20.5	24.0	19.6	21.2	30.8	24.7	27.2
31	---	---	---	26.3	16.8	21.1	---	---	---	33.1	24.2	27.8
MONTH	---	---	---	26.3	11.0	16.5	25.4	13.1	19.6	33.1	15.5	24.2
	JUNE			JULY			AUGUST			SEPTEMBER		
1	31.0	24.8	27.5	30.1	26.1	27.9	35.2	27.5	30.9	26.2	23.9	24.8
2	29.9	25.4	27.4	30.9	26.2	28.5	35.6	28.4	31.5	28.4	23.1	25.6
3	26.3	24.3	25.1	31.0	26.8	28.8	33.1	28.5	30.7	27.9	23.5	25.7
4	28.3	18.5	24.6	30.7	27.2	29.0	33.6	28.1	30.7	27.9	24.2	26.1
5	24.1	19.0	21.5	30.4	26.3	28.3	35.4	28.3	31.3	28.2	24.6	26.5
6	---	20.9	---	30.9	26.7	28.8	34.0	28.5	30.8	31.9	25.3	27.7
7	---	---	---	31.3	26.8	28.8	30.8	27.6	29.0	28.8	23.2	25.3
8	26.3	---	---	31.1	26.8	29.0	30.4	26.8	28.1	29.2	21.8	24.9
9	25.3	23.9	24.7	31.2	27.7	29.4	34.1	26.5	29.5	29.7	20.6	24.6
10	27.5	23.6	25.3	30.7	27.9	29.2	34.6	26.8	30.1	27.3	20.6	24.0
11	30.0	24.6	27.2	30.4	27.1	28.7	33.1	26.9	29.4	29.2	21.7	24.9
12	30.4	26.0	28.1	30.1	26.9	28.4	32.8	25.2	28.4	32.2	23.1	26.4
13	31.4	25.7	28.5	30.3	26.6	28.4	29.0	25.6	27.1	27.7	23.6	25.8
14	31.8	26.6	29.0	31.8	26.9	29.1	29.9	25.3	26.9	26.8	24.2	25.6
15	30.8	27.2	28.9	32.5	26.9	29.5	28.2	25.0	26.2	28.7	24.4	26.3
16	32.8	26.0	28.9	34.8	26.9	29.9	28.1	24.5	26.2	30.7	25.5	27.6
17	31.2	27.0	29.1	34.4	27.5	30.5	28.5	24.4	26.4	29.5	25.8	27.6
18	32.7	27.2	29.4	33.1	27.5	29.9	27.9	24.5	26.0	28.3	26.1	27.2
19	35.0	27.0	30.5	33.9	27.0	29.8	27.7	22.5	25.5	27.9	25.7	26.7
20	33.9	27.6	30.1	31.7	27.1	29.3	27.6	23.6	25.3	27.3	25.1	26.3
21	31.1	27.3	28.7	30.3	27.1	28.6	23.6	21.9	22.4	27.6	25.1	26.2
22	29.9	25.4	27.6	31.0	27.1	28.6	24.8	22.1	23.3	26.7	24.9	25.9
23	33.2	25.2	28.7	30.6	27.1	28.6	26.6	22.9	24.3	26.3	24.7	25.4
24	33.3	25.6	29.0	29.9	26.8	27.9	29.2	24.5	26.6	29.6	23.9	25.9
25	33.3	25.9	29.2	26.8	24.9	26.0	30.4	26.1	28.1	27.9	23.6	25.5
26	28.3	21.2	25.6	29.5	24.1	26.1	30.4	26.6	28.5	27.2	23.2	25.0
27	30.6	24.4	26.7	27.0	25.0	25.9	29.8	26.2	28.1	26.7	22.8	24.3
28	29.2	25.7	27.4	26.7	24.0	25.4	28.2	23.4	25.2	26.9	22.8	24.3
29	29.4	25.4	27.0	30.9	24.8	27.3	28.1	24.0	25.5	26.1	20.9	23.1
30	31.0	25.4	27.5	33.3	25.4	28.9	27.7	23.6	25.2	23.5	21.4	22.6
31	---	---	---	34.2	26.7	29.9	28.0	24.0	25.5	---	---	---
MONTH	35.0	18.5	27.5	34.8	24.0	28.5	35.6	21.9	27.5	32.2	20.6	25.6
YEAR	35.6	7.0	22.4									

Remarkcodes used in this report:  
E -- Estimated value

08086212 Hubbard Creek below Albany, TX—Continued



08086215 Lake Cisco near Cisco, TX

LOCATION.--Lat 32°26'16", long 98°59'07", Eastland County, Hydrologic Unit 12060105, on right bank 58 ft upstream from Williamson Dam on Sandy Creek, 0.2 mi west of State Highway 6, 1.4 mi north of Cisco Airport, and 4.0 mi north of Cisco.

DRAINAGE AREA.--26.7 mi<sup>2</sup>.

PERIOD OF RECORD.--Feb. 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 except those for Jan. 13-21 and July 24 to Aug. 31, which are fair. The lake is formed by a 1,064-ft-long Ambursen-type, slab and buttress, all concrete dam structure. A 270-ft long, uncontrolled, ogee-type spillway with a hollow core is an integral part of the dam. The outlet works consist of two 8.0- by 8.0-ft steel sluice gates that are inoperative and four cast-iron pipes through the upstream slab at different elevations that are permanently open to inflow. Reportedly, a 30-inch line extends from the water intake arrangement to the nearby pumphouse and filtration/treatment plant. A 12-inch low-flow outlet connected to the primary water-supply line will discharge into a concrete sluice box and enters the old abandoned swimming pool below the dam through an underground concrete conduit. The dam, owned by the city of Cisco, was completed Sept. 7, 1923. Water is impounded for municipal use by city of Cisco. The city of Cisco has a permit to divert 1,000 acre-ft annually from Battle Creek. The capacity curve is based on 10 ft contours by the Henry Exall Elrod Company in May 24, 1920. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	1,531.6
Crest of spillway	1,520.0
Lowest gated outlet (invert)	1,444.5

COOPERATION.--Records of diversions may be obtained from the city of Cisco.

EXTREMES FOR PERIOD OF RECORD.--Feb. 1999 to Sept. 2002: Maximum contents, 18,080 acre-ft, June 26, 1999; minimum estimated daily contents, 10,500 acre-ft, July 2, 2002; Feb. 1999 to current year: Maximum elevation, 1,511.14 ft, June 26, 1999; minimum elevation, 1,497.00 ft, Sept. 30, 2004.

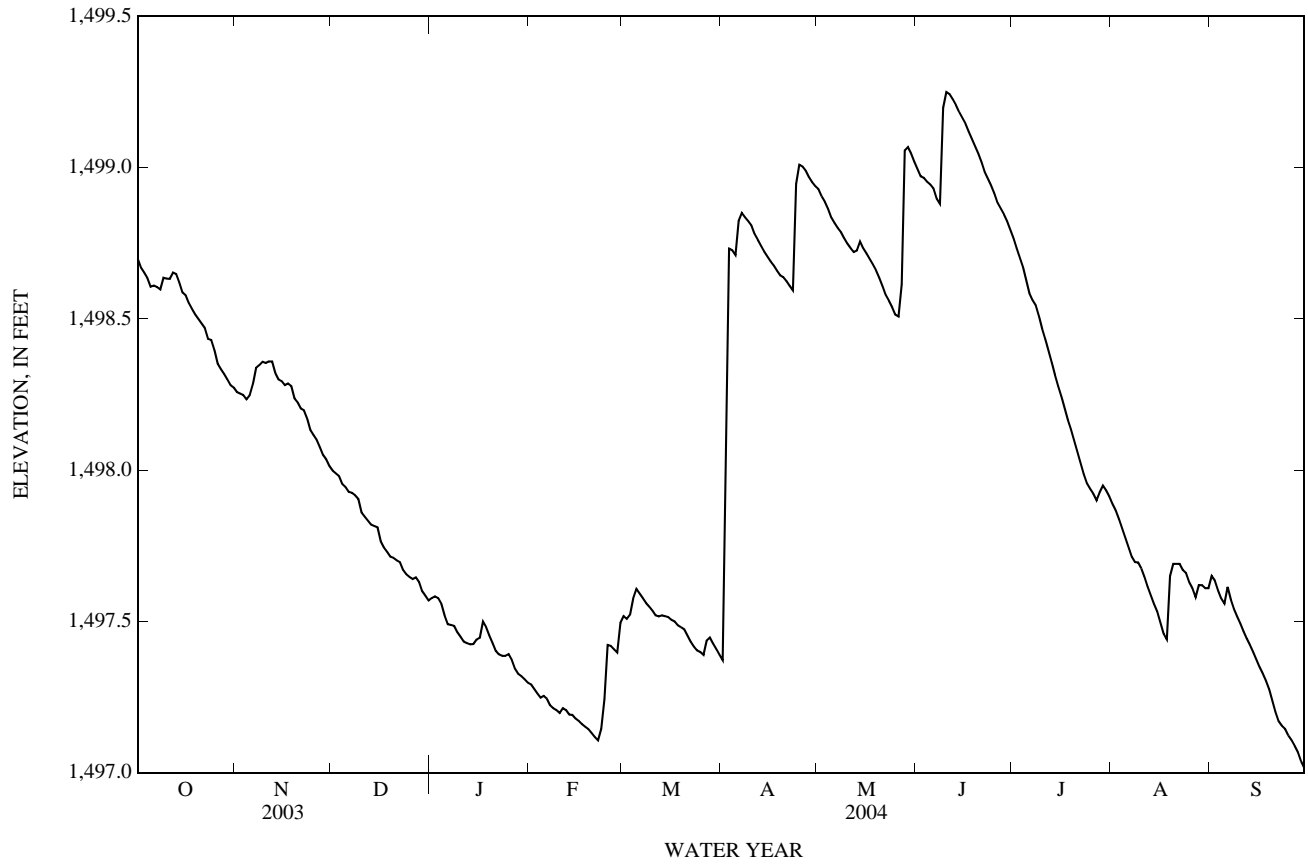
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,499.27 ft, June 10; minimum elevation, 1,497.00 ft, Sept. 30.

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	1,498.70	1,498.26	1,498.00	1,497.58	1,497.29	1,497.52	1,497.37	1,498.93	1,499.00	1,498.77	1,497.89	1,497.65
2	1,498.67	1,498.25	1,497.99	1,497.58	1,497.28	1,497.51	1,497.94	1,498.90	1,498.97	1,498.73	1,497.87	1,497.63
3	1,498.65	1,498.25	1,497.98	1,497.58	1,497.26	1,497.52	1,498.73	1,498.89	1,498.97	1,498.70	1,497.84	1,497.60
4	1,498.63	1,498.23	1,497.95	1,497.56	1,497.25	1,497.58	1,498.73	1,498.86	1,498.95	1,498.67	1,497.81	1,497.58
5	1,498.61	1,498.25	1,497.94	1,497.52	1,497.25	1,497.61	1,498.71	1,498.84	1,498.94	1,498.63	1,497.78	1,497.56
6	1,498.61	1,498.28	1,497.93	1,497.49	1,497.24	1,497.59	1,498.82	1,498.82	1,498.93	1,498.59	1,497.74	1,497.61
7	1,498.61	1,498.34	1,497.92	1,497.49	1,497.22	1,497.58	1,498.85	1,498.80	1,498.90	1,498.56	1,497.71	1,497.57
8	1,498.60	1,498.35	1,497.92	1,497.48	1,497.21	1,497.56	1,498.84	1,498.79	1,498.88	1,498.55	1,497.70	1,497.54
9	1,498.64	1,498.36	1,497.90	1,497.46	1,497.21	1,497.55	1,498.82	1,498.77	1,499.20	1,498.51	1,497.69	1,497.52
10	1,498.63	1,498.35	1,497.86	1,497.45	1,497.20	1,497.54	1,498.81	1,498.75	1,499.25	1,498.47	1,497.67	1,497.49
11	1,498.63	1,498.36	1,497.85	1,497.43	1,497.21	1,497.52	1,498.78	1,498.73	1,499.24	1,498.43	1,497.65	1,497.47
12	1,498.65	1,498.36	1,497.83	1,497.43	1,497.21	1,497.52	1,498.76	1,498.72	1,499.23	1,498.39	1,497.62	1,497.44
13	1,498.65	1,498.32	1,497.82	1,497.42	1,497.19	1,497.52	1,498.74	1,498.73	1,499.21	1,498.36	1,497.59	1,497.42
14	1,498.62	1,498.30	1,497.82	1,497.42	1,497.19	1,497.52	1,498.72	1,498.76	1,499.18	1,498.32	1,497.56	1,497.40
15	1,498.59	1,498.29	1,497.81	1,497.44	1,497.18	1,497.51	1,498.71	1,498.73	1,499.16	1,498.28	1,497.53	1,497.37
16	1,498.58	1,498.28	1,497.77	1,497.45	1,497.17	1,497.51	1,498.69	1,498.72	1,499.14	1,498.24	1,497.50	1,497.35
17	1,498.55	1,498.29	1,497.74	1,497.50	1,497.16	1,497.50	1,498.68	1,498.70	1,499.12	1,498.21	1,497.46	1,497.33
18	1,498.53	1,498.28	1,497.73	1,497.48	1,497.15	1,497.49	1,498.66	1,498.68	1,499.10	1,498.17	1,497.44	1,497.31
19	1,498.51	1,498.24	1,497.71	1,497.45	1,497.14	1,497.48	1,498.64	1,498.66	1,499.07	1,498.13	1,497.65	1,497.28
20	1,498.50	1,498.22	1,497.71	1,497.43	1,497.13	1,497.47	1,498.64	1,498.64	1,499.05	1,498.10	1,497.69	1,497.24
21	1,498.48	1,498.20	1,497.70	1,497.40	1,497.12	1,497.45	1,498.62	1,498.61	1,499.02	1,498.06	1,497.69	1,497.20
22	1,498.47	1,498.20	1,497.70	1,497.39	1,497.11	1,497.43	1,498.61	1,498.58	1,498.99	1,498.02	1,497.69	1,497.17
23	1,498.43	1,498.17	1,497.67	1,497.39	1,497.14	1,497.42	1,498.59	1,498.56	1,498.96	1,497.99	1,497.67	1,497.15
24	1,498.43	1,498.13	1,497.66	1,497.39	1,497.24	1,497.40	1,498.95	1,498.54	1,498.94	1,497.96	1,497.66	1,497.14
25	1,498.40	1,498.12	1,497.65	1,497.39	1,497.42	1,497.40	1,499.01	1,498.51	1,498.91	1,497.94	1,497.63	1,497.12
26	1,498.35	1,498.10	1,497.64	1,497.37	1,497.42	1,497.39	1,499.00	1,498.51	1,498.88	1,497.92	1,497.61	1,497.11
27	1,498.33	1,498.08	1,497.64	1,497.34	1,497.41	1,497.44	1,498.99	1,498.61	1,498.87	1,497.90	1,497.58	1,497.09
28	1,498.32	1,498.05	1,497.63	1,497.33	1,497.40	1,497.45	1,498.97	1,499.06	1,498.85	1,497.93	1,497.62	1,497.07
29	1,498.30	1,498.04	1,497.60	1,497.32	1,497.49	1,497.43	1,498.95	1,499.07	1,498.82	1,497.95	1,497.62	1,497.04
30	1,498.28	1,498.01	1,497.59	1,497.31	---	1,497.41	1,498.94	1,499.05	1,498.80	1,497.93	1,497.61	1,497.02
31	1,498.27	---	1,497.57	1,497.30	---	1,497.39	---	1,499.02	---	1,497.91	1,497.61	---
MEAN	1,498.52	1,498.23	1,497.78	1,497.44	1,497.24	1,497.49	1,498.71	1,498.76	1,499.02	1,498.27	1,497.66	1,497.35
MAX	1,498.70	1,498.36	1,498.00	1,497.58	1,497.49	1,497.61	1,499.01	1,499.07	1,499.25	1,498.77	1,497.89	1,497.65
MIN	1,498.27	1,498.01	1,497.57	1,497.30	1,497.11	1,497.39	1,497.37	1,498.51	1,498.80	1,497.90	1,497.44	1,497.02
WTR YR	2004	MEAN	1,498.04	MAX	1,499.25	MIN	1,497.02					



08086215 Lake Cisco near Cisco, TX—Continued



08086290 Big Sandy Creek above Breckenridge, TX

LOCATION.--Lat 32°38'54", long 99°00'15", Stephens County, Hydrologic Unit 12060105, on left bank 600 ft downstream from Battle Creek, 1.6 mi upstream from bridge on Farm Road 576, 9.8 mi southwest of Breckenridge, and about 14.6 mi upstream from Hubbard Creek Dam.

DRAINAGE AREA.--280 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Feb. 1962 to current year. Prior to Oct. 1975, published as "near Breckenridge".

REVISED RECORDS.--WDR TX-76-2: Drainage area at former site.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,185.83 ft above NGVD of 1929. Prior to Oct. 1, 1975, at site 1.6 mi downstream at datum 7.41 ft lower. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--According to information from Texas Department of Transportation, the floods of May 16, 1949, July 20, 1953, and Apr. 29, 1957, each reached a stage of 24.6 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	0.00	0.00	0.00	0.00	0.00	52	0.03	11	0.40	0.02	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	7.2	10	0.87	0.15	0.01	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	1.6	85	0.22	0.13	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	1.4	9.4	0.10	0.06	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	48	1.7	0.06	0.07	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	10	21	0.05	0.72	0.00	0.00	0.00
7	0.00	0.01	0.00	0.00	0.00	2.2	23	0.04	0.10	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.66	3.2	0.04	0.05	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.25	0.68	0.04	89	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.12	0.25	0.04	42	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.06	0.13	0.04	11	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.03	0.08	0.03	3.2	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.04	1.1	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.03	0.40	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.02	0.17	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.03	0.09	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.05	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.04	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.03	0.03	0.00	0.09	0.00
20	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.03	0.03	0.00	0.08	0.00
21	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.03	0.03	0.00	73	0.00
22	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.03	0.03	0.00	14	0.00
23	0.00	0.00	0.00	0.00	0.95	0.07	2.4	0.03	0.03	0.00	2.1	0.00
24	0.00	0.00	0.00	0.00	13	0.09	628	0.03	0.02	0.00	0.40	0.00
25	0.00	0.00	0.00	0.00	192	0.09	93	0.03	0.02	0.00	0.09	0.00
26	0.00	0.00	0.00	0.00	37	0.11	22	0.04	0.02	0.00	0.02	0.00
27	0.00	0.00	0.00	0.00	6.1	0.11	12	0.12	0.02	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	1.1	0.04	3.7	110	0.05	0.00	0.01	0.00
29	0.00	0.00	0.00	0.00	54	0.03	1.3	31	0.04	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.03	2.2	6.3	0.02	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.03	---	1.4	---	0.00	0.00	---
TOTAL	0.00	0.01	0.00	0.00	304.15	124.50	919.15	161.78	149.07	0.03	89.79	0.00
MEAN	0.00	0.00	0.00	0.00	10.5	4.02	30.6	5.22	4.97	0.00	2.90	0.00
MAX	0.00	0.01	0.00	0.00	192	52	628	110	89	0.02	73	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.02	0.00	0.00	0.00
AC-FT	0.00	0.02	0.00	0.00	603	247	1,820	321	296	0.06	178	0.00
CFSM	0.00	0.00	0.00	0.00	0.04	0.01	0.11	0.02	0.02	0.00	0.01	0.00
IN.	0.00	0.00	0.00	0.00	0.04	0.02	0.12	0.02	0.02	0.00	0.01	0.00

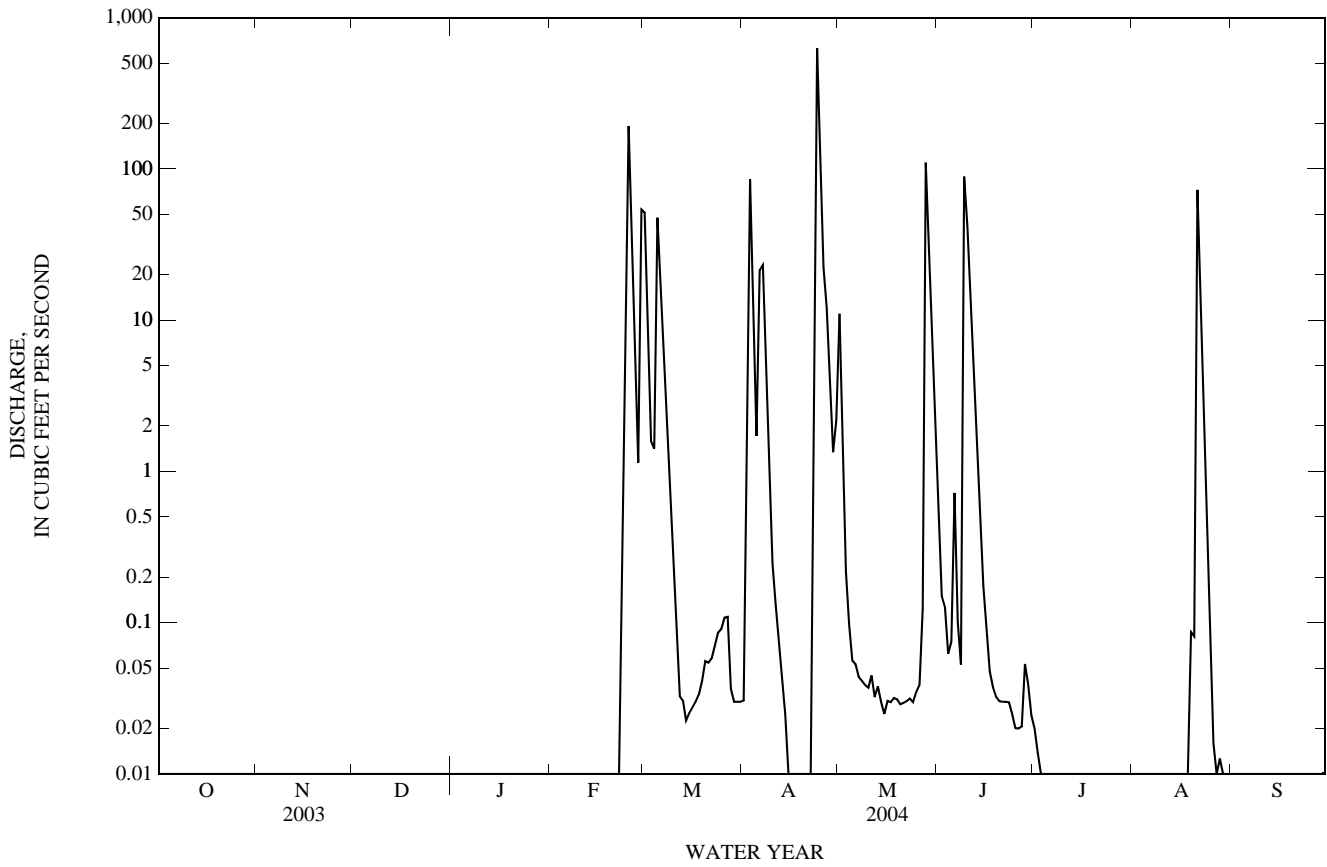
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004, BY WATER YEAR (WY)

MEAN	46.5	13.2	14.4	16.3	30.2	28.1	26.7	58.8	39.7	10.3	16.1	26.8
MAX	1,151	155	342	547	455	255	209	414	406	204	211	396
(WY)	(1982)	(1965)	(1992)	(1968)	(1992)	(1992)	(1990)	(1965)	(1997)	(2002)	(1978)	(1996)
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)	(1969)	(1971)	(1971)	(1971)	(1962)	(1966)	(2000)	(1984)	(1964)	(1964)	(1980)	(1968)

08086290 Big Sandy Creek above Breckenridge, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004	
ANNUAL TOTAL	2,296.35		1,748.48		27.2	
ANNUAL MEAN	6.29		4.78		114	
HIGHEST ANNUAL MEAN					1992	
LOWEST ANNUAL MEAN					2000	
HIGHEST DAILY MEAN	1,520	Jun 5	628	Apr 24	28,100	Oct 13, 1981
LOWEST DAILY MEAN	0.00	May 7	0.00	Oct 1	0.00	Feb 1, 1962
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 13	0.00	Oct 1	0.00	Feb 1, 1962
MAXIMUM PEAK FLOW			1,140	Apr 24	i80,000	Oct 13, 1981
MAXIMUM PEAK STAGE			8.17	Apr 24	a28.60	Oct 13, 1981
ANNUAL RUNOFF (AC-FT)	4,550		3,470		19,720	
ANNUAL RUNOFF (CFSM)	0.022		0.017		0.097	
ANNUAL RUNOFF (INCHES)	0.31		0.23		1.32	
10 PERCENT EXCEEDS	0.36		1.5		13	
50 PERCENT EXCEEDS	0.01		0.00		0.06	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a From floodmark.  
i From indirect measurement.



08086290 Big Sandy Creek above Breckenridge, TX—Continued

## WATER-QUALITY RECORDS

## PERIOD OF RECORD.--

CHEMICAL DATA: Nov. 1975 to current year.  
 SEDIMENT DATA: Oct. 1967 to Sept. 1975.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Feb. 1962 to Nov. 1970 (local observer), Dec. 1970 to current year.  
 WATER TEMPERATURE: Feb. 1962 to Feb. 1982 (local observer), Mar. 1982 to current year.

INSTRUMENTATION.--Specific conductance recorder since Dec. 1970. Water-temperature recorder since Mar. 1982.

REMARKS.--Records good except those for daily specific conductance for Feb. 24 to Mar. 10, May 1, 12, 17, May 28 to June 9, 15-24, which are poor. Interruptions in the record were due to no flow except those for specific conductance on May 1-12, 28-30, June 6, 7, 9-15, and water temperature on May 30, which were due to malfunction of the instrument. No flow many days. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous years using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 28,700 microsiemens/cm Apr. 5, 10, 1976; minimum daily, 59 microsiemens/cm, Nov. 21, 1963.  
 WATER TEMPERATURE: Maximum, 37.0°C, Aug. 9, 1987, July 16, 1989; minimum, 0.0°C, Jan. 9, 10, 1977, Dec. 2, 3, 1985.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 16,900 microsiemens/cm, May 27; minimum, 147 microsiemens/cm, Apr. 24.  
 WATER TEMPERATURE: Maximum, 35.4°C, June 16; minimum, 4.3°C, Feb. 26.

## 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)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	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)
FEB													
25...	1610	162	E12.1	--	7.9	303	6.5	94	30.9	4.02	4.67	.7	16.5
26...	0840	42	E11.9	--	7.7	320	4.8	91	30.0	3.94	4.71	1	24.1
MAR													
30...	1510	E.03	8.7	111	7.8	11,500	24.0	2,200	639d	136d	8.95d	16	1700d
MAY													
12...	0830	.03	6.1	76	7.7	9,250	22.2	1,700	513d	104d	8.60d	14	1330d
JUN													
30...	0830	E.02	4.2	55	7.8	7,600	25.4	1,300	396d	85.1d	8.47d	12	1000d

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

Date	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)
FEB					
25...	33.2	<.2	5.0	14.6	146
26...	39.0	<.2	4.9	17.4	164
MAR					
30...	3560d	.2	4.0	604d	6,730
MAY					
12...	2840d	.2	8.5	485d	5,380
JUN					
30...	2280d	.2	5.9d	403d	4,230

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

## 08086290 Big Sandy Creek above Breckenridge, 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
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	1,350	874	954	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	1,350	874	954	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	426	385	402	13,100	12,600	12,800	---	406	---
2	---	---	---	419	402	407	14,300	574	12,600	---	---	---
3	---	---	---	475	418	441	1,500	283	505	---	---	---
4	---	---	---	538	434	483	373	287	327	---	---	---
5	---	---	---	471	431	444	469	373	419	---	---	---
6	---	---	---	476	452	459	498	279	361	---	---	---
7	---	---	---	513	476	490	356	281	315	---	---	---
8	---	---	---	624	513	558	502	356	424	---	---	---
9	---	---	---	824	624	735	690	502	589	---	---	---
10	---	---	---	1,180	824	979	932	689	813	---	---	---
11	---	---	---	1,400	1,130	1,210	1,150	932	1,040	---	---	---
12	---	---	---	1,450	1,250	1,320	1,460	1,150	1,350	10,800	---	---
13	---	---	---	1,590	1,300	1,370	1,880	1,460	1,750	10,900	10,500	10,800
14	---	---	---	2,000	1,590	1,710	2,560	1,790	2,080	12,100	10,900	11,500
15	---	---	---	2,470	1,920	2,050	2,800	2,450	2,610	12,500	12,100	12,200
16	---	---	---	2,690	2,240	2,380	2,910	2,790	2,830	13,300	12,500	12,900
17	---	---	---	3,000	2,620	2,780	---	---	---	&13,800	&13,000	&13,500
18	---	---	---	3,730	2,990	3,180	---	---	---	14,200	13,800	14,000
19	---	---	---	4,170	3,460	3,850	---	---	---	14,600	14,200	14,400
20	---	---	---	4,780	4,010	4,280	---	---	---	14,900	14,600	14,700
21	---	---	---	5,210	4,570	4,880	---	---	---	15,300	14,900	15,100
22	---	---	---	5,650	5,160	5,300	---	---	---	15,800	15,300	15,500
23	7,730	505	1,120	6,420	5,590	5,940	12,400	232	5,890	16,100	15,800	15,900
24	1,010	222	663	7,390	6,310	6,760	350	147	254	16,400	16,100	16,200
25	412	179	284	8,480	7,380	7,840	358	280	328	16,700	16,200	16,500
26	390	337	370	9,030	8,300	8,610	390	358	375	16,700	16,300	16,600
27	426	372	399	10,200	9,030	9,550	397	377	385	16,900	14,000	16,400
28	489	425	457	11,300	10,000	10,500	478	396	432	15,100	---	---
29	522	338	432	12,000	11,000	11,300	574	478	514	694	---	---
30	---	---	---	12,200	11,600	11,700	740	450	620	619	---	---
31	---	---	---	12,600	12,000	12,200	---	---	---	730	619	668
MONTH	7,730	179	532	12,600	385	4,000	14,300	147	2,070	16,900	406	13,600

## BRAZOS RIVER BASIN

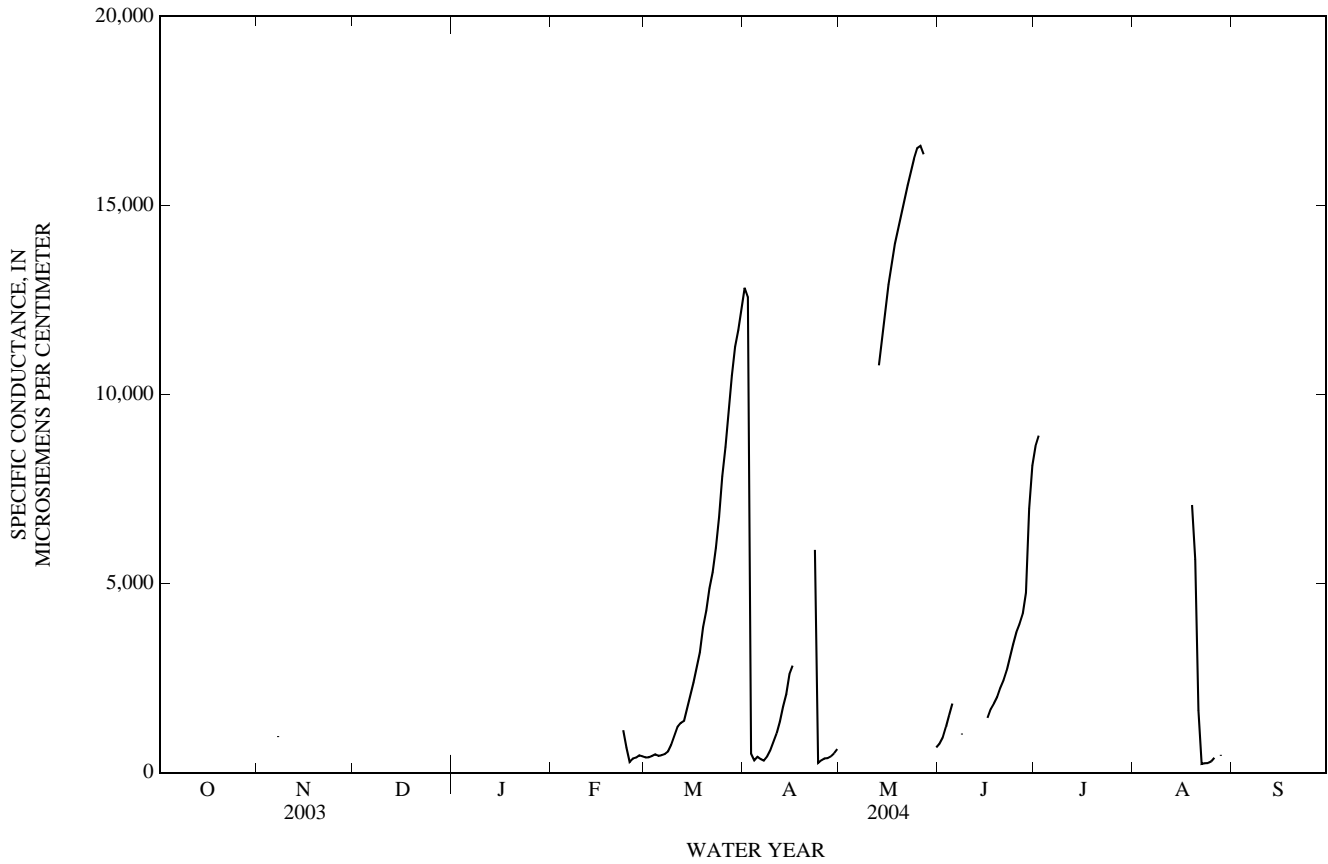
08086290 Big Sandy Creek above Breckenridge, TX—Continued

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
1	917	690	764	8,770	8,480	8,640	---	---	---	---	---	---
2	1,020	846	928	9,090	8,770	8,910	---	---	---	---	---	---
3	1,390	907	1,210	---	---	---	---	---	---	---	---	---
4	1,760	1,330	1,520	---	---	---	---	---	---	---	---	---
5	2,170	1,710	1,830	---	---	---	---	---	---	---	---	---
6	5,520	---	---	---	---	---	---	---	---	---	---	---
7	1,010	---	---	---	---	---	---	---	---	---	---	---
8	1,110	992	1,020	---	---	---	---	---	---	---	---	---
9	4,620	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	1,240	---	---	---	---	---	---	---	---	---	---	---
16	1,710	1,240	1,450	---	---	---	---	---	---	---	---	---
17	1,750	1,620	1,680	---	---	---	---	---	---	---	---	---
18	1,920	1,740	1,830	---	---	---	---	---	---	---	---	---
19	2,180	1,910	2,000	---	---	---	11,600	6,660	7,080	---	---	---
20	2,390	2,170	2,240	---	---	---	7,350	4,230	5,640	---	---	---
21	2,570	2,370	2,440	---	---	---	6,310	207	1,640	---	---	---
22	2,940	2,550	2,700	---	---	---	256	213	231	---	---	---
23	3,410	2,930	3,050	---	---	---	286	214	250	---	---	---
24	3,690	3,300	3,400	---	---	---	284	228	253	---	---	---
25	3,960	3,620	3,710	---	---	---	373	245	296	---	---	---
26	4,070	3,770	3,930	---	---	---	404	373	392	---	---	---
27	4,460	4,070	4,200	---	---	---	---	---	---	---	---	---
28	6,530	4,280	4,760	---	---	---	557	420	455	---	---	---
29	7,740	6,440	6,980	---	---	---	---	---	---	---	---	---
30	8,490	7,740	8,120	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	8,490	690	2,850	9,090	8,480	8,780	11,600	207	1,800	---	---	---
YEAR	16,900	147	4,400									

&amp; Value was computed from affected unit values

08086290 Big Sandy Creek above Breckenridge, TX—Continued



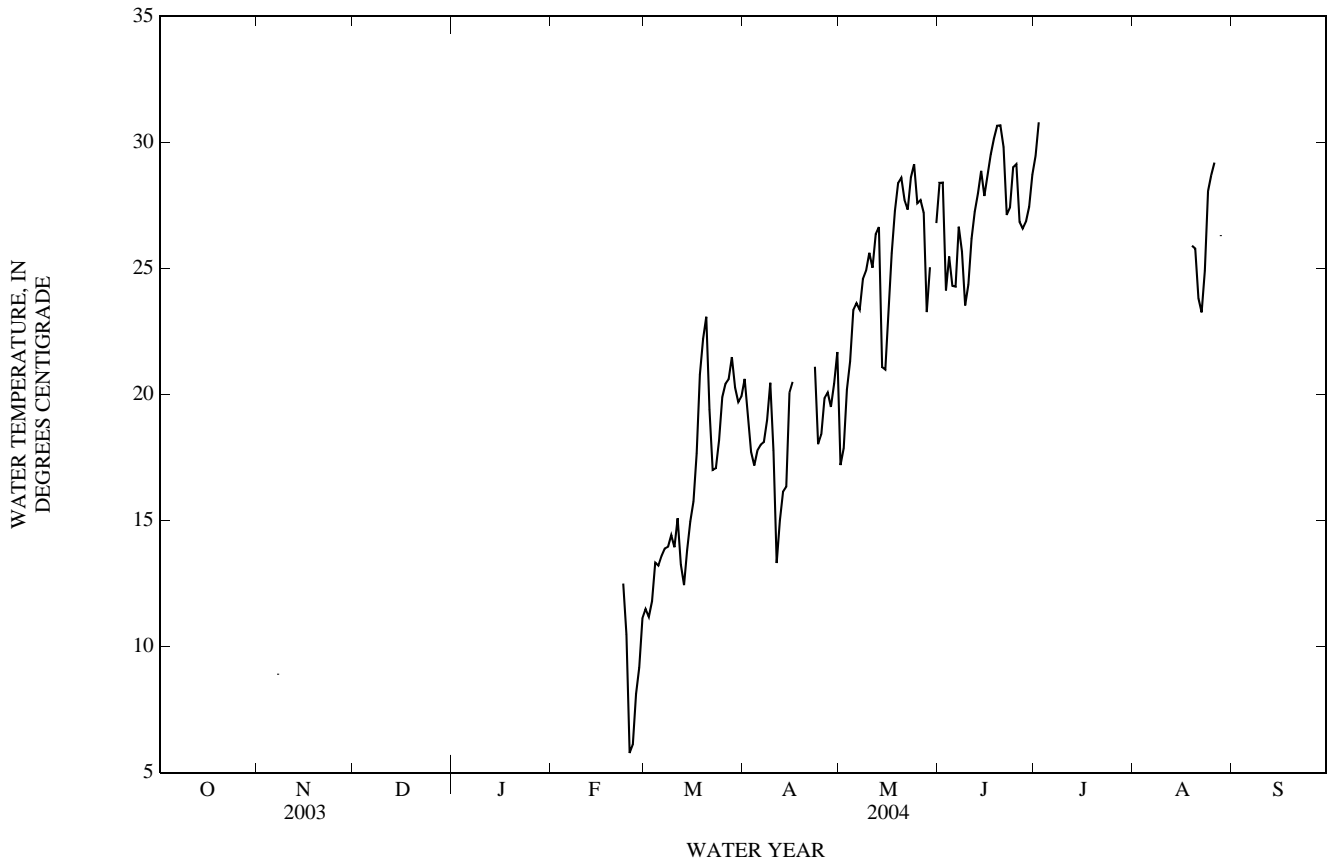
TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	9.2	8.6	8.9	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	9.2	8.6	8.9	---	---	---	---	---	---





08086290 Big Sandy Creek above Breckenridge, TX—Continued



## 08086400 Hubbard Creek Reservoir near Breckenridge, TX

LOCATION.--Lat 32°49'53", long 98°58'03", Stephens County, Hydrologic Unit 12060105, on left bank just upstream from dam on Hubbard Creek, 1.4 mi upstream from U.S. Highway 183, 6.5 mi northwest of Breckenridge, and 12.6 mi upstream from mouth.

DRAINAGE AREA.--1,085 mi<sup>2</sup>.

## WATER-STAGE RECORDS

PERIOD OF RECORD.--Oct. 1962 to Sept. 2003 (contents), Oct. 2003 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area. WDR TX-95-2: 1990-94.

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 5,630 ft long. There are two additional levees, the north and south, making an overall length of 3.5 mi. Storage began Sept. 1962 and the dam was completed in Dec. 1962. The emergency spillway is a 2,000-foot-wide cut through natural ground near the left end of dam. The service spillway is a partially controlled morning-glory type, with 12 lift gates designed to discharge 30,000 ft<sup>3</sup>/s with a 17.5-ft head through a 22.0-ft-diameter concrete conduit. The dam is the property of the West Central Texas Municipal Water District. Prior to Oct. 1, 1998, contents determined from capacity table dated Aug. 1, 1962, furnished by West Central Texas Municipal Water District. Data regarding the dam are given in the following table:

	Elevation
	(feet)
Top of dam	1,208.0
Crest of emergency spillway	1,194.0
Top of gates	1,185.1
Crest of service spillway	1,176.6
Sill of gate	1,138.0
Lowest gated outlet (invert)	1,136.0

COOPERATION.--Records of diversions may be obtained from West Central Texas Municipal Water District.

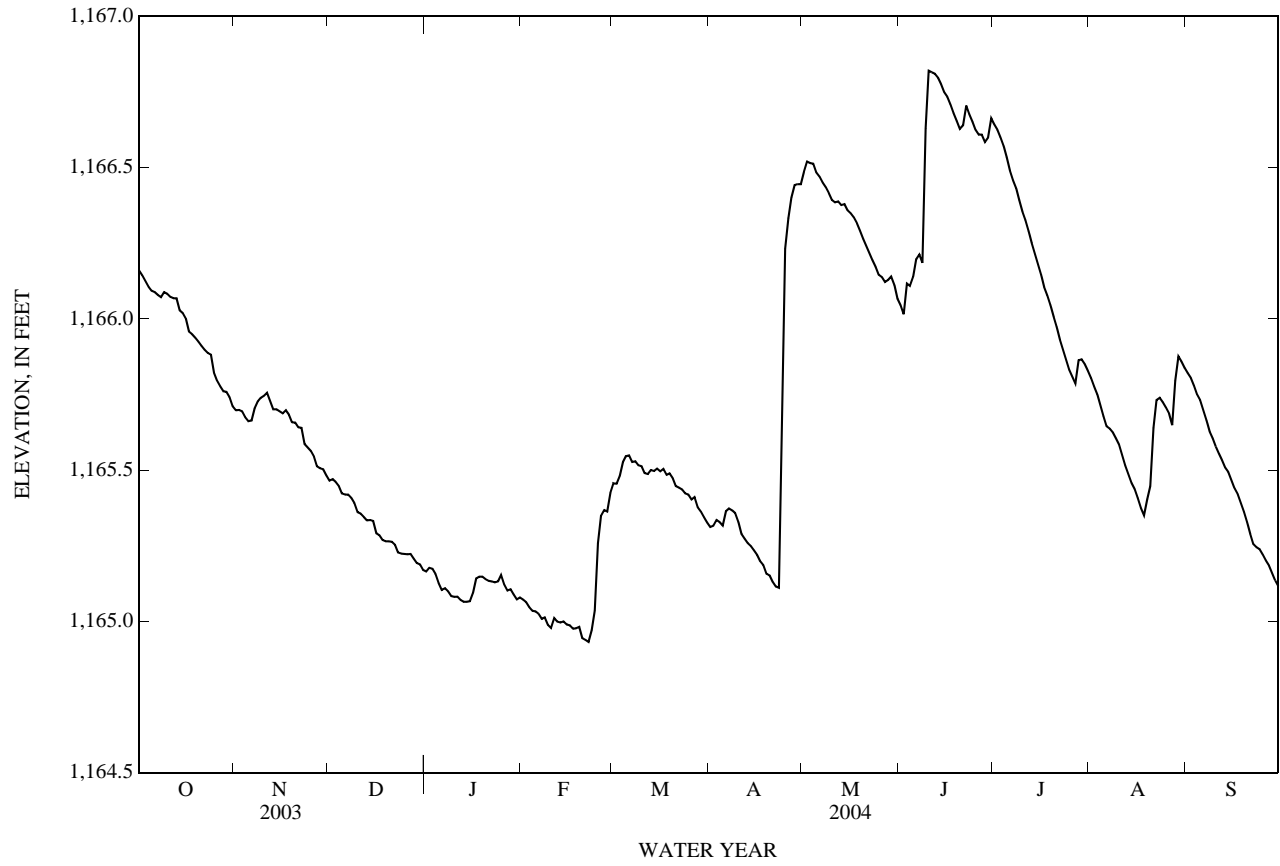
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 441,200 acre-ft, Oct. 14, 1981, elevation, 1,190.22 ft; minimum since normal operating level was reached in May 1969, 113,200 acre-ft, Mar. 18, 19, 2002, elevation, 1,164.08 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,166.85 ft, June 12; minimum elevation, 1,164.91 ft, Feb. 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	1,166.16	1,165.70	1,165.46	1,165.16	1,165.07	1,165.46	1,165.31	1,166.48	1,166.05	1,166.64	1,165.81	1,165.82
2	1,166.14	1,165.70	1,165.47	1,165.18	1,165.06	1,165.45	1,165.32	1,166.52	1,166.02	1,166.62	1,165.78	1,165.81
3	1,166.13	1,165.69	1,165.46	1,165.17	1,165.05	1,165.48	1,165.34	1,166.52	1,166.12	1,166.60	1,165.75	1,165.78
4	1,166.11	1,165.67	1,165.45	1,165.16	1,165.04	1,165.53	1,165.33	1,166.51	1,166.11	1,166.57	1,165.71	1,165.75
5	1,166.09	1,165.66	1,165.42	1,165.13	1,165.03	1,165.55	1,165.32	1,166.48	1,166.14	1,166.53	1,165.68	1,165.73
6	1,166.09	1,165.66	1,165.42	1,165.10	1,165.03	1,165.55	1,165.36	1,166.47	1,166.20	1,166.49	1,165.64	1,165.70
7	1,166.08	1,165.70	1,165.42	1,165.11	1,165.01	1,165.53	1,165.37	1,166.45	1,166.21	1,166.46	1,165.64	1,165.66
8	1,166.07	1,165.73	1,165.41	1,165.10	1,165.01	1,165.53	1,165.37	1,166.43	1,166.18	1,166.43	1,165.62	1,165.63
9	1,166.09	1,165.74	1,165.39	1,165.08	1,164.99	1,165.52	1,165.36	1,166.42	1,166.63	1,166.39	1,165.61	1,165.61
10	1,166.08	1,165.75	1,165.36	1,165.08	1,164.98	1,165.51	1,165.33	1,166.39	1,166.82	1,166.36	1,165.59	1,165.58
11	1,166.07	1,165.76	1,165.36	1,165.08	1,165.01	1,165.49	1,165.29	1,166.38	1,166.82	1,166.33	1,165.55	1,165.55
12	1,166.07	1,165.73	1,165.35	1,165.07	1,165.00	1,165.49	1,165.27	1,166.39	1,166.81	1,166.29	1,165.52	1,165.53
13	1,166.07	1,165.70	1,165.33	1,165.07	1,165.00	1,165.50	1,165.26	1,166.38	1,166.80	1,166.25	1,165.49	1,165.51
14	1,166.03	1,165.70	1,165.34	1,165.07	1,165.00	1,165.50	1,165.25	1,166.38	1,166.78	1,166.22	1,165.46	1,165.49
15	1,166.02	1,165.69	1,165.33	1,165.07	1,164.99	1,165.51	1,165.23	1,166.36	1,166.75	1,166.18	1,165.44	1,165.47
16	1,166.00	1,165.69	1,165.29	1,165.09	1,164.99	1,165.50	1,165.22	1,166.35	1,166.73	1,166.15	1,165.41	1,165.44
17	1,165.96	1,165.70	1,165.29	1,165.14	1,164.98	1,165.50	1,165.20	1,166.34	1,166.71	1,166.11	1,165.38	1,165.42
18	1,165.95	1,165.68	1,165.27	1,165.15	1,164.98	1,165.48	1,165.19	1,166.32	1,166.68	1,166.08	1,165.35	1,165.39
19	1,165.94	1,165.66	1,165.27	1,165.15	1,164.98	1,165.49	1,165.16	1,166.29	1,166.65	1,166.05	1,165.40	1,165.36
20	1,165.92	1,165.66	1,165.27	1,165.14	1,164.94	1,165.47	1,165.15	1,166.27	1,166.63	1,166.01	1,165.45	1,165.33
21	1,165.91	1,165.64	1,165.26	1,165.13	1,164.94	1,165.45	1,165.13	1,166.24	1,166.64	1,165.97	1,165.64	1,165.29
22	1,165.90	1,165.64	1,165.25	1,165.13	1,164.93	1,165.44	1,165.12	1,166.22	1,166.70	1,165.93	1,165.73	1,165.26
23	1,165.89	1,165.59	1,165.23	1,165.13	1,164.97	1,165.44	1,165.11	1,166.19	1,166.68	1,165.90	1,165.74	1,165.24
24	1,165.88	1,165.58	1,165.22	1,165.13	1,165.04	1,165.42	1,165.62	1,166.17	1,166.65	1,165.87	1,165.72	1,165.24
25	1,165.82	1,165.56	1,165.22	1,165.15	1,165.26	1,165.42	1,166.23	1,166.15	1,166.62	1,165.83	1,165.71	1,165.22
26	1,165.80	1,165.55	1,165.22	1,165.12	1,165.35	1,165.40	1,166.33	1,166.14	1,166.61	1,165.81	1,165.69	1,165.20
27	1,165.78	1,165.51	1,165.22	1,165.10	1,165.37	1,165.41	1,166.40	1,166.12	1,166.61	1,165.79	1,165.65	1,165.18
28	1,165.76	1,165.51	1,165.21	1,165.11	1,165.36	1,165.38	1,166.44	1,166.13	1,166.59	1,165.86	1,165.80	1,165.16
29	1,165.76	1,165.50	1,165.19	1,165.09	1,165.42	1,165.36	1,166.44	1,166.14	1,166.60	1,165.87	1,165.88	1,165.13
30	1,165.74	1,165.48	1,165.19	1,165.07	---	1,165.34	1,166.44	1,166.11	1,166.66	1,165.85	1,165.86	1,165.12
31	1,165.71	---	1,165.17	1,165.08	---	1,165.33	---	1,166.07	---	1,165.83	1,165.84	---
MEAN	1,165.97	1,165.65	1,165.31	1,165.11	1,165.06	1,165.46	1,165.50	1,166.32	1,166.54	1,166.17	1,165.63	1,165.45
MAX	1,166.16	1,165.76	1,165.47	1,165.18	1,165.42	1,165.55	1,166.44	1,166.52	1,166.82	1,166.64	1,165.88	1,165.82
MIN	1,165.71	1,165.48	1,165.17	1,165.07	1,164.93	1,165.33	1,165.11	1,166.07	1,166.02	1,165.79	1,165.35	1,165.12
CAL YR	2003	MEAN	1,167.21	MAX	1,168.68	MIN	1,165.17					
WTR YR	2004	MEAN	1,165.68	MAX	1,166.82	MIN	1,164.93					

08086400 Hubbard Creek Reservoir near Breckenridge, TX—Continued



08086400 Hubbard Creek Reservoir near Breckenridge, TX—Continued

## WATER-QUALITY RECORDS

## PERIOD OF RECORD.--

CHEMICAL DATA: Sept. 1963 to current year.

BIOCHEMICAL DATA: Sept. 1963 to current year.

324932098575101 -- HUBBARD CK RES SITE P01  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Trans- parency Secchi disc, meters (00078)	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, air, deg C (00020)	Temper- ature, water, deg C (00010)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
MAR													
10...	1030	1.00	.79	746	11.8	112	8.2	1,450	--	12.0	250	350	91.0
10...	1035	10.0	--	746	11.8	112	8.2	1,450	--	12.0	--	--	--
10...	1040	20.0	--	746	11.8	112	8.2	1,450	--	12.0	--	--	--
10...	1045	30.0	--	746	11.6	110	8.2	1,450	--	12.0	--	--	--
10...	1050	40.0	--	746	11.3	106	8.1	1,450	--	11.5	--	--	--
10...	1055	53.0	--	746	10.4	97	8.0	1,460	--	11.0	250	360	91.9
SEP													
02...	1007	1.00	1.22	752	7.4	95	8.3	1,380	25.0	27.0	230	320	81.3
02...	1013	10.0	--	752	7.2	91	8.2	1,380	--	26.5	--	--	--
02...	1019	20.0	--	752	7.1	90	8.3	1,380	--	26.5	--	--	--
02...	1025	30.0	--	752	5.3	67	7.9	1,390	--	26.5	--	--	--
02...	1031	40.0	--	752	4.7	60	7.7	1,390	--	26.5	--	--	--
02...	1037	51.0	--	752	1.4	17	7.3	1,400	25.0	26.0	230	320	82.1

324932098575101 -- HUBBARD CK RES SITE P01  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	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)
MAR													
10...	30.9	10.9	4	168	50	107	130	<1	335d	.4	5.4	100	805
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	30.9	10.9	4	169	50	110	133	<1	334d	.4	5.9	100	809
SEP													
02...	29.0	10.7	4	146	49	91	109	1	308d	.4	6.3	96.3	733
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
02...	28.8	10.7	4	150	49	98	119	<1	306d	.4	7.3	96.1	740

324932098575101 -- HUBBARD CK RES SITE P01  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	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)	Organic nitro- gen, water, fltrd, mg/L (00607)	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)
MAR									
10...	--	<.04	<.06	<.008	--	<.006	.004	10	1.6
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	.04	E.03n	<.008	--	<.006	.007	11	11.6
SEP									
02...	.39	<.04	<.06	<.008	--	<.02	<.04	<6	E.8n
02...	--	--	--	--	--	--	--	--	--
02...	.39	<.04	<.06	<.008	--	<.02	<.04	<6	2.5
02...	--	--	--	--	--	--	--	--	--
02...	.44	.06	<.06	<.008	.38	<.02	<.04	<6	76.5
02...	.65	.24	<.06	<.008	.40	<.02	<.04	<6	738

## 08086400 Hubbard Creek Reservoir near Breckenridge, TX—Continued

324649099000501 -- HUBBARD CK RES SITE P09  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Trans- parency Secchi disc, meters (00078)	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, air, deg C (00020)	Temper- ature, water, deg C (00010)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
MAR													
10...	1123	1.00	.55	745	11.5	112	8.3	1,380	--	13.0	240	340	87.7
10...	1129	10.0	--	745	11.6	113	8.3	1,380	--	13.0	--	--	--
10...	1136	20.0	--	745	11.5	111	8.3	1,380	--	12.5	--	--	--
10...	1142	30.0	--	745	10.8	104	8.2	1,400	--	12.5	230	330	86.0
SEP													
02...	1105	1.00	.76	750	7.2	92	8.0	1,390	27.0	27.0	230	320	81.3
02...	1110	10.0	--	750	5.9	74	7.8	1,390	--	26.5	--	--	--
02...	1115	20.0	--	750	3.5	45	7.5	1,380	--	26.5	--	--	--
02...	1120	31.0	--	750	1.4	18	7.5	1,360	27.0	26.5	230	330	83.1

324649099000501 -- HUBBARD CK RES SITE P09  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	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)
MAR													
10...	29.5	10.6	4	158	49	104	124	1	313d	.4	5.2	95.4	762
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	29.0	10.2	4	155	49	105	126	<1	321d	.4	5.4	96.4	765
SEP													
02...	29.0	10.6	4	150	49	91	108	1	309d	.4	6.5	96.3	737
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
02...	28.7	10.6	4	146	48	95	115	<1	297d	.4	7.0	94.4	724

324649099000501 -- HUBBARD CK RES SITE P09  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	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)	Organic nitro- gen, water, fltrd, mg/L (00607)	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)
MAR									
10...	--	<.04	E.04n	<.008	--	<.006	.005	E6n	1.5
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	<.04	E.04n	<.008	--	<.006	.005	E4n	10.3
SEP									
02...	.39	<.04	<.06	<.008	--	<.02	<.04	E6n	1.3
02...	.38	<.04	<.06	<.008	--	<.02	<.04	<6	3.4
02...	--	--	--	--	--	--	--	--	--
02...	.49	.09	<.06	<.008	.40	<.02	<.04	<6	119

## BRAZOS RIVER BASIN

08086400 Hubbard Creek Reservoir near Breckenridge, TX—Continued

324606099000201 -- HUBBARD CK RES SITE P10  
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, air, deg C (00020)	Temper- ature, water, deg C (00010)
MAR									
10...	1159	1.00	745	11.3	111	8.3	1,280	--	13.5
10...	1204	10.0	745	11.2	110	8.3	1,280	--	13.5
10...	1209	19.0	745	11.1	108	8.2	1,300	--	13.0
SEP									
02...	1134	1.00	752	7.6	97	8.5	1,390	28.0	27.0
02...	1138	10.0	752	6.4	81	8.2	1,380	28.0	26.5
02...	1142	20.0	752	3.5	44	7.7	1,360	28.0	26.0

324949098594301 -- HUBBARD CK RES SITE P13  
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, air, deg C (00020)	Temper- ature, water, deg C (00010)
MAR									
10...	1234	1.00	746	11.6	112	8.1	1,450	--	12.5
10...	1237	10.0	746	11.5	111	8.1	1,450	--	12.5
10...	1241	20.0	746	11.4	109	8.0	1,450	--	12.0
10...	1245	30.0	746	10.9	103	7.9	1,450	--	11.5
10...	1248	39.0	746	10.8	102	8.1	1,450	--	11.5
SEP									
02...	1212	1.00	750	8.8	113	8.3	1,380	29.0	27.5
02...	1216	10.0	750	8.1	103	8.3	1,390	29.0	27.0
02...	1220	20.0	750	4.7	60	7.8	1,400	29.0	26.5
02...	1224	32.0	750	3.8	48	7.7	1,400	29.0	26.5

Remark codes used in this table:

&lt; -- 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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## BRAZOS RIVER BASIN

08086600 Lake Daniel near Breckenridge, TX

LOCATION.--Lat 32°38'52", long 98°52'09", Stephens County, Hydrologic Unit 12060105, 66 ft left and 128 ft upstream from service outlet structure at Gonzales Creek Dam, on Gonzales Creek, 2.0 miles east of U.S. Highway 183, 7.0 miles south of Breckenridge, and 16.0 miles upstream from mouth.

DRAINAGE AREA.--115 mi<sup>2</sup>.

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. Interruptions in the record were due to the lake being considered dry below elevation 1,258.12 ft. The lake is formed by a rolled earthfill dam 2,655 ft long. The dam was completed on Sept. 1, 1948 and first filled June 1949. The dam and reservoir are owned and operated by city of Breckenridge. Water is released from service spillway through three 18-inch gated outlets into two 8.0- by 8.0-ft conduits into Gonzales Creek and diverted from a downstream lake to the treatment plant. The unregulated service spillway, located near left end of dam, is a concrete drop inlet structure with double horseshoe conduits. The emergency spillway is located at left end of the dam, and is 1,500 ft in length. Lake was built for flood control, industrial, and municipal uses. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	1,295.5
Crest of emergency spillway	1,284.5
Crest of service spillway	1,278.5
Lowest gated outlet (invert)	1,250.0

COOPERATION.--Records of diversions may be obtained from the city of Breckenridge.

EXTREMES FOR PERIOD OF RECORD.--Mar. 1999 to Sept. 2002: Maximum contents, 4,400 acre-ft, Apr. 1, 1999; minimum contents, 200 acre-ft, Feb. 15, 2001; Mar. 1999 to current year: Maximum elevation, 1,271.94 ft, Apr. 1, 1999; minimum elevation, 1,258.05 ft, on several days in 2003.

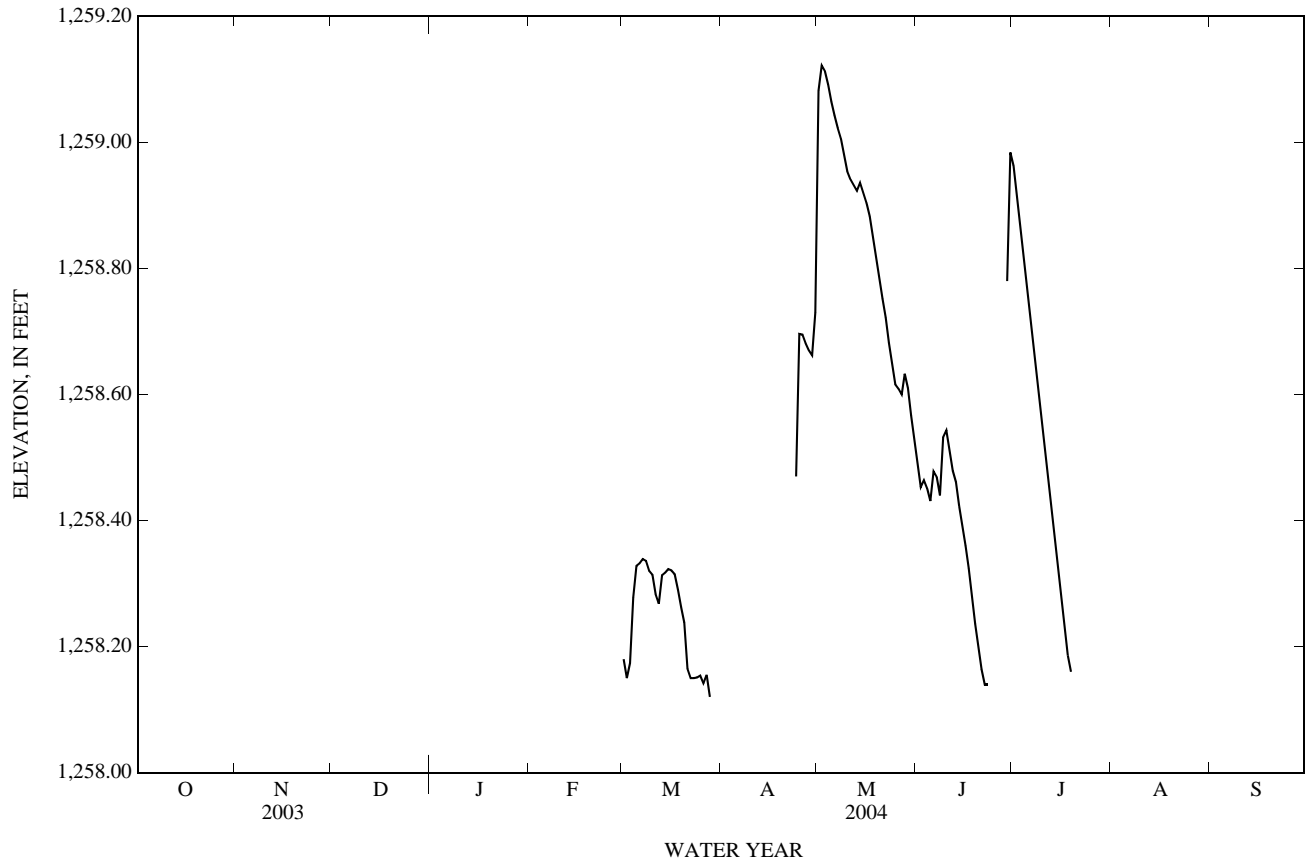
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,259.13 ft, May 2; minimum recorded elevation, 1,258.12 ft, Mar. 1, 2, 21-28.

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	---	---	---	---	---	1,258.18	---	1,259.08	1,258.49	1,258.96	---	---
2	---	---	---	---	---	1,258.15	---	1,259.12	1,258.45	1,258.92	---	---
3	---	---	---	---	---	1,258.17	---	1,259.11	1,258.46	1,258.88	---	---
4	---	---	---	---	---	1,258.28	---	1,259.09	1,258.45	1,258.84	---	---
5	---	---	---	---	---	1,258.33	---	1,259.07	1,258.43	1,258.79	---	---
6	---	---	---	---	---	1,258.33	---	1,259.04	1,258.48	1,258.74	---	---
7	---	---	---	---	---	1,258.34	---	1,259.02	1,258.47	1,258.70	---	---
8	---	---	---	---	---	1,258.34	---	1,259.01	1,258.44	1,258.66	---	---
9	---	---	---	---	---	1,258.32	---	1,258.98	1,258.53	1,258.61	---	---
10	---	---	---	---	---	1,258.31	---	1,258.95	1,258.54	1,258.57	---	---
11	---	---	---	---	---	1,258.28	---	1,258.94	1,258.51	1,258.52	---	---
12	---	---	---	---	---	1,258.27	---	1,258.93	1,258.48	1,258.46	---	---
13	---	---	---	---	---	1,258.31	---	1,258.92	1,258.46	1,258.42	---	---
14	---	---	---	---	---	1,258.32	---	1,258.94	1,258.42	1,258.38	---	---
15	---	---	---	---	---	1,258.32	---	1,258.92	1,258.39	1,258.33	---	---
16	---	---	---	---	---	1,258.32	---	1,258.90	1,258.36	1,258.28	---	---
17	---	---	---	---	---	1,258.32	---	1,258.88	1,258.32	1,258.23	---	---
18	---	---	---	---	---	1,258.29	---	1,258.85	1,258.28	1,258.19	---	---
19	---	---	---	---	---	1,258.26	---	1,258.82	1,258.24	1,258.16	---	---
20	---	---	---	---	---	1,258.24	---	1,258.79	1,258.20	---	---	---
21	---	---	---	---	---	1,258.16	---	1,258.75	1,258.16	---	---	---
22	---	---	---	---	---	1,258.15	---	1,258.72	1,258.14	---	---	---
23	---	---	---	---	---	1,258.15	---	1,258.68	1,258.14	---	---	---
24	---	---	---	---	---	1,258.15	1,258.47	1,258.65	---	---	---	---
25	---	---	---	---	---	1,258.15	1,258.70	1,258.62	---	---	---	---
26	---	---	---	---	---	1,258.14	1,258.69	1,258.61	---	---	---	---
27	---	---	---	---	---	1,258.15	1,258.68	1,258.60	---	---	---	---
28	---	---	---	---	---	1,258.12	1,258.67	1,258.63	---	---	---	---
29	---	---	---	---	---	---	1,258.66	1,258.61	1,258.78	---	---	---
30	---	---	---	---	---	---	1,258.73	1,258.57	1,258.98	---	---	---
31	---	---	---	---	---	---	---	1,258.53	---	---	---	---
MEAN	---	---	---	---	---	---	---	1,258.85	---	---	---	---
MAX	---	---	---	---	---	---	---	1,259.12	---	---	---	---
MIN	---	---	---	---	---	---	---	1,258.53	---	---	---	---



08086600 Lake Daniel near Breckenridge, TX—Continued



## BRAZOS RIVER BASIN

08088000 Brazos River near South Bend, TX

LOCATION.--Lat 33°01'27", long 98°38'37", Young County, Hydrologic Unit 12060201, on left bank 225 ft downstream from bridge on State Highway 67, 1.8 mi downstream from Clear Fork Brazos River, 2.0 mi northeast of South Bend, and at mile 758.2.

DRAINAGE AREA.--22,673 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--Sept. 1938 to current year. Water-quality records: Chemical data: July 1941 to Mar. 1948. Biochemical data: Nov. 1977 to Sept. 1991. Pesticide data: Mar. 1968 to Apr. 1982. Sediment data: May to Sept. 1962, Nov. 1977 to Sept. 1991. Specific conductance: Jan. 1942 to Mar. 1948, Nov. 1977 to Sept. 1981. Water temperature: Nov. 1977 to Sept. 1981.

REVISED RECORDS.--WRD TX-74-1: 1973. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,002.98 ft above NGVD of 1929. Prior to Feb. 23, 1939, nonrecording gage at site 255 ft upstream, and Feb. 23, 1939, to Mar. 9, 1961, water-stage recorder at site 225 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those for the period from Aug. 27, to Sep. 1, which are fair. Since water year 1962, at least 10% of contributing drainage area has been regulated. There are many small diversions upstream from station for municipal supply and oil field operations. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--23 years (water years 1939-61), 993 ft<sup>3</sup>/s (719,100 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1876 reached a stage of 36.2 ft, from information by Texas Department of Transportation and U.S. Army Corps of Engineers. Flood of Sept. 24, 1900, reached a stage of 29.5 ft, and flood of June 16, 1930, reached a stage of 35.5 ft, from information by local residents.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS, 1939-1961: Maximum discharge, 87,400 ft<sup>3</sup>/s May 4, 1941 (gage height, 27.35 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	13	0.05	3.7	0.49	11	128	121	380	8.2	1,170	18,500	949
2	12	0.24	4.2	0.58	11	139	99	387	56	918	7,250	407
3	11	0.13	3.1	0.61	9.5	161	83	282	131	715	3,010	486
4	9.0	0.00	3.0	0.28	9.8	165	70	220	133	610	2,480	502
5	9.5	0.13	2.3	0.21	10	181	67	177	144	457	1,980	461
6	16	0.78	2.2	0.17	10	342	170	146	246	413	1,570	845
7	12	3.0	2.6	0.40	10	468	170	122	703	348	1,350	695
8	8.7	4.0	2.1	0.24	12	1,150	181	104	570	274	1,210	579
9	8.8	5.0	1.4	0.14	9.9	1,460	195	87	1,240	225	1,260	510
10	6.8	3.7	1.4	0.21	11	979	260	73	1,660	183	1,090	460
11	5.3	2.8	1.8	0.18	19	687	624	63	975	148	987	428
12	4.6	1.8	1.5	0.14	20	512	867	65	1,250	118	960	394
13	4.7	1.4	1.5	0.06	21	413	654	68	1,100	97	1,000	366
14	3.1	1.4	1.8	0.10	23	350	508	72	1,680	80	1,050	347
15	3.0	2.8	1.6	0.33	23	345	409	205	1,570	66	1,090	328
16	2.5	3.8	0.78	1.1	24	356	361	188	1,290	55	1,090	311
17	1.6	9.5	0.92	4.0	23	272	328	92	821	46	1,170	298
18	1.5	14	0.85	4.5	20	232	287	68	695	39	1,220	286
19	1.4	14	0.82	4.2	19	213	253	122	1,540	32	890	280
20	1.3	14	0.99	3.4	16	187	240	227	509	27	852	267
21	1.1	11	0.99	2.3	17	161	215	182	390	22	2,170	252
22	0.82	11	0.73	1.9	16	153	193	137	2,410	18	2,050	242
23	0.66	8.1	0.37	4.4	23	160	191	89	919	14	2,640	234
24	0.59	7.4	0.56	12	44	131	610	65	470	15	1,530	228
25	0.14	6.5	0.94	16	235	115	1,110	48	403	17	1,760	226
26	0.12	5.8	0.93	16	280	104	1,010	42	390	32	2,310	266
27	0.19	4.7	0.77	17	214	99	706	35	472	35	2,460	313
28	0.18	4.5	0.43	17	176	89	503	33	431	2,110	856	253
29	0.27	4.3	0.40	15	144	93	485	26	355	13,600	813	226
30	0.15	4.1	0.55	13	---	87	454	17	2,340	16,200	837	214
31	0.02	---	0.48	12	---	110	---	11	---	18,400	742	---
TOTAL	140.04	149.93	45.71	147.94	1,461.2	10,042	11,424	3,833	24,901.2	56,484	68,177	11,653
MEAN	4.52	5.00	1.47	4.77	50.4	324	381	124	830	1,822	2,199	388
MAX	16	14	4.2	17	280	1,460	1,110	387	2,410	18,400	18,500	949
MIN	0.02	0.00	0.37	0.06	9.5	87	67	11	8.2	14	742	214
AC-FT	278	297	91	293	2,900	19,920	22,660	7,600	49,390	112,000	135,200	23,110

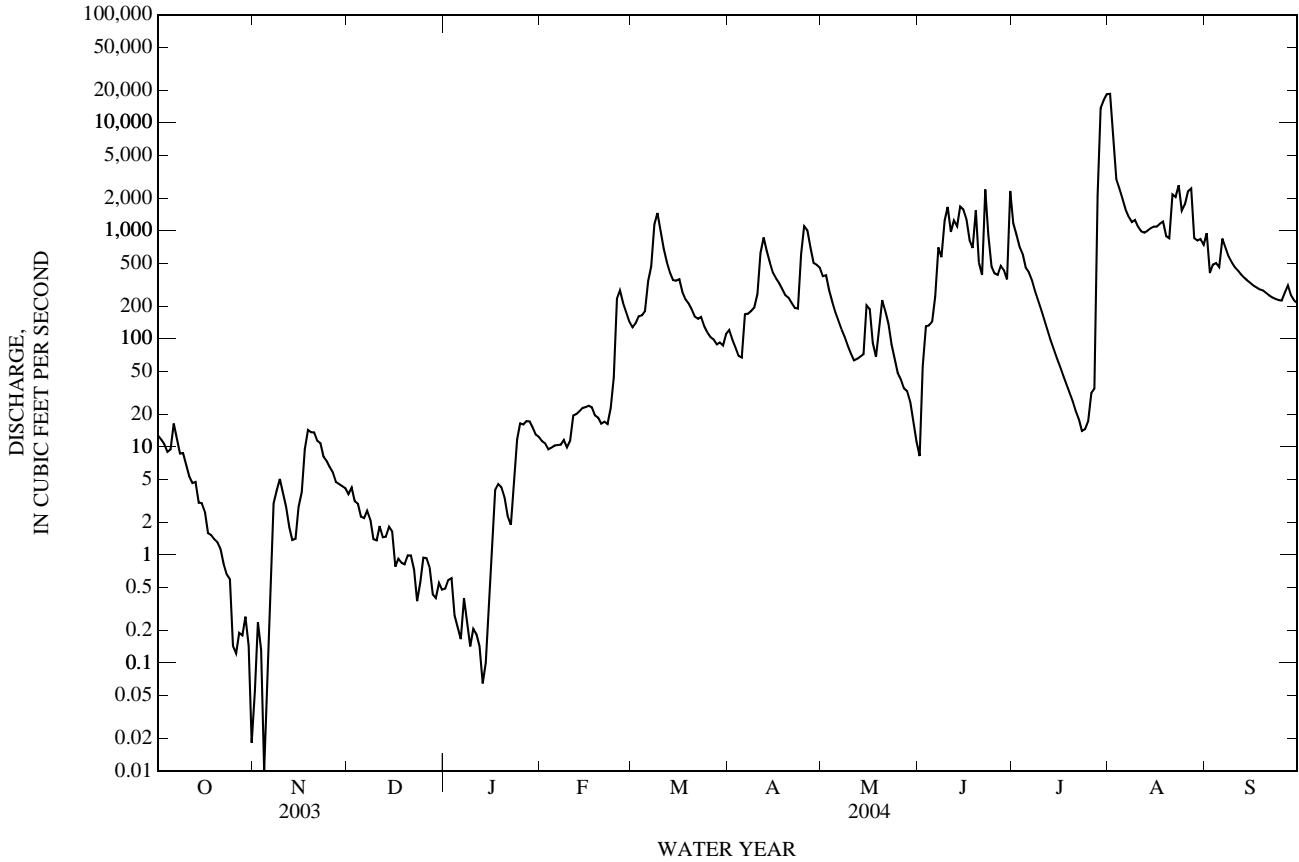
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004z, BY WATER YEAR (WY)

	808	349	320	221	490	488	545	1,241	1,544	421	681	913
MAX	7,600	2,143	6,024	1,743	8,987	4,143	5,435	6,872	8,652	2,236	9,363	6,231
(WY)	(1982)	(1975)	(1992)	(1968)	(1992)	(1992)	(1990)	(1982)	(1982)	(1967)	(1978)	(1962)
MIN	3.82	5.00	1.47	4.77	3.33	7.17	0.82	20.0	5.61	2.88	0.10	0.00
(WY)	(1999)	(2004)	(2004)	(2004)	(2000)	(1971)	(1971)	(1996)	(1984)	(1978)	(1998)	(1998)

08088000 Brazos River near South Bend, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004z	
ANNUAL TOTAL	59,187.08		188,459.02		668	
ANNUAL MEAN	162		515		174	
HIGHEST ANNUAL MEAN					2,966	1992
LOWEST ANNUAL MEAN					174	2000
HIGHEST DAILY MEAN	5,120	Jun 9	18,500	Aug 1	74,700	Aug 6, 1978
LOWEST DAILY MEAN	0.00	Nov 4	0.00	Nov 4	0.00	Aug 3, 1964
ANNUAL SEVEN-DAY MINIMUM	0.10	Aug 22	0.10	Oct 30	0.00	Aug 3, 1964
MAXIMUM PEAK FLOW			19,700	Aug 1	78,100	Aug 6, 1978
MAXIMUM PEAK STAGE			23.55	Aug 1	41.50	Aug 6, 1978
ANNUAL RUNOFF (AC-FT)	117,400		373,800		483,900	
10 PERCENT EXCEEDS	269		1,090		1,180	
50 PERCENT EXCEEDS	27		89		124	
90 PERCENT EXCEEDS	0.58		0.76		12	

z Period of regulated streamflow.



## BRAZOS RIVER BASIN

08088400 Lake Graham near Graham, TX

LOCATION.--Lat 33°08'04", long 98°36'48", Young County, Hydrologic Unit 12060201, near left end of earthen dam on Salt Creek, 2.2 mi northwest of Graham, 5.0 mi downstream from Briar Creek, and 9.5 mi upstream from mouth.

DRAINAGE AREA.--221 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1963 to Sept. 2002 (daily mean contents), Oct. 2002 to current year. Prior to Oct. 1965, end of month contents only.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.30 ft above NGVD of 1929. Prior to Oct. 1963, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good. Mar. 1958 to Sept. 1963 end of month contents were not published. The lake is formed by a rolled earthfill dam 5,000 ft long. Lake Graham was connected with Lake Eddleman in 1959 by a cut channel at a gage height of 1,050.0 ft. Deliberate impoundment began Apr. 28, 1958, and dam was completed in July 1958. The uncontrolled emergency spillway is a 1,050-foot-wide cut at the right end of dam. The spillway is designed to discharge 136,500 ft<sup>3</sup>/s at a gage height of 1,087.5 ft. The dam is the property of the city of Graham and was built to impound water for municipal and industrial uses. In addition, water is used by the Texas Electric Service Co. for operation of their steam generating powerplant. New capacity table from Texas Water Development Board hydrosurvey of June 1998 was put into use Oct. 1, 2000. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	1,092.0
Crest of spillway	1,075.0
Bottom of interconnecting channel	1,050.0
Lowest gated outlet (invert)	1,050.0

COOPERATION.--Capacity table was provided by Freese and Nichols Inc., Consulting Engineers.

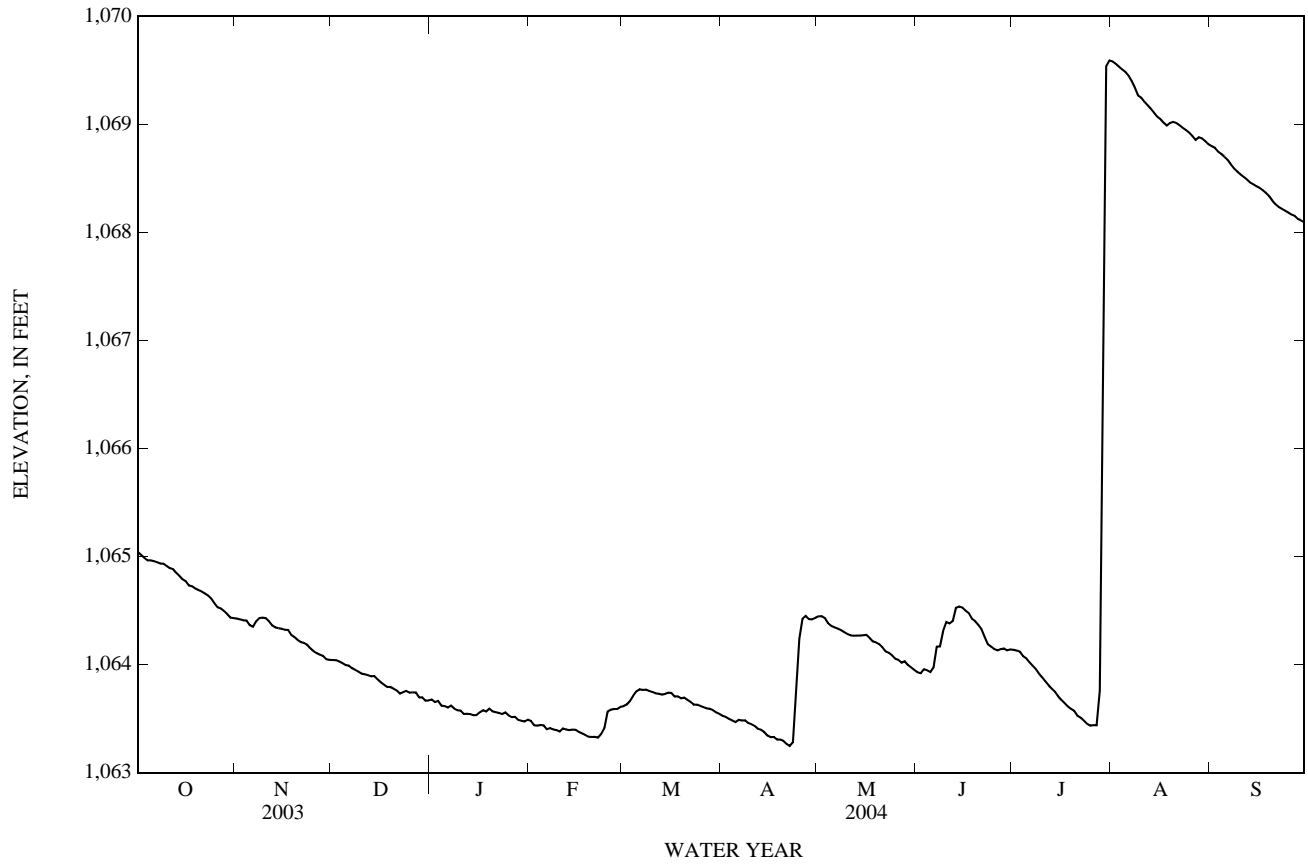
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 63,280 acre-ft, May 3, 1990, gage height, 1,078.52 ft; minimum, 21,450 acre-ft Apr 21, 2004, gage height, 1,063.21 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,069.61 ft, July 31; minimum elevation, 1,063.21 ft, April 21, 22.

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

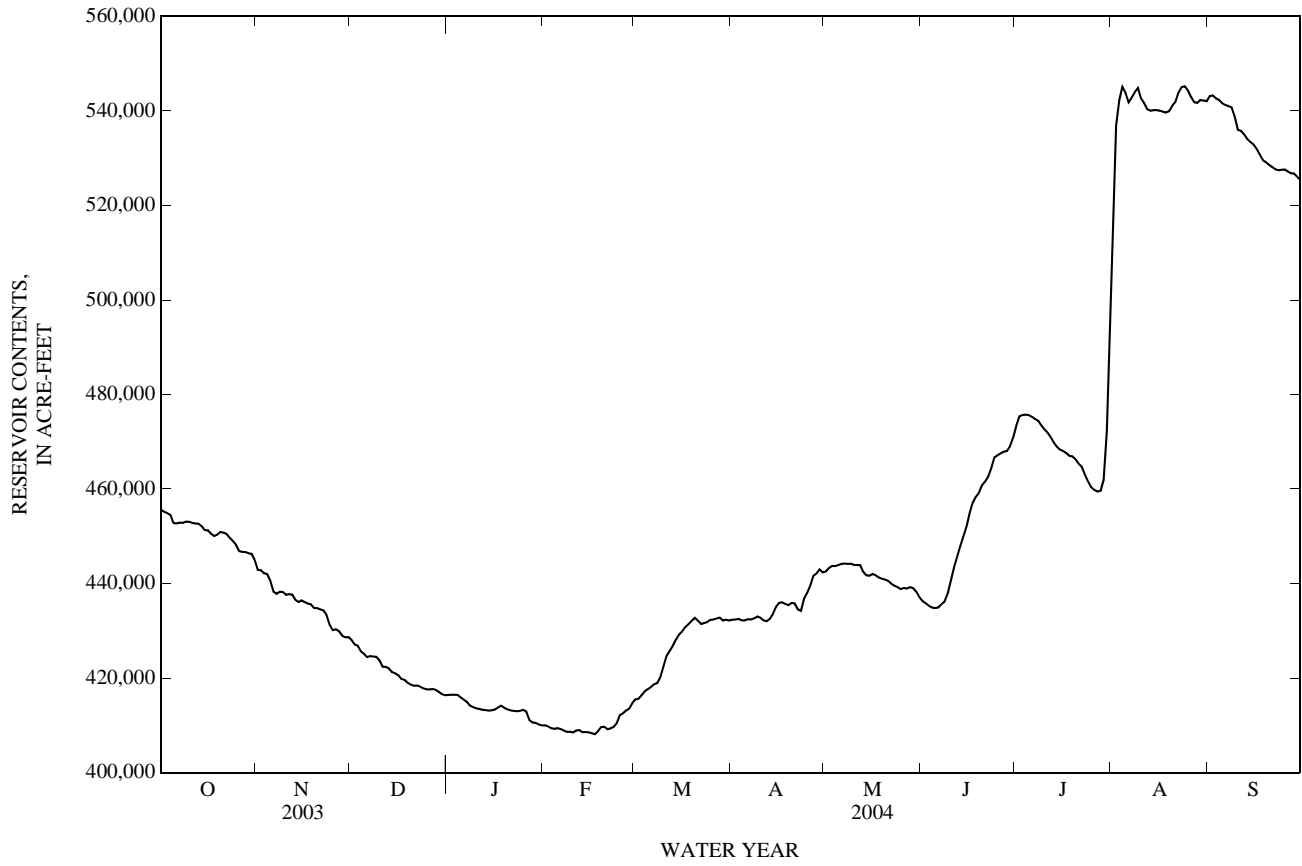
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,065.04	1,064.43	1,064.04	1,063.68	1,063.48	1,063.62	1,063.53	1,064.45	1,063.93	1,064.14	1,069.58	1,068.80
2	1,065.02	1,064.42	1,064.04	1,063.65	1,063.44	1,063.63	1,063.52	1,064.45	1,063.92	1,064.13	1,069.56	1,068.78
3	1,064.99	1,064.41	1,064.03	1,063.66	1,063.44	1,063.66	1,063.50	1,064.43	1,063.96	1,064.12	1,069.53	1,068.75
4	1,064.96	1,064.41	1,064.01	1,063.62	1,063.44	1,063.71	1,063.48	1,064.38	1,063.95	1,064.08	1,069.51	1,068.73
5	1,064.96	1,064.37	1,064.00	1,063.62	1,063.44	1,063.75	1,063.47	1,064.36	1,063.93	1,064.06	1,069.49	1,068.70
6	1,064.96	1,064.35	1,063.99	1,063.60	1,063.40	1,063.77	1,063.49	1,064.34	1,063.97	1,064.02	1,069.45	1,068.67
7	1,064.95	1,064.40	1,063.97	1,063.62	1,063.41	1,063.77	1,063.48	1,064.33	1,064.17	1,063.99	1,069.40	1,068.63
8	1,064.94	1,064.43	1,063.95	1,063.59	1,063.40	1,063.77	1,063.48	1,064.32	1,064.17	1,063.96	1,069.34	1,068.59
9	1,064.93	1,064.43	1,063.94	1,063.58	1,063.39	1,063.76	1,063.46	1,064.30	1,064.31	1,063.92	1,069.27	1,068.56
10	1,064.91	1,064.43	1,063.92	1,063.58	1,063.38	1,063.75	1,063.45	1,064.28	1,064.39	1,063.88	1,069.25	1,068.54
11	1,064.89	1,064.40	1,063.91	1,063.54	1,063.41	1,063.73	1,063.43	1,064.27	1,064.38	1,063.85	1,069.21	1,068.52
12	1,064.88	1,064.36	1,063.90	1,063.55	1,063.40	1,063.73	1,063.41	1,064.27	1,064.40	1,063.81	1,069.18	1,068.49
13	1,064.85	1,064.34	1,063.89	1,063.54	1,063.39	1,063.72	1,063.40	1,064.27	1,064.53	1,063.78	1,069.14	1,068.46
14	1,064.82	1,064.34	1,063.89	1,063.53	1,063.40	1,063.73	1,063.38	1,064.27	1,064.54	1,063.75	1,069.11	1,068.45
15	1,064.79	1,064.33	1,063.86	1,063.53	1,063.40	1,063.74	1,063.34	1,064.27	1,064.53	1,063.71	1,069.07	1,068.43
16	1,064.77	1,064.32	1,063.84	1,063.56	1,063.38	1,063.74	1,063.33	1,064.28	1,064.50	1,063.67	1,069.05	1,068.41
17	1,064.73	1,064.32	1,063.81	1,063.58	1,063.36	1,063.70	1,063.33	1,064.25	1,064.48	1,063.64	1,069.02	1,068.39
18	1,064.72	1,064.28	1,063.79	1,063.57	1,063.35	1,063.71	1,063.31	1,064.21	1,064.42	1,063.61	1,068.99	1,068.37
19	1,064.70	1,064.26	1,063.79	1,063.59	1,063.33	1,063.69	1,063.31	1,064.20	1,064.40	1,063.59	1,069.01	1,068.34
20	1,064.69	1,064.23	1,063.78	1,063.57	1,063.33	1,063.69	1,063.29	1,064.19	1,064.37	1,063.57	1,069.02	1,068.30
21	1,064.68	1,064.21	1,063.76	1,063.56	1,063.33	1,063.67	1,063.27	1,064.16	1,064.33	1,063.53	1,069.01	1,068.26
22	1,064.66	1,064.20	1,063.73	1,063.55	1,063.33	1,063.65	1,063.25	1,064.12	1,064.26	1,063.51	1,068.99	1,068.24
23	1,064.64	1,064.18	1,063.74	1,063.54	1,063.36	1,063.63	1,063.28	1,064.11	1,064.19	1,063.48	1,068.97	1,068.22
24	1,064.61	1,064.15	1,063.76	1,063.56	1,063.41	1,063.63	1,063.76	1,064.09	1,064.17	1,063.45	1,068.95	1,068.20
25	1,064.57	1,064.12	1,063.74	1,063.53	1,063.57	1,063.62	1,064.24	1,064.05	1,064.14	1,063.43	1,068.92	1,068.18
26	1,064.53	1,064.11	1,063.74	1,063.51	1,063.58	1,063.61	1,064.42	1,064.04	1,064.13	1,063.44	1,068.89	1,068.17
27	1,064.52	1,064.09	1,063.74	1,063.52	1,063.59	1,063.60	1,064.45	1,064.02	1,064.14	1,063.44	1,068.86	1,068.15
28	1,064.50	1,064.08	1,063.70	1,063.49	1,063.59	1,063.59	1,064.42	1,064.03	1,064.15	1,063.76	1,068.88	1,068.13
29	1,064.47	1,064.05	1,063.70	1,063.48	1,063.61	1,063.58	1,064.42	1,064.00	1,064.13	1,067.63	1,068.87	1,068.11
30	1,064.43	1,064.04	1,063.67	1,063.47	---	1,063.56	1,064.43	1,063.97	1,064.14	1,069.54	1,068.85	1,068.09
31	1,064.43	---	1,063.67	1,063.49	---	1,063.54	---	1,063.95	---	1,069.59	1,068.82	---
MEAN	1,064.76	1,064.28	1,063.85	1,063.56	1,063.43	1,063.68	1,063.61	1,064.21	1,064.23	1,064.26	1,069.13	1,068.42
MAX	1,065.04	1,064.43	1,064.04	1,063.68	1,063.61	1,063.77	1,064.45	1,064.45	1,064.54	1,069.59	1,069.58	1,068.80
MIN	1,064.43	1,064.04	1,063.67	1,063.47	1,063.33	1,063.54	1,063.25	1,063.95	1,063.92	1,063.43	1,068.82	1,068.09
CAL YR	2003	MEAN	1,066.24	MAX	1,068.11	MIN	1,063.67					
WTR YR	2004	MEAN	1,064.79	MAX	1,069.59	MIN	1,063.25					

08088400 Lake Graham near Graham, TX—Continued





08088500 Possum Kingdom Lake near Graford, TX—Continued



## BRAZOS RIVER BASIN

08088610 Brazos River near Graford, TX

LOCATION.--Lat 32°51'29", long 98°24'41", Palo Pinto County, Hydrologic Unit 12060201, on State Highway 16, on left bank 1.25 mi downstream of Morris Sheppard Dam (formerly Possum Kingdom Dam), 1.3 mi upstream from Loving Creek, 11.3 mi southwest of Graford, and 18.8 mi upstream from Brazos River near Palo Pinto (station 08089000).

DRAINAGE AREA.--23,596 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--Oct. 1989 to current year. Prior to Feb. 8, 1995, published as "Brazos River at Morris Shepard Dam near Graford" (station 08088600).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 800.00 ft above NGVD of 1929. Prior to Fe. 8, 1995, water-stage recorder at site 1.25 mi upstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in Oct. 1989, at least 10% of contributing drainage area has been regulated. No known diversions.

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	38	136	640	34	33	34	53	57	60	514	632	276
2	34	94	106	34	122	105	54	134	60	712	2,620	296
3	34	231	118	35	35	33	55	381	237	577	5,230	367
4	653	31	282	34	35	386	56	60	59	259	2,660	426
5	712	471	35	34	34	39	57	56	53	351	2,640	638
6	80	947	34	34	33	31	172	100	309	470	1,200	407
7	33	66	34	339	33	30	120	71	58	381	383	98
8	32	31	35	191	33	31	53	56	54	380	87	540
9	32	316	35	33	32	32	54	137	58	464	1,220	1,950
10	32	241	419	33	29	32	52	85	56	308	1,870	728
11	33	133	138	33	33	31	120	57	53	388	835	392
12	33	31	35	97	30	31	57	439	52	498	803	755
13	32	27	279	33	31	143	200	402	52	379	86	260
14	33	28	141	33	31	31	68	58	52	425	311	226
15	44	28	100	34	31	41	54	56	51	77	332	749
16	199	301	97	35	31	52	164	192	51	75	455	747
17	36	34	188	35	104	283	254	235	50	77	393	845
18	31	25	35	35	168	63	274	322	49	81	368	70
19	31	27	215	34	30	52	311	143	90	183	149	67
20	31	27	96	119	29	52	55	133	152	245	335	68
21	30	186	41	34	29	182	767	58	53	80	410	69
22	255	29	35	34	30	58	587	399	464	607	625	70
23	307	27	34	34	37	52	72	248	58	644	783	71
24	36	843	35	34	34	53	252	61	205	382	1,120	73
25	31	137	35	35	353	102	381	221	73	235	1,090	74
26	31	40	36	483	89	54	138	59	84	47	909	334
27	31	27	36	247	86	52	417	59	408	47	813	71
28	31	72	35	103	33	163	57	58	90	48	102	70
29	32	50	35	34	35	131	590	162	91	366	386	273
30	195	30	135	33	---	52	536	450	93	748	233	157
31	1,100	---	38	33	---	52	---	499	---	800	96	---
TOTAL	4,262	4,666	3,557	2,393	1,663	2,483	6,080	5,448	3,275	10,848	29,176	11,167
MEAN	137	156	115	77.2	57.3	80.1	203	176	109	350	941	372
MAX	1,100	947	640	483	353	386	767	499	464	800	5,230	1,950
MIN	30	25	34	33	29	30	52	56	49	47	86	67
AC-FT	8,450	9,260	7,060	4,750	3,300	4,930	12,060	10,810	6,500	21,520	57,870	22,150

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY)

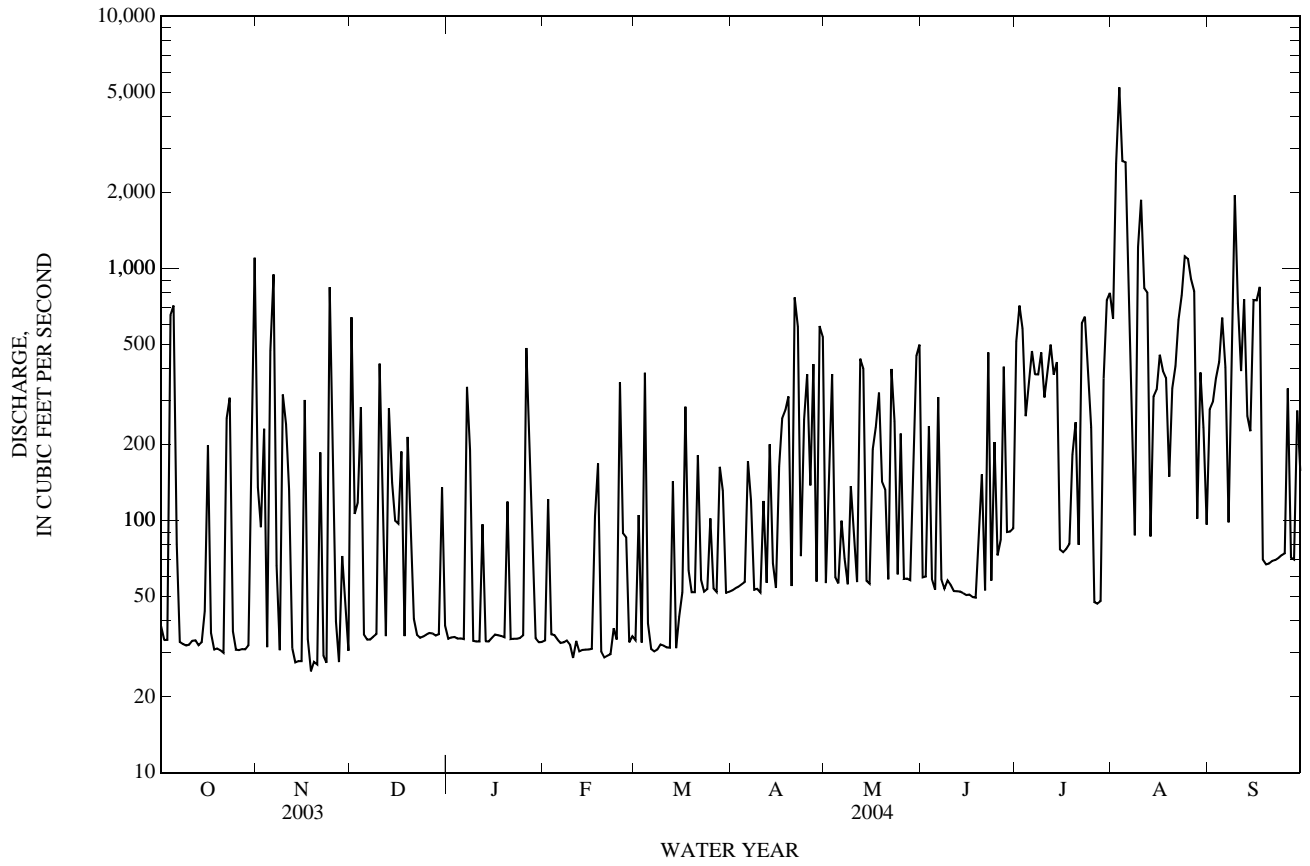
MEAN	310	216	689	293	935	845	868	1,165	1,626	447	530	523
MAX	1,819	656	7,172	2,197	8,659	4,948	7,952	8,503	8,024	1,201	1,228	1,751
(WY)	(1992)	(1992)	(1992)	(1992)	(1992)	(1992)	(1990)	(1990)	(1992)	(1992)	(1995)	(1996)
MIN	36.3	27.3	27.8	29.6	27.8	45.4	85.1	62.9	69.9	40.6	53.0	75.8
(WY)	(2002)	(2002)	(2000)	(2000)	(1999)	(1999)	(1999)	(1996)	(1996)	(1996)	(1996)	(2001)

## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1990 - 2004	
ANNUAL TOTAL	62,434		85,018			
ANNUAL MEAN	171		232		701	
HIGHEST ANNUAL MEAN					3,170	
LOWEST ANNUAL MEAN					103	
HIGHEST DAILY MEAN	1,230	Sep 25	5,230	Aug 3	43,800	May 5, 1990
LOWEST DAILY MEAN	25	Nov 18	25	Nov 18	4.1	Oct 31, 1998
ANNUAL SEVEN-DAY MINIMUM	32	Oct 7	31	Feb 10	6.6	Oct 29, 1998
MAXIMUM PEAK FLOW			8,750	Aug 3	48,000	Apr 26, 1990
MAXIMUM PEAK STAGE			78.34	Aug 3	89.79	Apr 26, 1990
ANNUAL RUNOFF (AC-FT)	123,800		168,600		507,800	
10 PERCENT EXCEEDS	479		588		1,120	
50 PERCENT EXCEEDS	84		72		121	
90 PERCENT EXCEEDS	35		31		32	



08088610 Brazos River near Graford, TX—Continued



## BRAZOS RIVER BASIN

08089000 Brazos River near Palo Pinto, TX

LOCATION.--Lat 32°51'45", long 98°18'08", Palo Pinto County, Hydrologic Unit 12060201, on right bank 25 ft upstream from bridge on Farm Road 4, 300 ft downstream from Dark Valley Creek, 6.5 mi north of Palo Pinto, and at mile 667.3.

DRAINAGE AREA.--23,811 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--Feb. 1924 to current year. Prior to Oct. 1933, published as "near Mineral Wells".

REVISED RECORDS.--WSP 1512: 1924-25, 1929, 1932-34. WSP 1712: 1935-36, 1937-38(M), 1939, 1940(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 834.23 ft above NGVD of 1929. Prior to Nov. 15, 1933, nonrecording gage at site 19 mi downstream at datum 38.19 ft lower. Nov. 15, 1933, to Apr. 10, 1989, at location 125 ft upstream from present site at datum 3.00 ft higher. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since 1941, at least 10% of contributing drainage area has been regulated. No known diversions.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--16 years (water years 1925-40) prior to completion of Possum Kingdom Lake, 1,262 ft<sup>3</sup>/s (724,700 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage occurred in 1876, from data by U.S. Army Corps of Engineers, and was several feet higher than the flood of June 16, 1930, which reached a stage of about 30 ft and was the highest since at least 1876.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS, 1924-1940: Maximum discharge, 95,600 ft<sup>3</sup>/s, June 16, 1930, at site then in use (gage height, 30 ft, present site and datum); 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	946	e62	e54	e44	150	86	391	387	173	877	75
2	59	e191	506	e52	e47	111	86	122	56	675	950	250
3	59	e175	e148	e47	101	169	86	166	85	971	9,680	336
4	59	177	e192	e44	60	113	86	431	231	824	3,210	341
5	696	e70	e253	e42	61	547	86	108	81	490	3,160	491
6	676	855	e62	e44	62	189	86	88	69	481	2,570	714
7	e145	403	e56	e59	61	105	186	106	457	666	283	455
8	e68	104	e48	e228	64	85	171	95	103	572	424	115
9	e49	e78	e48	e179	65	86	87	89	87	579	248	1,330
10	e44	335	e59	e60	66	86	86	145	167	665	2,390	1,900
11	e45	208	e240	e64	67	86	86	105	141	470	1,150	379
12	e42	e127	e148	e65	66	86	119	92	97	568	965	449
13	e43	e55	e83	e90	67	87	94	655	90	712	776	655
14	e42	e47	236	e47	68	194	210	271	82	575	106	189
15	e40	e44	127	e51	69	90	106	91	76	605	300	286
16	e63	e63	e117	e50	70	86	86	91	76	145	415	521
17	e122	e183	e136	e52	70	93	200	266	74	100	409	680
18	e44	e57	e155	49	140	330	394	347	73	95	401	793
19	e52	e46	e76	48	177	119	387	248	74	94	389	80
20	e49	e48	e203	e47	74	86	195	154	105	217	169	52
21	e46	e50	e114	e103	75	86	306	153	191	343	325	47
22	e54	e109	e59	48	75	197	983	68	103	126	419	47
23	e163	e36	e54	e55	77	108	349	451	540	734	637	50
24	290	e67	e51	49	90	86	245	262	186	e766	996	49
25	e58	531	e52	e45	946	86	365	121	230	e417	1,180	49
26	e54	140	e47	e64	525	109	413	182	155	e251	1,190	48
27	e56	e73	e45	e334	241	96	163	34	139	68	871	265
28	e46	e54	e45	179	175	86	455	41	719	57	899	65
29	e41	e81	e44	e132	137	206	95	59	315	59	195	50
30	e50	e54	e60	e66	---	152	971	312	207	352	304	212
31	e232	---	e120	e53	---	86	---	531	---	838	218	---
TOTAL	3,546	5,407	3,646	2,500	3,840	4,196	7,268	6,275	5,396	13,688	36,106	10,973
MEAN	114	180	118	80.6	132	135	242	202	180	442	1,165	366
MAX	696	946	506	334	946	547	983	655	719	971	9,680	1,900
MIN	40	36	44	42	44	85	86	34	56	57	106	47
AC-FT	7,030	10,720	7,230	4,960	7,620	8,320	14,420	12,450	10,700	27,150	71,620	21,760

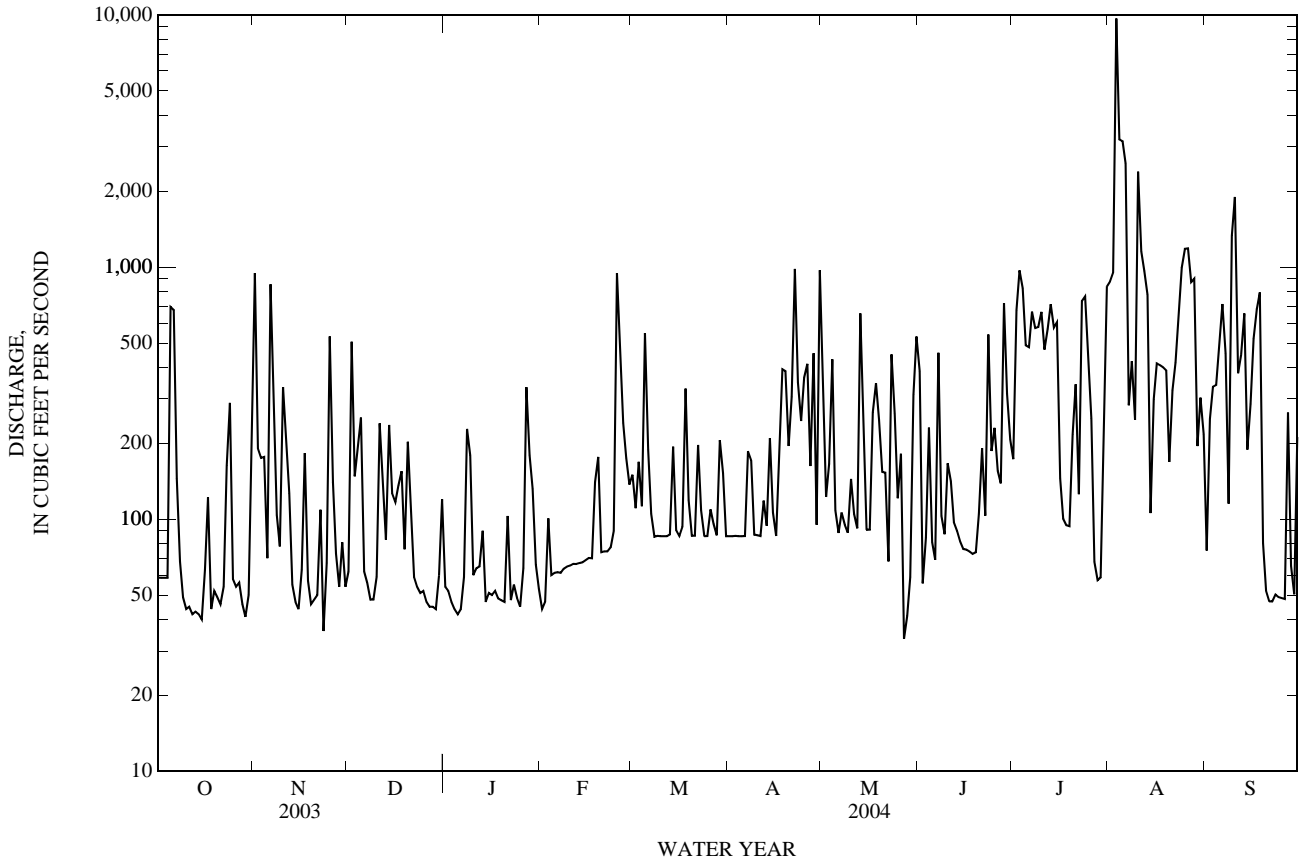
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004z, BY WATER YEAR (WY)

MEAN	1,244	484	449	401	557	543	825	1,906	1,682	838	723	952
MAX	13,140	3,020	7,800	2,254	9,064	5,280	8,881	30,210	10,540	3,971	7,486	7,650
(WY)	(1942)	(1975)	(1992)	(1992)	(1992)	(1992)	(1957)	(1957)	(1941)	(1961)	(1978)	(1966)
MIN	22.6	33.9	29.5	25.7	12.4	23.0	26.5	26.9	53.8	34.2	78.9	30.4
(WY)	(1953)	(2002)	(1955)	(1953)	(1971)	(1976)	(1971)	(1971)	(1978)	(1971)	(1988)	(1988)

08089000 Brazos River near Palo Pinto, TX—Continued

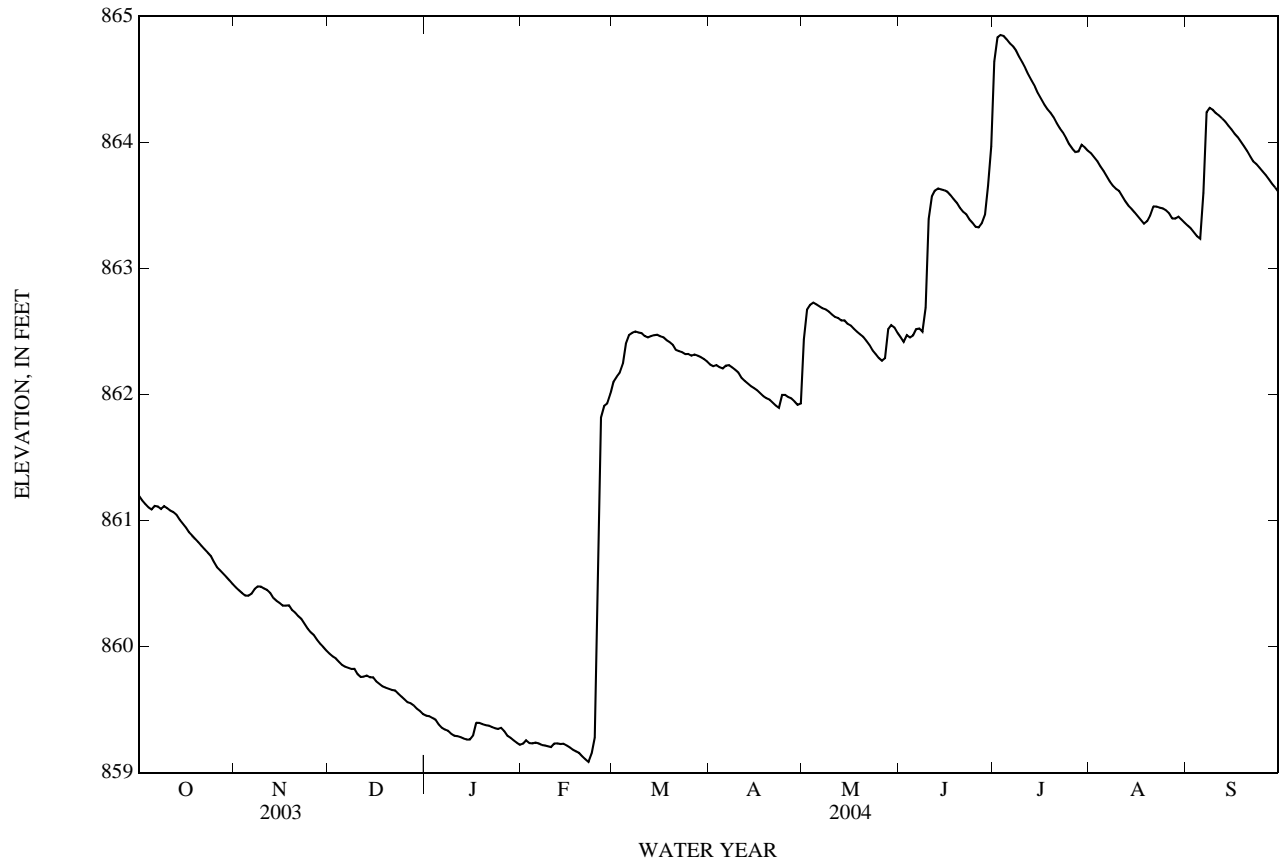
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1941 - 2004z	
ANNUAL TOTAL	72,222		102,841			
ANNUAL MEAN	198		281		885	
HIGHEST ANNUAL MEAN					4,145	1957
LOWEST ANNUAL MEAN					98.5	1988
HIGHEST DAILY MEAN	1,560	Feb 16	9,680	Aug 3	81,700	Apr 29, 1957
LOWEST DAILY MEAN	36	Nov 23	34	May 27	3.4	Apr 15, 1949
ANNUAL SEVEN-DAY MINIMUM	44	Oct 9	44	Oct 9	5.6	Nov 2, 1940
MAXIMUM PEAK FLOW			14,000	Aug 3	85,400	Apr 29, 1957
MAXIMUM PEAK STAGE			12.17	Aug 3	28.87	Apr 29, 1957
ANNUAL RUNOFF (AC-FT)	143,300		204,000		641,100	
10 PERCENT EXCEEDS	481		665		1,600	
50 PERCENT EXCEEDS	106		108		194	
90 PERCENT EXCEEDS	57		48		31	

z Period of regulated streamflow.  
e Estimated



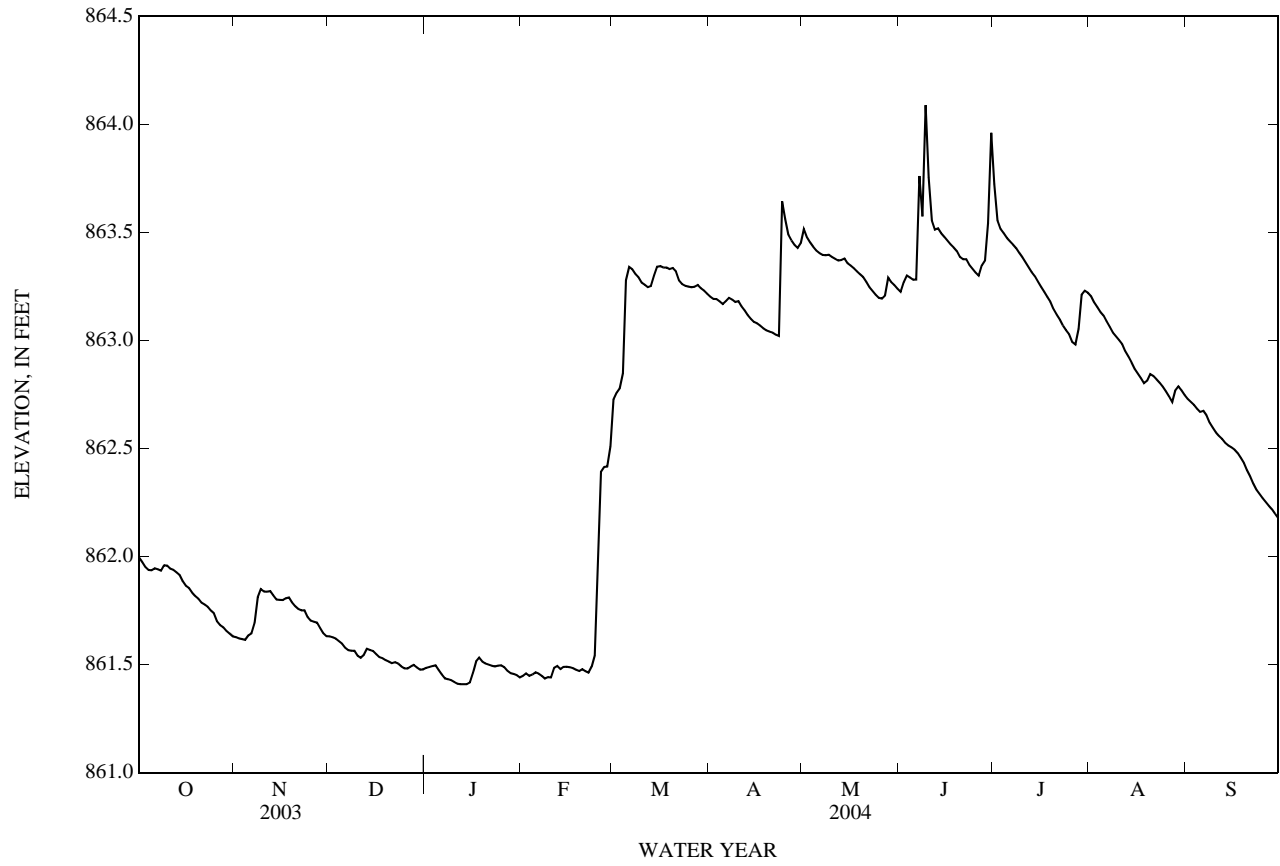


08090300 Lake Palo Pinto near Santo, TX—Continued





08090700 Lake Mineral Wells near Mineral Wells, TX—Continued



## BRAZOS RIVER BASIN

08090800 Brazos River near Dennis, TX

LOCATION.--Lat 32°36'56", long 97°55'32", Parker County, Hydrologic Unit 12060201, on right bank at downstream side of highway embankment of bridge on Farm Road 1189, 0.2 mi south of Dennis, 1.0 mi upstream from Patrick Creek, and at mile 589.8.

DRAINAGE AREA.--25,237 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--May 1968 to current year. Water-quality records: Chemical data: Oct. 1970 to Sept. 1995. Specific conductance: Oct. 1970 to Sept. 1995. Water temperature: Oct. 1970 to Sept. 1995.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 697.67 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in May 1968, at least 10% of contributing drainage area has been regulated. At times flow may be affected by discharge from floodwater-retarding structures controlling runoff from 53.0 mi<sup>2</sup> in the East Keechi and Pollard Creeks drainage basins. There are many diversions above station for irrigation, municipal supply and oil field operations.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1930, 31.8 ft in May 1957, from floodmark, 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	135	63	106	79	166	625	126	558	101	8,810	247	288
2	93	107	85	96	131	384	109	1,040	276	3,260	618	207
3	77	600	74	87	85	338	100	556	444	1,210	618	187
4	69	299	267	92	50	285	71	338	292	1,140	5,360	152
5	50	157	247	72	49	382	62	220	200	1,070	3,440	240
6	63	182	164	57	43	485	56	288	169	795	2,530	295
7	384	184	253	56	63	558	56	246	1,910	563	2,420	442
8	554	655	219	76	54	340	73	171	569	533	1,420	487
9	287	458	133	62	48	226	81	143	2,890	586	485	361
10	192	281	87	55	38	169	65	134	3,490	451	453	224
11	132	206	79	207	31	133	78	138	1,500	398	605	952
12	97	211	64	188	33	92	62	141	703	410	1,500	1,030
13	92	238	64	145	31	88	49	103	475	313	870	453
14	66	154	258	119	36	89	55	110	324	363	715	439
15	62	164	204	93	44	92	64	244	212	432	541	507
16	68	149	117	92	48	94	86	386	203	374	269	341
17	47	127	205	120	42	188	105	245	170	357	253	331
18	50	113	167	93	45	190	93	176	137	201	342	529
19	55	95	132	86	52	129	57	141	106	148	351	579
20	57	182	149	86	38	138	150	206	95	120	348	551
21	120	153	192	84	31	812	281	276	92	96	335	256
22	99	125	155	82	89	409	324	186	65	90	256	162
23	77	63	152	83	76	175	194	176	81	127	306	130
24	66	49	119	84	71	116	1,230	149	140	149	426	110
25	34	78	117	125	1,520	137	1,050	147	188	259	537	96
26	70	114	109	83	1,810	138	493	291	172	416	801	96
27	180	372	104	63	1,270	106	427	196	218	366	886	99
28	126	227	72	69	600	89	383	251	573	266	851	84
29	103	174	59	128	515	89	286	311	475	220	764	113
30	84	138	65	277	---	97	390	210	4,030	201	635	172
31	75	---	69	195	---	90	---	132	---	187	278	---
TOTAL	3,664	6,118	4,287	3,234	7,109	7,283	6,656	7,909	20,300	23,911	29,460	9,913
MEAN	118	204	138	104	245	235	222	255	677	771	950	330
MAX	554	655	267	277	1,810	812	1,230	1,040	4,030	8,810	5,360	1,030
MIN	34	49	59	55	31	88	49	103	65	90	247	84
AC-FT	7,270	12,140	8,500	6,410	14,100	14,450	13,200	15,690	40,270	47,430	58,430	19,660

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

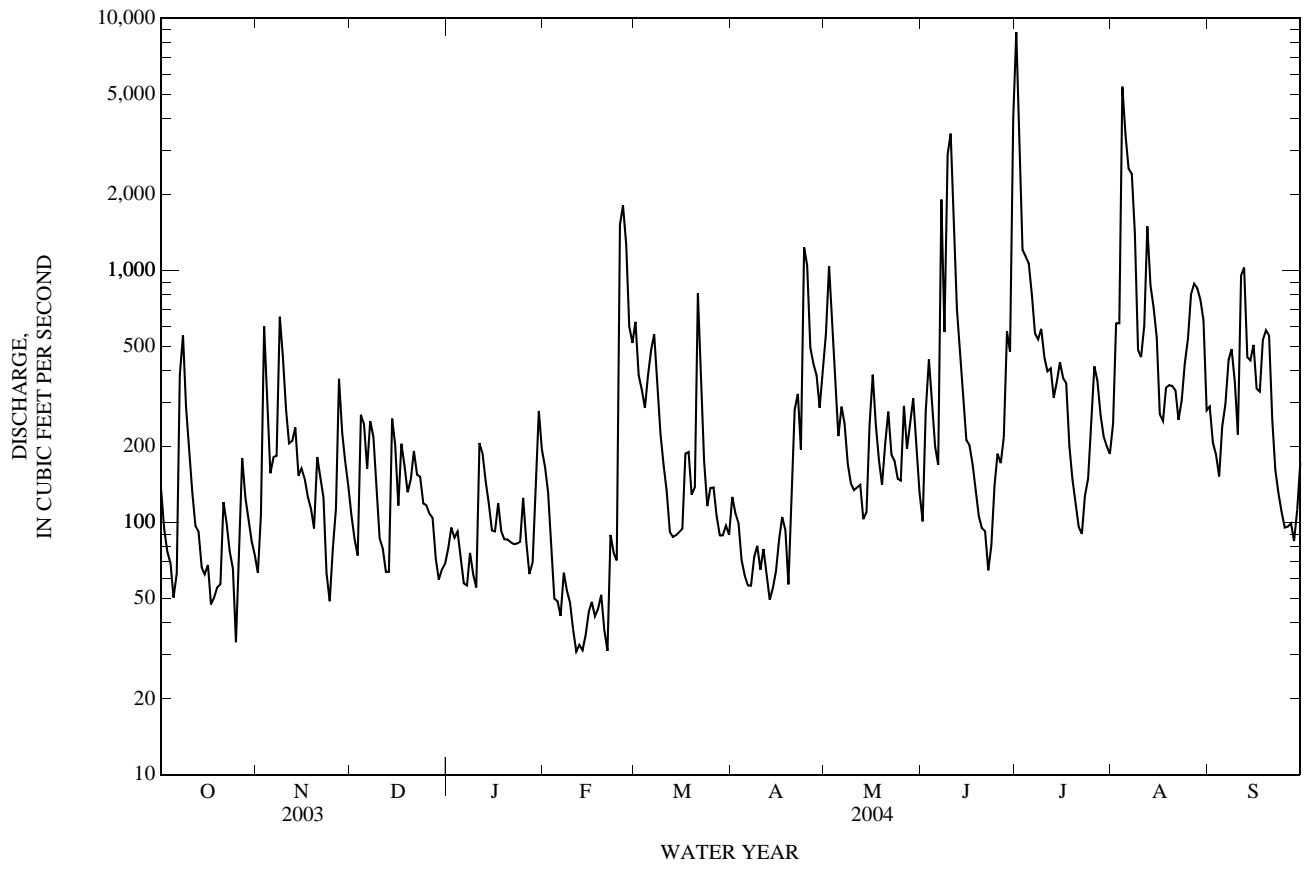
	1968	1975	1992	1999	2000	2001	2002	2003	2004	2005	2006	2007
MEAN	1,362	640	709	433	931	1,067	997	1,737	1,894	656	791	716
MAX	17,690	5,000	12,240	2,835	9,530	5,970	13,320	12,090	13,490	4,376	7,600	3,680
(WY)	(1982)	(1975)	(1992)	(1992)	(1992)	(1992)	(1990)	(1990)	(1982)	(1982)	(1978)	(1996)
MIN	27.6	36.0	35.5	32.8	26.6	26.7	27.1	30.4	61.7	37.0	56.6	14.9
(WY)	(2002)	(2000)	(2000)	(2000)	(2000)	(1971)	(1971)	(1988)	(1971)	(1978)	(1988)	(1984)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1968 - 2004	
ANNUAL TOTAL	69,678		129,844			
ANNUAL MEAN	191		355		993	
HIGHEST ANNUAL MEAN					4,141	
LOWEST ANNUAL MEAN					120	
HIGHEST DAILY MEAN	916	Feb 18	8,810	Jul 1	87,700	Oct 14, 1981
LOWEST DAILY MEAN	31	May 17	31	Feb 11	1.2	Aug 2, 1978
ANNUAL SEVEN-DAY MINIMUM	58	Oct 14	37	Feb 9	3.0	Jul 29, 1978
MAXIMUM PEAK FLOW			10,100	Jul 1	96,600	Oct 14, 1981
MAXIMUM PEAK STAGE			12.36	Jul 1	31.85	Oct 14, 1981
ANNUAL RUNOFF (AC-FT)	138,200		257,500		719,200	
10 PERCENT EXCEEDS	377		620		1,910	
50 PERCENT EXCEEDS	149		165		246	
90 PERCENT EXCEEDS	71		62		46	

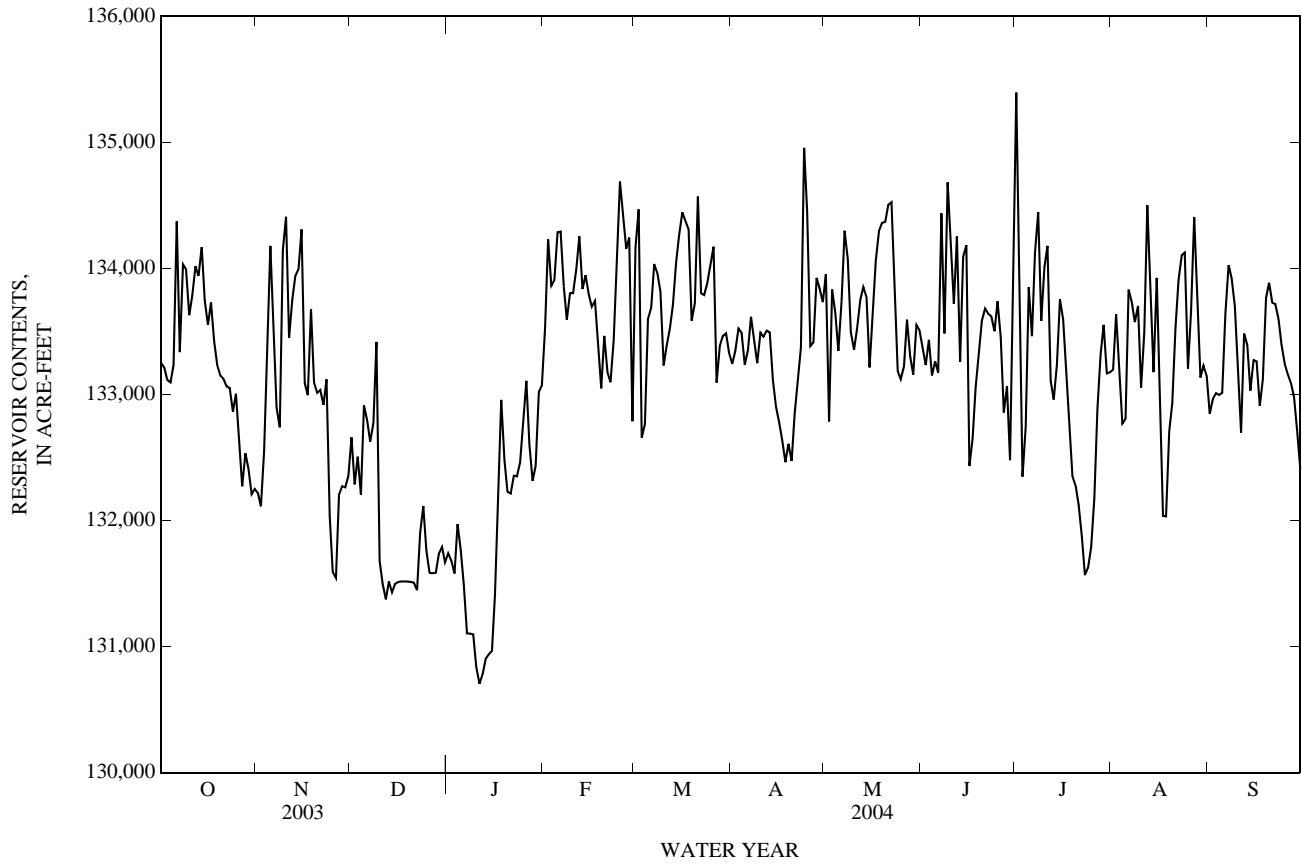


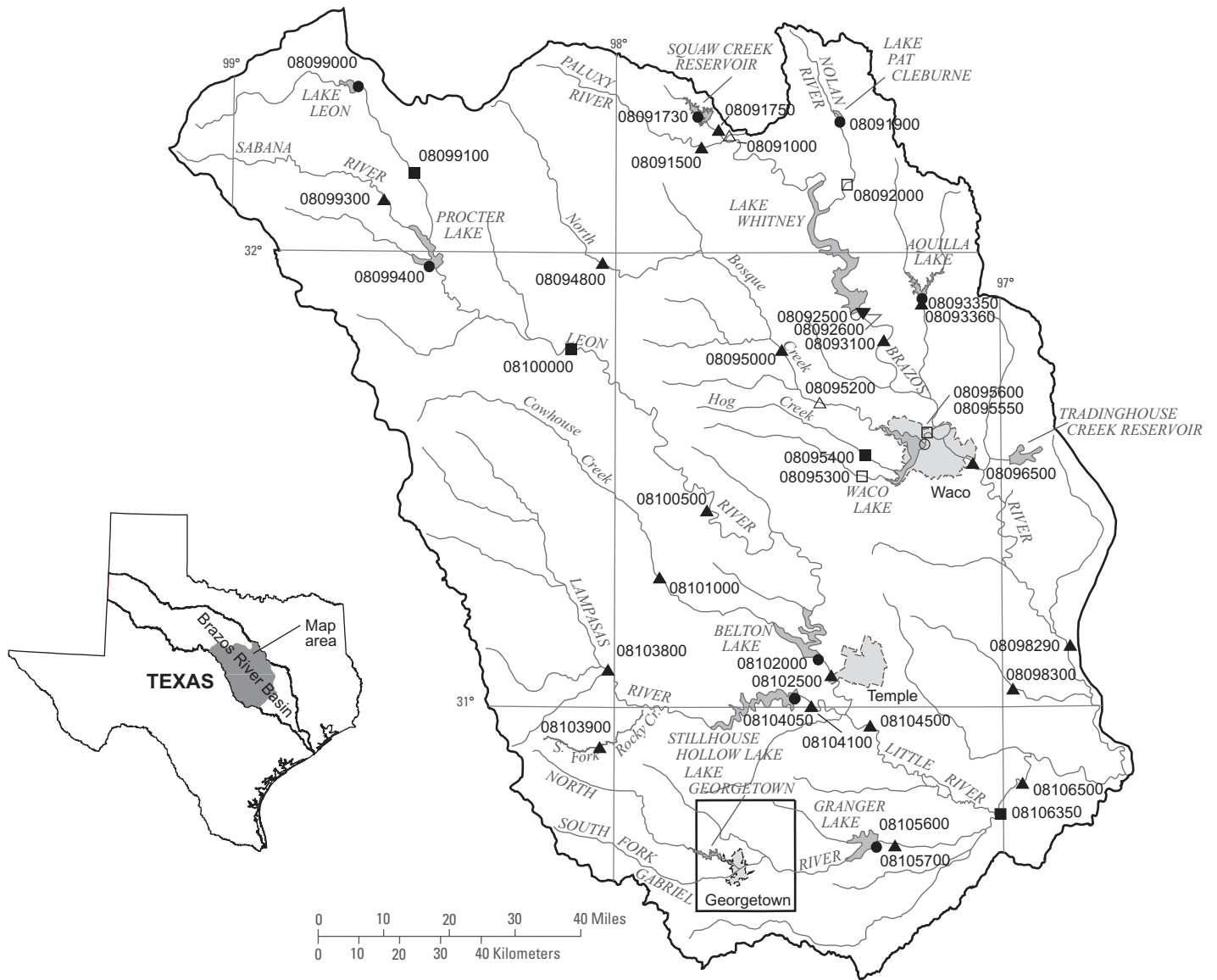
08090800 Brazos River near Dennis, TX—Continued





08090900 Lake Granbury near Granbury, TX—Continued

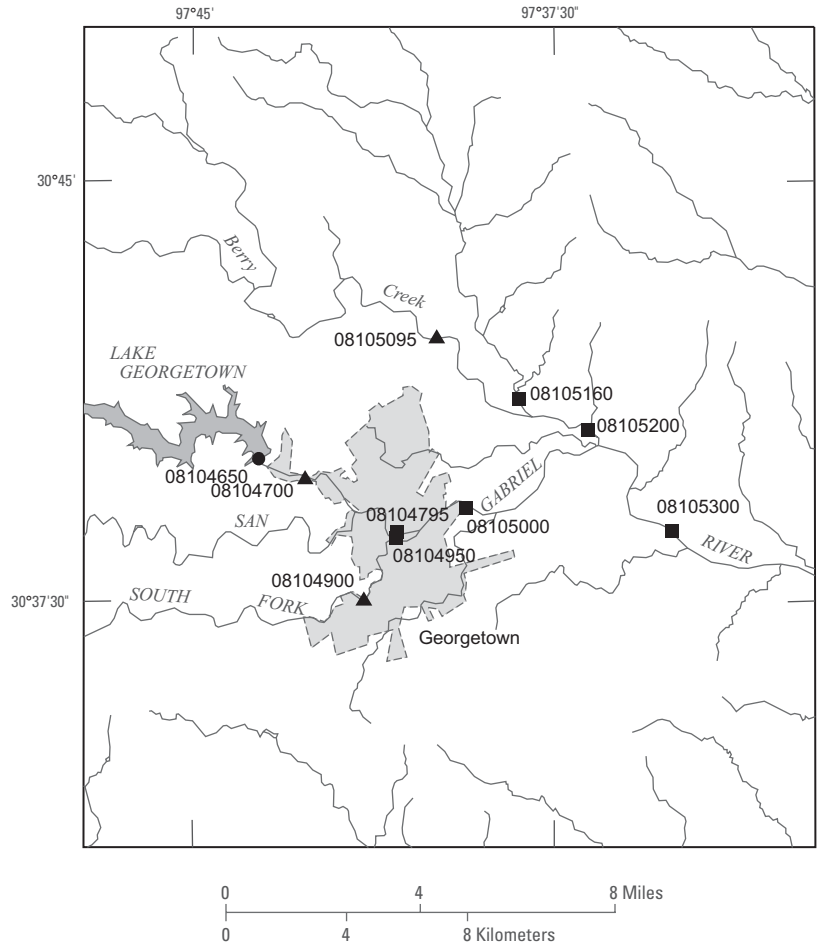




EXPLANATION

- 08209500 ▲ Surface-water continuous station and number
- 08095200 △ Surface-water continuous/water-quality station and number
- 08092500 ● Reservoir station and number
- 08102000 ○ Reservoir/water-quality station and number
- 08092600 ▼ Water-quality station and number
- 08100000 ■ Surface-water partial record/stage only station and number
- 08095300 □ Surface-water partial record/stage only/water-quality station and number

Figure 7.--Map showing location of gaging stations in the third section of the Brazos River Basin



**EXPLANATION**

- 08105100 ▲ Surface-water continuous station and number
- 08104650 ● Reservoir station and number
- 08105000 ■ Surface-water partial record/stage only station and number

Figure 8.-- Map showing location of gaging stations in the Georgetown inset of the Brazos River Basin.

08091000	Brazos River near Glen Rose, TX . . . . .	348
08091500	Paluxy River at Glen Rose, TX . . . . .	352
08091730	Squaw Creek Reservoir near Glen Rose, TX . . . . .	354
08091750	Squaw Creek near Glen Rose, TX . . . . .	356
08091900	Lake Pat Cleburne near Cleburne, TX . . . . .	358
08092000	Nolan River at Blum, TX . . . . .	360
08092500	Lake Whitney near Whitney, TX . . . . .	364
08092600	Brazos River at Whitney Dam near Whitney, TX . . . . .	382
08093100	Brazos River near Aquilla, TX . . . . .	384
08093160	Aquilla Creek near Peoria, TX . . . . .	386
08093260	Hackberry Creek below Hillsboro, TX . . . . .	388
08093350	Aquilla Lake above Aquilla, TX . . . . .	390
08093360	Aquilla Creek above Aquilla, TX . . . . .	404
08094800	North Bosque River at Hico, TX . . . . .	408
08095000	North Bosque River near Clifton, TX . . . . .	410
08095200	North Bosque River at Valley Mills, TX . . . . .	412
08095300	Middle Bosque River near McGregor, TX . . . . .	416
08095400	Hog Creek near Crawford, TX . . . . .	420
08095550	Waco Lake near Waco, TX . . . . .	422
08095600	Bosque River near Waco, TX . . . . .	438, 533
08096500	Brazos River at Waco, TX . . . . .	440
08098290	Brazos River near Highbank, TX . . . . .	442
08098300	Little Pond Creek at Burlington, TX . . . . .	444
08099000	Leon Reservoir near Ranger, TX . . . . .	446
08099100	Leon River near DeLeon, TX . . . . .	448
08099300	Sabana River near DeLeon, TX . . . . .	450
08099400	Proctor Lake near Proctor, TX . . . . .	452
08100000	Leon River near Hamilton, TX . . . . .	454
08100500	Leon River at Gatesville, TX . . . . .	456
08101000	Cowhouse Creek at Pidcoke, TX . . . . .	458
08102000	Belton Lake near Belton, TX . . . . .	460
08102500	Leon River near Belton, TX . . . . .	462
08103800	Lampasas River near Kempner, TX . . . . .	464
08103900	South Fork Rocky Creek near Briggs, TX . . . . .	466
08104050	Stillhouse Hollow Lake near Belton, TX . . . . .	468
08104100	Lampasas River near Belton, TX . . . . .	470
08104500	Little River near Little River, TX . . . . .	472
08104650	Lake Georgetown near Georgetown, TX . . . . .	474
08104700	North Fork San Gabriel River near Georgetown, TX . . . . .	476
08104795	North Fork San Gabriel River upstream from State Highway 418 at Georgetown, TX . . . . .	531
08104900	South Fork San Gabriel River at Georgetown, TX . . . . .	478
08104950	South Fork San Gabriel River upstream from State Highway 418 at Georgetown, TX . . . . .	531
08105000	San Gabriel River at Georgetown, TX . . . . .	531
08105095	Berry Creek upstream from Interstate Highway 35 near Georgetown, TX . . . . .	480, 531
08105160	Dry Berry Creek near Georgetown, TX . . . . .	531
08105200	Berry Creek at State Highway 971 near Georgetown, TX . . . . .	531
08105300	San Gabriel River near Weir, TX . . . . .	531
08105600	Granger Lake near Granger, TX . . . . .	482
08105700	San Gabriel River at Laneport, TX . . . . .	484
08106350	Little River near Rockdale, TX . . . . .	486
08106500	Little River near Cameron, TX . . . . .	488

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08091000 Brazos River near Glen Rose, TX

LOCATION.--Lat 32°15'32", long 97°42'08", Somervell County, Hydrologic Unit 12060202, at upstream side of bridge on Farm Road 200, 2.5 mi downstream from Georges Creek, 2.0 mi upstream from Paluxy River, 4.0 mi northeast of Glen Rose.

DRAINAGE AREA.--25,818 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1923 to current year.

REVISED RECORDS.--WSP 1058: 1932. WSP 1512: 1946-47, 1949. WSP 1712: 1928(M). WDR TX-76-2: Drainage area. WDR TX-03-3(M).

GAGE.--Water-stage recorder. Elevation of gage is 561.79 ft above NGVD of 1929. Prior to May 7, 1931, nonrecording gage at site 0.1 mi downstream at datum 15.58 ft higher. May 7, 1931, to Sept. 30, 1957, water-stage recorder at site at datum 15.58 ft higher, used as supplementary gage Oct. 1, 1957, to Apr. 1, 1959. Apr. 27, 1950, to Sept. 30, 1957, water-stage recorder at site 2.4 mi upstream at datum 15.58 ft higher, used as supplementary gage. Oct. 1, 1957 to Apr. 12, 2002, water-stage recorder at site 2.4 mi upstream at datum 6.03 ft higher. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since 1941, at least 10% of contributing drainage area has been regulated. There are many diversions above station for irrigation and municipal supplies, and oil field operations.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--17 years (water years 1924-40) prior to regulation by Possum Kingdom Lake, 1,581 ft<sup>3</sup>/s (1,145,000 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Second highest known flood since at least 1876 occurred in May 1922 and reached a stage of 29.5 ft, and flood in May 1908 reached a stage of 27 ft, each at site 2.4 mi downstream, from information by local residents.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS, 1924-1940: Maximum discharge, 97,600 ft<sup>3</sup>/s May 18, 1935 (gage height, 23.68 ft, from floodmarks); no flow at times prior to construction of Morris Sheppard Dam in 1941 on the Brazos River, forming Possum Kingdom 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	15	35	32	34	22	928	34	2,780	48	6,620	159	285
2	15	35	30	34	31	236	31	2,790	45	7,180	67	182
3	16	32	28	35	32	1,450	32	628	47	3,140	179	63
4	15	28	26	34	39	810	32	857	545	1,400	1,320	35
5	18	28	22	27	45	401	30	546	342	685	5,210	23
6	98	27	21	27	40	601	36	341	122	1,240	2,010	18
7	1,760	544	21	27	37	569	37	134	57	929	2,490	18
8	523	498	22	29	33	560	36	91	2,340	227	2,520	33
9	512	306	24	22	35	549	33	449	21,100	724	910	436
10	743	104	447	21	36	541	33	433	11,600	633	774	461
11	413	621	425	24	43	398	31	170	4,290	189	277	464
12	176	430	131	23	40	151	31	74	2,330	884	69	546
13	87	115	73	25	42	91	32	52	2,420	655	1,250	980
14	62	59	57	25	43	80	26	47	1,050	379	1,060	762
15	49	46	51	26	41	75	25	284	630	133	491	491
16	39	255	44	36	40	71	25	160	1,790	115	258	469
17	39	502	35	60	40	65	24	68	878	503	719	462
18	33	129	34	59	38	61	22	50	322	512	257	396
19	31	66	40	51	37	264	21	45	210	481	257	150
20	29	63	34	42	35	357	24	42	171	200	696	87
21	26	57	30	35	31	125	19	40	147	72	153	450
22	27	43	33	29	34	868	20	38	128	44	58	336
23	25	38	29	29	38	622	23	38	119	34	38	116
24	21	295	28	32	55	144	e331	338	108	29	29	64
25	29	165	29	37	951	78	e2,570	255	122	25	313	114
26	27	67	37	33	3,020	63	e2,570	86	343	e22	453	64
27	28	45	38	28	2,240	210	e828	54	1,160	20	85	38
28	23	35	39	28	1,100	402	461	491	1,010	22	972	27
29	21	30	38	43	2,020	93	197	439	2,000	55	1,350	22
30	25	31	35	36	---	48	474	114	2,260	884	755	22
31	29	---	34	24	---	38	---	58	---	476	299	---
TOTAL	4,954	4,729	1,967	1,015	10,238	10,949	8,088	11,992	57,734	28,512	25,478	7,614
MEAN	160	158	63.5	32.7	353	353	270	387	1,924	920	822	254
MAX	1,760	621	447	60	3,020	1,450	2,570	2,790	21,100	7,180	5,210	980
MIN	15	27	21	21	22	38	19	38	45	20	29	18
AC-FT	9,830	9,380	3,900	2,010	20,310	21,720	16,040	23,790	114,500	56,550	50,540	15,100

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004z, BY WATER YEAR (WY)

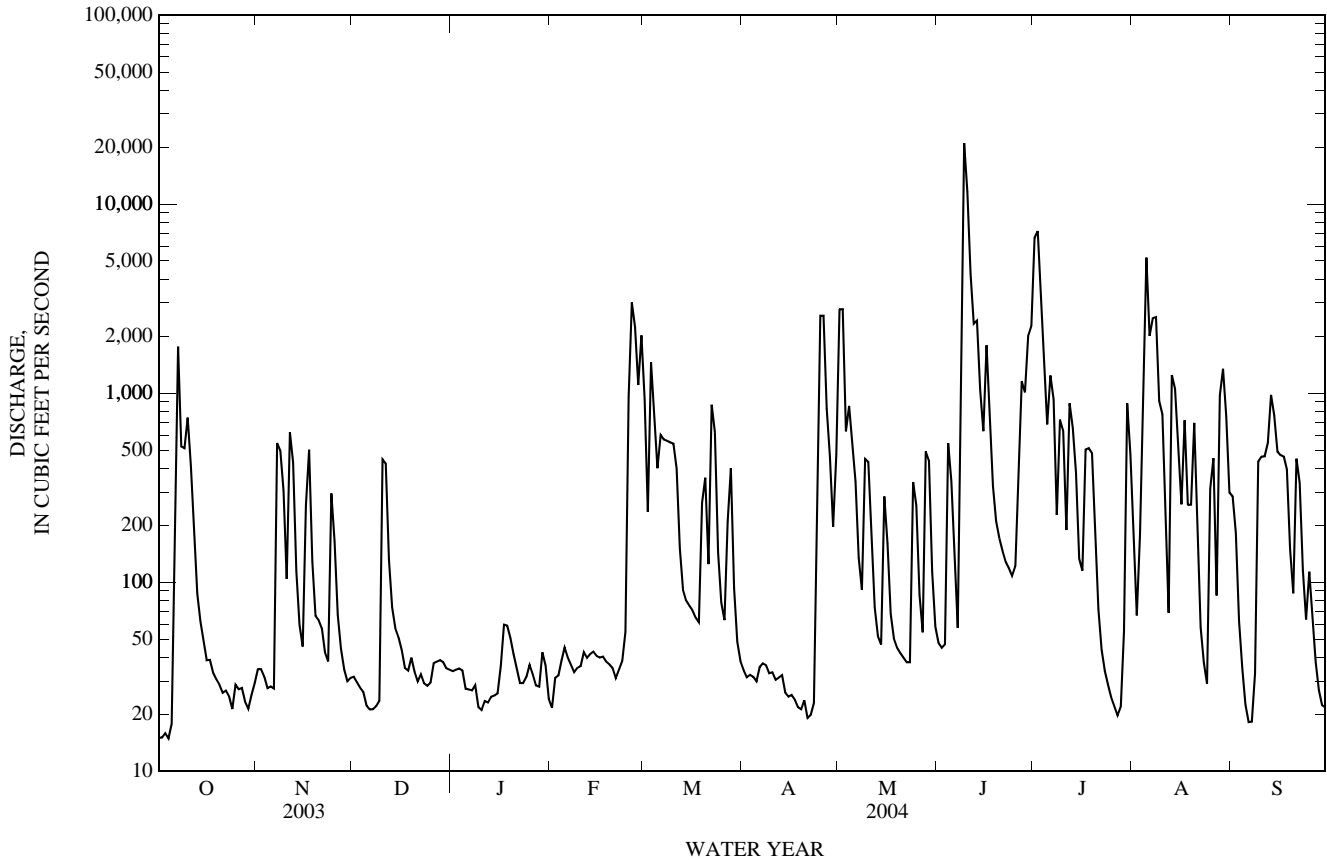
MEAN	1,671	770	720	547	980	1,061	1,281	3,066	2,182	976	762	1,027
MAX	17,860	6,209	14,960	3,180	11,290	6,684	14,360	44,800	13,660	4,873	6,621	9,994
(WY)	(1982)	(1975)	(1992)	(1968)	(1992)	(1992)	(1990)	(1957)	(1982)	(1982)	(1978)	(1966)
MIN	7.42	12.6	25.1	27.1	15.9	34.3	9.99	15.7	17.5	12.1	12.3	15.9
(WY)	(1953)	(2002)	(1989)	(2002)	(1984)	(1974)	(1974)	(1996)	(1996)	(1978)	(2000)	(1998)



08091000 Brazos River near Glen Rose, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1941 - 2004z	
ANNUAL TOTAL	54,103.80		173,270		1,255	
ANNUAL MEAN	148		473		5,494	
HIGHEST ANNUAL MEAN					115	1957
LOWEST ANNUAL MEAN					85,100	1988
HIGHEST DAILY MEAN	2,440	Sep 19	21,100	Jun 9	89,600	May 1, 1957
LOWEST DAILY MEAN	4.9	Jul 20	15	Oct 1	0.10	Oct 30, 1952
ANNUAL SEVEN-DAY MINIMUM	7.8	Aug 22	22	Apr 17	0.36	Oct 27, 1952
MAXIMUM PEAK FLOW			42,700	Jun 9	89,600	Dec 21, 1991
MAXIMUM PEAK STAGE			25.71	Jun 9	35.76	Apr 28, 1990
ANNUAL RUNOFF (AC-FT)	107,300		343,700		909,300	
10 PERCENT EXCEEDS	442		974		2,350	
50 PERCENT EXCEEDS	44		64		318	
90 PERCENT EXCEEDS	13		25		32	

z Period of regulated streamflow.  
e Estimated



## WATER-QUALITY RECORDS

## PERIOD OF RECORD.--

CHEMICAL DATA: Aug. 1946 to Nov. 1946, Oct. 1980 to June 1987, Oct. 1998 to current year.

BIOCHEMICAL DATA: Oct. 1980 to June 1987, Oct. 1998 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltd, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltd, std units (00400)	Specific conductance, wat unfltd, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Noncarb hardness, wat fltd, mg/L as CaCO3 (00904)	Hardness, water, mg/L as CaCO3 (00900)	Calcium, water, fltd, mg/L (00915)	Magnesium, water, fltd, mg/L (00925)
FEB 17...	1409	40	5.4	765	14.6	139	8.6	2,700	13.0	280	390	105dc	31.5dc
APR 01...	1000	38	3.4	742	12.1	140	8.5	2,840	20.8	300	410	113dc	31.2dc
MAY 04...	1313	890	6.7	763	10.0	--	8.3	773	--	220	350	101d	23.1d
AUG 03...	1100	41	3.3	754	7.8	110	8.4	1,300	32.8	100	210	60.6	14.8

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

Date	Potassium, water, fltd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat fltd inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat fltd incm. titr., mg/L (00453)	Carbonate, wat fltd incm. titr., mg/L (00452)	Chloride, water, fltd, mg/L (00940)	Fluoride, water, fltd, mg/L (00950)	Silica, water, fltd, mg/L (00955)	Sulfate water, fltd, mg/L (00945)	Residue water, fltd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat fltd mg/L (70300)
FEB 17...	7.01dc	9	408d	69	110	129	2	647d	.3	.2	244d	1,510	--
APR 01...	7.25dc	9	420dc	69	116	137	2	705d	.3	1.19dc	255d	1,600	1,690
MAY 04...	5.88d	8	340d	68	127	152	2	571d	.3	3.08d	207d	1,330	1,440
AUG 03...	6.15	5	154	60	111	134	<1	257	.3	7.57	101	667	715

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

Date	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltd, mg/L as N (00608)	Nitrite + nitrate water, fltd, mg/L as N (00631)	Nitrite water, fltd, mg/L as N (00613)	Orthophosphate, water, fltd, mg/L as P (00671)	Phosphorus, water, fltd, mg/L (00666)	Organic carbon, water, unfltd mg/L (00680)	BOD, water, unfltd 5 day, 20 degC mg/L (00310)	Aluminum, water, fltd, ug/L (01106)	Antimony, water, fltd, ug/L (01095)	Arsenic water, fltd, ug/L (01000)	Barium, water, fltd, ug/L (01005)	Beryllium, water, fltd, ug/L (01010)
FEB 17...	<10	<.04	<.06	<.008	<.006	.013	6.5	2.1	<3d	E.23nd	E1n	133d	<.12d
APR 01...	<10	<.04	<.06	<.008	<.006	.011	8.7	E2.6	E3nd	<.40d	E2n	166d	<.12d
MAY 04...	13	<.04	<.06	<.008	<.006	.007	9.3	E2.1	3	E.16n	E1n	149	<.06
AUG 03...	<10	<.04	<.06	<.008	<.006	.008	7.1	<2.0	6	E.18n	E2n	97	<.06

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

Date	Cadmium water, fltd, ug/L (01025)	Chromium, water, fltd, ug/L (01030)	Cobalt water, fltd, ug/L (01035)	Copper, water, fltd, ug/L (01040)	Iron, water, fltd, ug/L (01046)	Lead, water, fltd, ug/L (01049)	Manganese, water, fltd, ug/L (01056)	Mercury water, fltd, ug/L (71890)	Molybdenum, water, fltd, ug/L (01060)	Nickel, water, fltd, ug/L (01065)	Selenium, water, fltd, ug/L (01145)	Silver, water, fltd, ug/L (01075)	Zinc, water, fltd, ug/L (01090)
FEB 17...	<.08d	<.8	.310d	2.7d	--	<.16d	4.0d	<.02	6.5d	2.35d	<3	<.4d	E.9nd
APR 01...	<.08d	<.8	.310d	2.4d	<19dc	<.16d	4.4d	<.02	2.4d	1.98d	<3	<.4d	E1.1nd
MAY 04...	<.04	<.8	.379	3.8	<19d	<.08	2.4	<.02	2.0	2.89	<3	<.2	1.5
AUG 03...	<.04	<.8	.278	1.3	<6	<.08	.9	<.02	1.8	2.39	<3	<.2	1.0

08091000 Brazos River near Glen Rose, TX—Continued

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

Date	Uranium natural water, fltrd, ug/L (22703)
FEB 17...	1.60d
APR 01...	1.52d
MAY 04...	1.58
AUG 03...	.78

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

## 08091500 Paluxy River at Glen Rose, TX

LOCATION.--Lat 32°13'53", long 97°46'37", Somervell County, Hydrologic Unit 12060202, on left bank at downstream side of remaining pier of dismantled highway bridge, 500 ft upstream from bridge on U.S. Highway 67, 1.0 mi upstream from Cross Branch, 1.2 mi southwest of Glen Rose, and 5.1 mi upstream from mouth.

DRAINAGE AREA.--410 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1923 to Sept. 1925 (water year 1924 is not complete), June 1947 to current year. Prior to Oct. 1965, published as "Paluxy Creek at Glen Rose."

REVISED RECORDS.--WSP 1392: 1949, 1952. WSP 2122: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 609.66 ft above NGVD of 1929. Oct. 27, 1923, to Sept. 30, 1925, nonrecording gage at bridge 1.8 mi downstream at datum 13.62 ft lower. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since 1981, at least 10% of contributing drainage area has been regulated by 14 floodwater-retarding structures. These structures control runoff from 90.8 mi<sup>2</sup>. No known diversions. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1877, 27.2 ft Apr. 17, 1908, present site and datum (discharge, 59,000 ft<sup>3</sup>/s). Flood of May 21, 1922, reached a stage of 26.0 ft, present site and datum (discharge, 53,000 ft<sup>3</sup>/s). Flood in Nov. 1918 reached about the same stage as flood of May 21, 1922, from information by local residents.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS, 1924-1925: Maximum stage recorded, 7.10 ft, Apr. 25, 1924 (discharge not determined); no flow for several periods.

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	8.6	7.2	7.0	10	9.6	40	15	1,260	25	467	42	15
2	8.2	7.0	7.0	10	12	38	15	668	23	279	31	15
3	7.7	7.2	7.6	10	11	31	19	330	30	190	25	14
4	7.7	7.4	7.1	10	11	30	25	217	32	140	21	13
5	8.0	7.7	6.7	9.4	13	58	31	157	35	109	18	13
6	9.5	7.7	6.2	9.2	12	49	30	124	27	91	16	15
7	11	8.6	6.3	8.4	11	40	30	106	24	78	14	15
8	10	9.3	6.9	8.8	10	32	29	92	33	70	14	13
9	21	10	6.9	9.2	10	27	27	97	4,300	60	14	12
10	19	10	6.4	9.2	10	24	24	86	1,910	54	50	11
11	14	10	6.1	8.9	14	23	23	77	847	50	28	11
12	14	9.8	7.2	9.1	13	22	22	69	467	44	19	10
13	14	8.7	9.2	9.2	12	22	21	63	282	40	15	9.7
14	12	8.0	9.2	9.4	12	22	19	59	191	37	13	9.8
15	9.7	8.3	9.2	10	12	22	18	52	154	34	13	9.4
16	9.2	8.0	8.7	14	11	21	17	48	124	31	12	10
17	8.3	10	8.0	22	11	20	16	46	96	29	11	10
18	7.2	9.3	7.7	20	11	19	15	43	81	27	10	9.0
19	7.0	7.2	7.7	16	11	18	15	39	70	25	214	8.2
20	7.1	7.0	8.0	13	11	18	15	35	63	24	208	7.7
21	7.0	7.0	8.4	12	10	18	15	32	56	22	131	7.4
22	7.0	7.7	8.5	11	9.8	20	14	30	49	21	74	6.9
23	7.0	8.8	8.2	11	12	20	14	28	45	19	48	6.5
24	6.9	7.3	7.8	11	16	20	684	26	42	18	35	7.0
25	6.6	6.8	8.0	12	146	20	1,060	25	64	17	28	7.0
26	6.3	6.6	8.4	11	172	19	707	25	77	16	23	7.1
27	5.9	7.0	8.8	10	74	18	367	29	130	17	20	7.0
28	6.2	6.6	11	9.5	46	18	242	48	161	19	19	7.0
29	6.4	6.4	12	9.2	39	17	178	38	375	24	19	6.7
30	6.9	6.7	11	9.2	---	16	128	33	494	125	18	6.4
31	7.4	---	9.9	9.2	---	15	---	28	---	89	17	---
TOTAL	286.8	239.3	251.1	340.9	752.4	777	3,835	4,010	10,307	2,266	1,220	299.8
MEAN	9.25	7.98	8.10	11.0	25.9	25.1	128	129	344	73.1	39.4	9.99
MAX	21	10	12	22	172	58	1,060	1,260	4,300	467	214	15
MIN	5.9	6.4	6.1	8.4	9.6	15	14	25	23	16	10	6.4
AC-FT	569	475	498	676	1,490	1,540	7,610	7,950	20,440	4,490	2,420	595

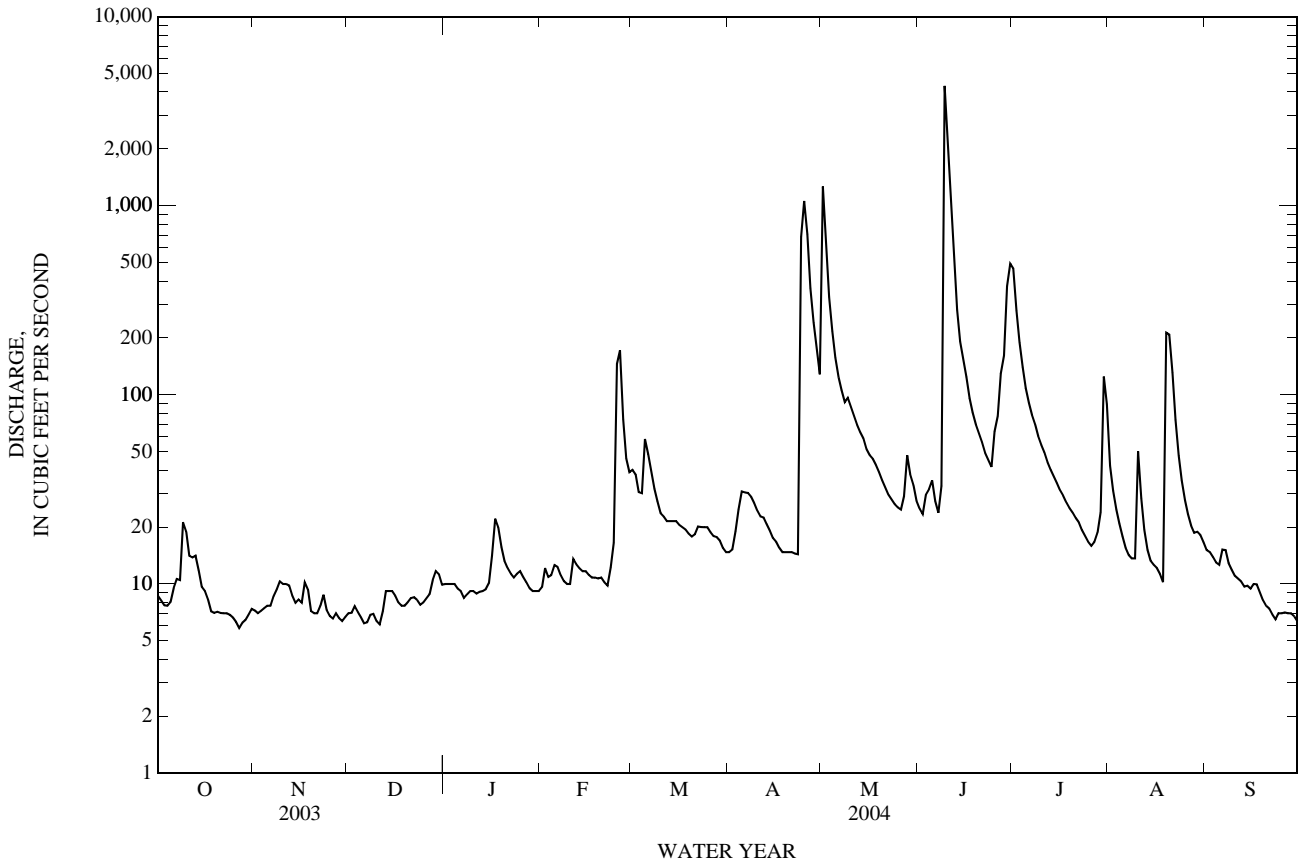
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2004z, BY WATER YEAR (WY)

MEAN	59.4	32.4	53.4	44.9	85.8	103	122	232	105	33.3	27.5	29.8
MAX	724	211	1,382	380	933	654	828	1,191	890	245	721	335
(WY)	(1960)	(1992)	(1992)	(1992)	(1992)	(1998)	(1990)	(1949)	(1989)	(1995)	(1995)	(1955)
MIN	0.00	1.05	3.47	4.70	5.49	5.84	6.46	3.34	1.48	0.00	0.00	0.00
(WY)	(2000)	(1984)	(1989)	(1984)	(1984)	(1956)	(1986)	(1988)	(1974)	(1978)	(1978)	(1984)

08091500 Paluxy River at Glen Rose, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1947 - 2004z	
ANNUAL TOTAL	9,179.43		24,585.3			
ANNUAL MEAN	25.1		67.2		77.5	
HIGHEST ANNUAL MEAN					361	1992
LOWEST ANNUAL MEAN					6.24	1984
HIGHEST DAILY MEAN	755	Sep 19	4,300	Jun 9	26,600	May 17, 1949
LOWEST DAILY MEAN	0.00	Aug 9	5.9	Oct 27	0.00	Sep 5, 1951
ANNUAL SEVEN-DAY MINIMUM	0.10	Aug 20	6.5	Oct 24	0.00	Aug 25, 1952
MAXIMUM PEAK FLOW			10,500	Jun 9	50,000	Oct 4, 1959
MAXIMUM PEAK STAGE			13.17	Jun 9	25.40	Oct 4, 1959
ANNUAL RUNOFF (AC-FT)	18,210		48,760		56,180	
10 PERCENT EXCEEDS	47		107		112	
50 PERCENT EXCEEDS	15		15		15	
90 PERCENT EXCEEDS	0.92		7.0		1.5	

z Period of regulated streamflow.



## 08091730 Squaw Creek Reservoir near Glen Rose, TX

LOCATION.--Lat 32°18'00", long 97°47'12", Somervell County, Hydrologic Unit 12060202, on upstream side of intake structure near power house on Squaw Creek, 1.8 mi upstream from dam, 3.9 mi north of Glen Rose, and 6.1 mi upstream from mouth.

DRAINAGE AREA.--64.0 mi<sup>2</sup>.

PERIOD OF RECORD.--Feb. 1977 to Sept. 2002 (contents), Oct. 2002 to current year. Water-quality records: Chemical data: Oct. 1982 to Sept. 1984.

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 4,360 ft long. Deliberate impoundment began in Feb. 1977, and the dam was completed in June 1977. The flood-control outlet works consist of an ungated 100 ft long concrete ogee spillway located at right end of dam. The low-flow outlet works consist of a concrete outlet tower with three 4 by 6 ft slide gates and one 6 by 6 ft slide gate, which feed into a 6 ft inside diameter concrete conduit that extends through the dam. The dam is owned by Texas Utilities Services Inc. Water can be diverted by pipeline from Lake Granbury (station 08090900) into this reservoir. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	796.0
Crest of spillway	783.0
Crest of spillway	775.0
Invert of slide gate (No. 1)	764.0
Invert of slide gate (No. 2)	715.0
Invert of slide gate (No. 3)	666.5
Lowest gated outlet (invert)	653.0

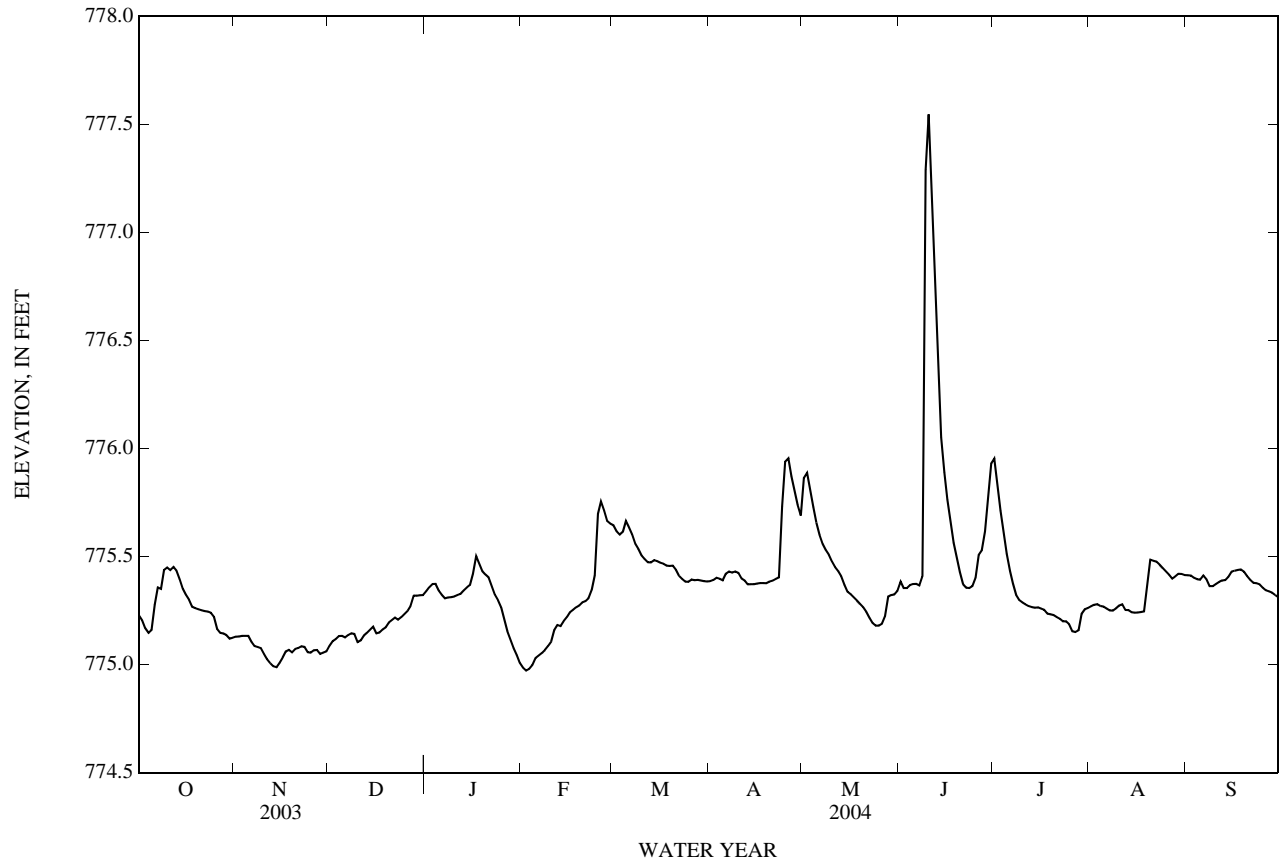
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 164,700 acre-ft, Dec. 19, 1991, elevation, 779.14 ft; minimum contents since first appreciable storage in 1979, 141,200 acre-ft, Sept. 16, 1992, elevation, 771.98 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 777.97 ft, June 9; minimum elevation, 774.95 ft, Feb. 2.

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	775.23	775.13	775.09	775.34	774.99	775.64	775.39	775.86	775.38	775.95	775.27	775.41
2	775.20	775.13	775.11	775.36	774.97	775.62	775.39	775.89	775.35	775.83	775.28	775.41
3	775.17	775.13	775.12	775.37	774.98	775.60	775.40	775.81	775.35	775.71	775.28	775.40
4	775.15	775.13	775.13	775.37	775.00	775.62	775.40	775.73	775.37	775.61	775.27	775.40
5	775.16	775.13	775.13	775.34	775.03	775.66	775.39	775.66	775.37	775.51	775.27	775.39
6	775.28	775.10	775.13	775.32	775.04	775.63	775.42	775.60	775.37	775.43	775.26	775.41
7	775.36	775.09	775.14	775.31	775.05	775.60	775.43	775.56	775.37	775.37	775.25	775.39
8	775.35	775.08	775.14	775.31	775.07	775.56	775.43	775.53	775.41	775.32	775.25	775.36
9	775.44	775.08	775.14	775.31	775.09	775.54	775.43	775.51	777.29	775.30	775.26	775.36
10	775.45	775.05	775.10	775.32	775.11	775.50	775.42	775.48	777.55	775.29	775.27	775.37
11	775.44	775.02	775.11	775.32	775.16	775.49	775.40	775.45	776.98	775.28	775.28	775.38
12	775.45	775.01	775.13	775.33	775.18	775.47	775.39	775.43	776.57	775.27	775.25	775.39
13	775.43	774.99	775.15	775.34	775.18	775.47	775.37	775.41	776.27	775.27	775.25	775.39
14	775.40	774.99	775.16	775.36	775.20	775.48	775.37	775.37	776.05	775.26	775.24	775.41
15	775.35	775.01	775.18	775.37	775.22	775.48	775.37	775.34	775.89	775.26	775.24	775.43
16	775.32	775.03	775.15	775.42	775.24	775.47	775.38	775.33	775.76	775.26	775.24	775.43
17	775.30	775.06	775.15	775.50	775.25	775.47	775.38	775.31	775.66	775.25	775.24	775.44
18	775.27	775.07	775.16	775.47	775.27	775.46	775.38	775.30	775.56	775.24	775.25	775.44
19	775.26	775.06	775.17	775.43	775.27	775.46	775.38	775.28	775.49	775.23	775.37	775.43
20	775.26	775.07	775.19	775.42	775.29	775.46	775.38	775.27	775.43	775.23	775.49	775.41
21	775.25	775.08	775.21	775.40	775.29	775.44	775.39	775.24	775.37	775.22	775.48	775.39
22	775.25	775.09	775.22	775.36	775.31	775.41	775.40	775.22	775.36	775.21	775.48	775.38
23	775.25	775.08	775.21	775.32	775.35	775.40	775.40	775.19	775.35	775.20	775.46	775.38
24	775.24	775.06	775.22	775.30	775.41	775.38	775.73	775.18	775.36	775.20	775.45	775.37
25	775.22	775.06	775.23	775.27	775.70	775.38	775.94	775.18	775.40	775.19	775.43	775.36
26	775.17	775.07	775.25	775.21	775.76	775.39	775.95	775.19	775.51	775.15	775.42	775.34
27	775.15	775.07	775.27	775.15	775.71	775.39	775.87	775.22	775.53	775.15	775.40	775.34
28	775.14	775.05	775.32	775.12	775.66	775.39	775.80	775.31	775.62	775.16	775.41	775.33
29	775.14	775.06	775.32	775.08	775.65	775.39	775.74	775.32	775.78	775.24	775.42	775.32
30	775.12	775.06	775.32	775.04	---	775.39	775.69	775.33	775.93	775.26	775.42	775.31
31	775.12	---	775.32	775.01	---	775.38	---	775.34	---	775.26	775.41	---
MEAN	775.27	775.07	775.18	775.31	775.26	775.48	775.49	775.41	775.76	775.33	775.33	775.39
MAX	775.45	775.13	775.32	775.50	775.76	775.66	775.95	775.89	777.55	775.95	775.49	775.44
MIN	775.12	774.99	775.09	775.01	774.97	775.38	775.37	775.18	775.35	775.15	775.24	775.31
CAL YR	2003	MEAN	775.14	MAX	775.99	MIN	774.14					
WTR YR	2004	MEAN	775.36	MAX	777.55	MIN	774.97					

08091730 Squaw Creek Reservoir near Glen Rose, TX—Continued



## BRAZOS RIVER BASIN

08091750 Squaw Creek near Glen Rose, TX

LOCATION.--Lat 32°16'12", long 97°43'56", Somervell County, Hydrologic Unit 12060202, on left bank at downstream side of highway embankment 25 ft left of left end of bridge on State Highway 144, 2.1 mi upstream from mouth, 2.5 mi downstream from Squaw Creek Dam, and 2.8 mi northeast of Glen Rose.

DRAINAGE AREA.--70.3 mi<sup>2</sup>.

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 599.00 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since Feb. 1977, at least 10% of contributing drainage area has been regulated. No known diversions. During the year, low flows were sustained by releases from a pipeline used to divert water from Lake Granbury (station 08090900) to Squaw Creek Reservoir.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--4 years (1974-77) prior to regulation by Squaw Creek Reservoir 8.41 ft<sup>3</sup>/s (6,090 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1934, about 20.5 ft in May 1957, from information by Texas Department of Transportation (discharge not determined).

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS, 1974-1977: Maximum discharge 9,030 ft<sup>3</sup>/s Apr. 8, 1975 (gage height, 11.90 ft), from rating curve extended above 1,000 ft<sup>3</sup>/s on basis of area-velocity study; minimum, 0.02 ft<sup>3</sup>/s, Aug. 28 and 29, 1974.

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	8.4	5.9	3.1	30	4.8	117	38	216	42	189	19	33
2	6.6	6.2	3.5	37	9.1	104	39	227	36	151	19	34
3	4.7	6.0	6.8	40	4.8	97	42	180	41	122	18	32
4	4.6	5.7	3.7	46	4.9	101	40	148	41	97	17	31
5	5.0	7.5	8.9	43	5.1	120	38	117	42	73	18	30
6	15	9.2	4.9	36	7.7	113	45	98	40	55	15	37
7	26	7.6	3.5	29	4.7	102	51	87	38	39	11	36
8	24	6.0	3.6	29	4.7	91	49	76	53	25	11	30
9	43	5.8	21	30	5.0	87	49	69	1,310	19	12	31
10	45	5.1	15	29	5.9	75	51	62	988	16	14	30
11	43	4.9	3.2	29	7.7	69	47	58	606	14	17	31
12	46	5.1	4.0	30	13	64	43	57	421	13	14	32
13	41	5.7	12	32	9.5	62	44	53	305	13	11	33
14	40	5.4	5.5	35	14	66	36	47	231	13	9.4	34
15	31	5.6	7.6	38	13	64	34	35	183	12	7.8	38
16	24	5.5	20	47	14	62	35	32	148	12	7.0	39
17	23	5.6	7.1	71	19	57	36	29	118	11	6.2	41
18	18	19	8.2	70	18	57	35	26	95	9.4	5.2	43
19	17	5.1	7.9	54	19	57	36	24	77	7.5	32	41
20	16	4.1	8.6	46	23	55	37	22	61	6.2	49	37
21	15	4.2	10	43	23	56	42	20	45	5.0	49	33
22	15	4.6	14	37	25	46	40	16	42	6.4	54	31
23	14	14	21	30	33	42	44	14	42	7.6	50	31
24	13	5.6	11	25	50	40	169	12	42	7.6	50	32
25	15	3.7	12	23	152	36	240	12	51	10	44	29
26	13	3.4	14	25	161	36	254	13	79	8.5	38	26
27	6.4	9.6	18	7.4	135	35	220	21	83	6.8	34	25
28	5.0	6.3	30	5.0	118	38	179	32	104	7.3	37	26
29	5.8	3.6	32	4.6	115	42	151	30	150	18	37	25
30	5.7	3.2	28	5.2	---	41	133	33	185	21	35	20
31	5.9	---	28	4.6	---	38	---	36	---	20	34	---
TOTAL	595.1	189.2	376.1	1,010.8	1,018.9	2,070	2,297	1,902	5,699	1,015.3	774.6	971
MEAN	19.2	6.31	12.1	32.6	35.1	66.8	76.6	61.4	190	32.8	25.0	32.4
MAX	46	19	32	71	161	120	254	227	1,310	189	54	43
MIN	4.6	3.2	3.1	4.6	4.7	35	34	12	36	5.0	5.2	20
AC-FT	1,180	375	746	2,000	2,020	4,110	4,560	3,770	11,300	2,010	1,540	1,930

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2004z, BY WATER YEAR (WY)

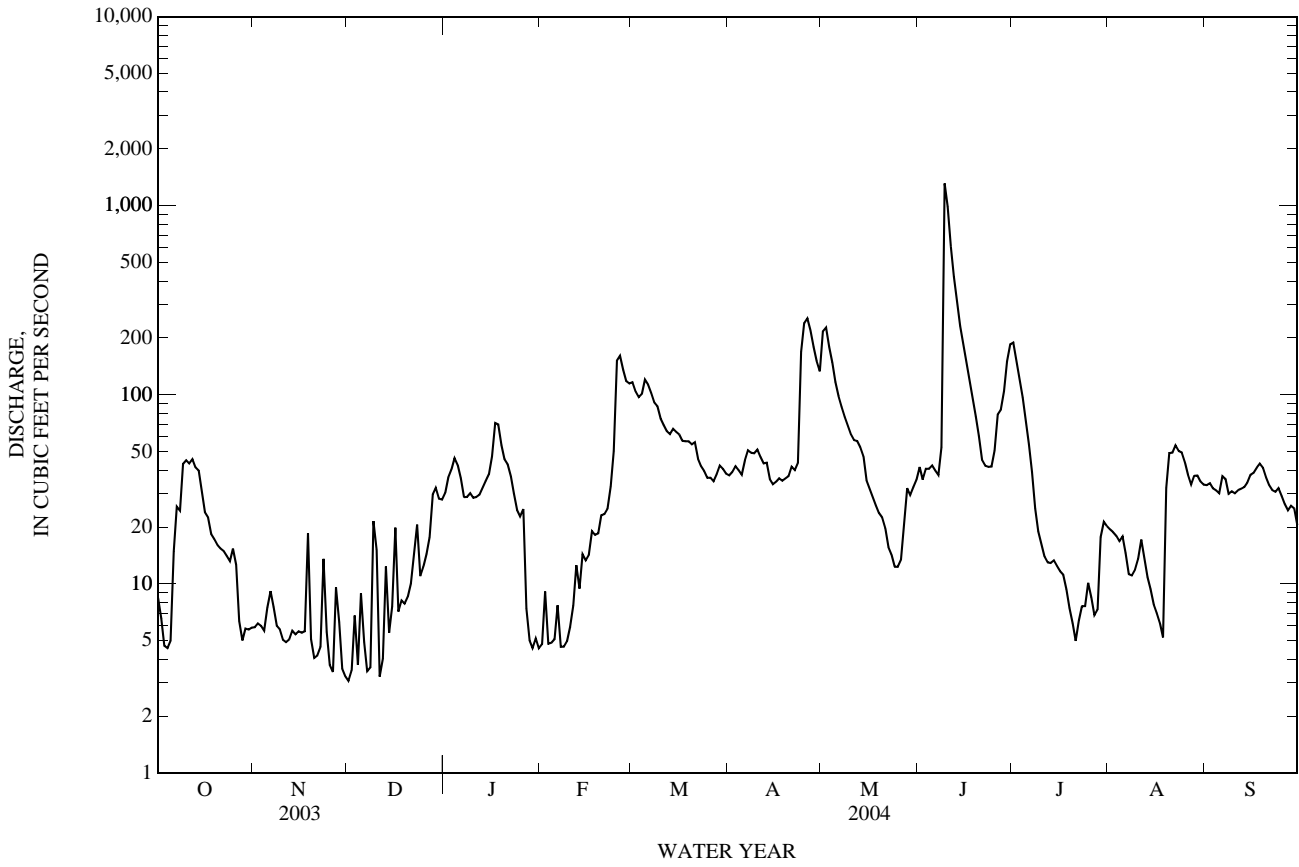
MEAN	12.4	11.7	23.7	11.9	18.7	29.2	22.1	45.9	48.2	9.73	13.3	10.6
MAX	110	81.5	416	66.0	162	132	169	336	362	36.0	143	41.2
(WY)	(1992)	(1992)	(1992)	(1992)	(1992)	(1992)	(1990)	(1989)	(1989)	(1995)	(1995)	(2003)
MIN	1.54	1.95	2.36	1.62	2.42	1.61	1.78	2.39	1.28	1.59	1.47	1.91
(WY)	(1993)	(1993)	(1978)	(1998)	(1999)	(1978)	(1978)	(1978)	(1978)	(1978)	(1992)	(1994)



08091750 Squaw Creek near Glen Rose, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1978 - 2004z	
ANNUAL TOTAL	8,073.5		17,919.0			
ANNUAL MEAN	22.1		49.0		21.5	
HIGHEST ANNUAL MEAN					89.9	1992
LOWEST ANNUAL MEAN					2.18	1978
HIGHEST DAILY MEAN	123	Sep 19	1,310	Jun 9	4,380	Dec 20, 1991
LOWEST DAILY MEAN	1.9	May 21	3.1	Dec 1	0.54	Aug 5, 1996
ANNUAL SEVEN-DAY MINIMUM	3.7	May 18	4.3	Nov 28	0.70	Oct 22, 1992
MAXIMUM PEAK FLOW			2,640	Jun 9	8,940	Jun 13, 1989
MAXIMUM PEAK STAGE			10.47	Jun 9	11.85	Jun 13, 1989
ANNUAL RUNOFF (AC-FT)	16,010		35,540		15,540	
10 PERCENT EXCEEDS	53		103		42	
50 PERCENT EXCEEDS	14		30		4.3	
90 PERCENT EXCEEDS	5.2		5.3		2.4	

z Period of regulated streamflow.



## 08091900 Lake Pat Cleburne near Cleburne, TX

LOCATION.--Lat 32°17'20", long 97°24'54", Johnson County, Hydrologic Unit 12060202, at side of walkway from dam to outlet structure near left end of Cleburne Dam on Nolan river, 2.2 mi upstream from Buffalo Creek, 4.3 mi south of Cleburne, and 21.4 mi upstream from mouth.

DRAINAGE AREA.--100 mi<sup>2</sup>.

PERIOD OF RECORD.--Apr. 1965 to Sept. 1985, June 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 rock-faced earthfill dam 5,050 ft long, including a 150-ft wide uncontrolled concrete service spillway at left end of dam. A spillway, 500 ft wide, is cut in ground on the right bank about 400 ft from right end of dam. Storage began Aug. 4, 1964. Lake is the property of the city of Cleburne and was built to impound water for municipal use. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	753.0
Top of design flood pool	752.3
Crest of emergency spillway	744.0
Crest of service spillway	733.5
Lowest gated outlet (invert)	690.0

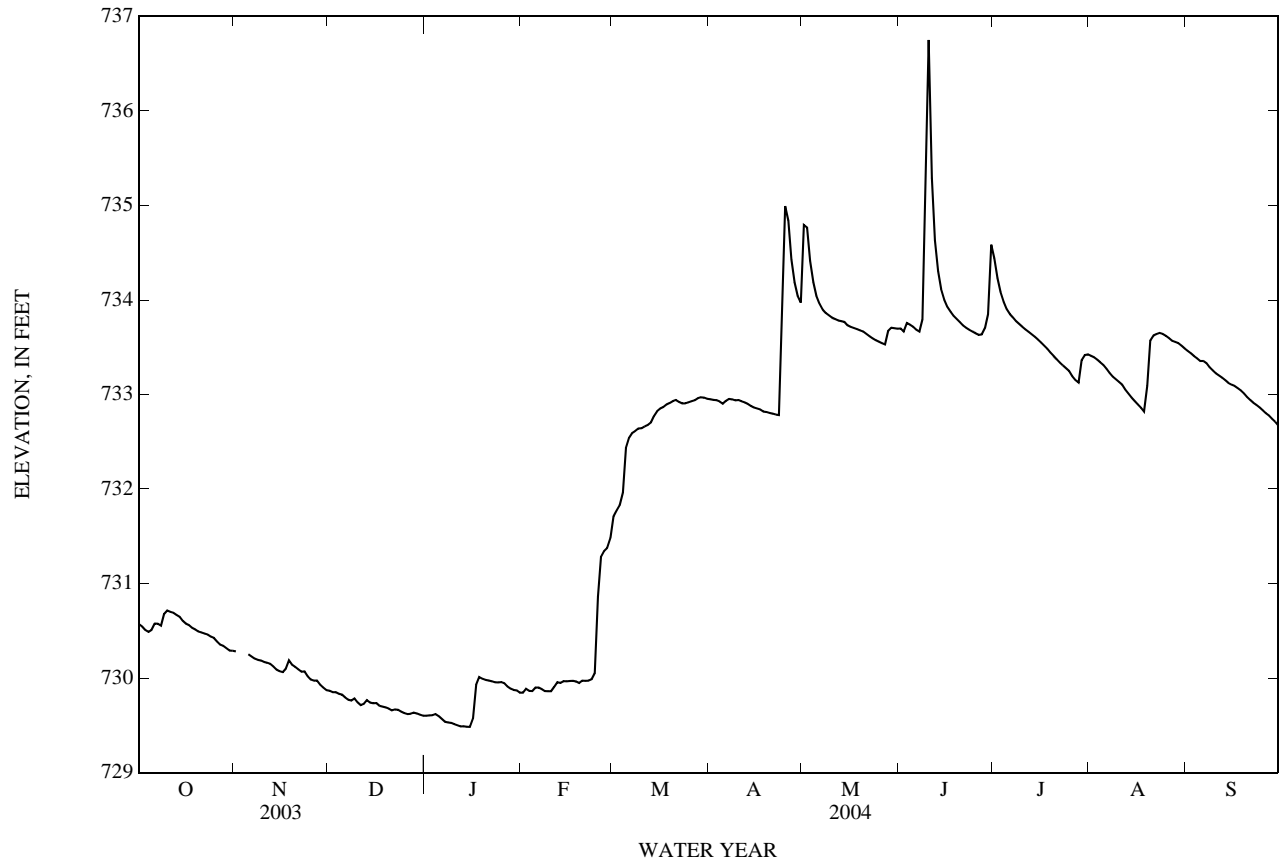
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 34,180 acre-ft, Mar. 20, 2002, elevation, 738.52 ft; minimum 14,500 acre-ft on Oct. 5, 6, 1984, elevation, 724.85 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 737.73 ft, June 10; minimum elevation, 729.48 ft, Jan. 12, 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	730.57	730.28	729.87	729.60	729.85	731.71	732.95	734.79	733.70	734.44	733.41	733.46
2	730.54	---	729.85	729.61	729.89	731.77	732.94	734.77	733.67	734.23	733.39	733.44
3	730.51	---	729.85	729.61	729.87	731.83	732.94	734.41	733.76	734.09	733.37	733.41
4	730.49	---	729.83	729.62	729.86	731.96	732.93	734.19	733.74	733.98	733.34	733.38
5	730.51	730.25	729.83	729.60	729.90	732.43	732.90	734.05	733.72	733.90	733.31	733.35
6	730.58	730.23	729.79	729.57	729.90	732.54	732.93	733.96	733.69	733.85	733.27	733.36
7	730.57	730.21	729.77	729.54	729.88	732.59	732.95	733.90	733.67	733.81	733.23	733.33
8	730.55	730.19	729.76	729.53	729.86	732.61	732.95	733.86	733.80	733.78	733.19	733.29
9	730.68	730.19	729.78	729.53	729.86	732.64	732.94	733.84	735.34	733.75	733.16	733.26
10	730.71	730.17	729.74	729.51	729.86	732.64	732.94	733.81	736.75	733.72	733.13	733.22
11	730.70	730.16	729.71	729.50	729.91	732.66	732.93	733.80	735.29	733.69	733.10	733.20
12	730.69	730.15	729.73	729.49	729.96	732.68	732.92	733.78	734.63	733.66	733.05	733.18
13	730.67	730.12	729.77	729.49	729.95	732.70	732.90	733.78	734.30	733.64	733.01	733.15
14	730.65	730.09	729.74	729.49	729.97	732.77	732.88	733.77	734.11	733.61	732.97	733.12
15	730.61	730.07	729.73	729.48	729.97	732.82	732.86	733.73	734.00	733.58	732.93	733.10
16	730.58	730.06	729.74	729.57	729.97	732.85	732.85	733.72	733.93	733.55	732.90	733.09
17	730.56	730.10	729.71	729.93	729.97	732.87	732.84	733.70	733.88	733.52	732.86	733.07
18	730.53	730.19	729.70	730.01	729.96	732.89	732.82	733.69	733.83	733.48	732.82	733.04
19	730.51	730.14	729.69	729.99	729.95	732.91	732.82	733.68	733.80	733.44	733.09	733.01
20	730.49	730.12	729.68	729.98	729.97	732.93	732.81	733.67	733.77	733.41	733.57	732.97
21	730.48	730.09	729.66	729.98	729.97	732.94	732.80	733.64	733.73	733.37	733.62	732.94
22	730.47	730.07	729.67	729.97	729.97	732.92	732.79	733.62	733.71	733.34	733.64	732.91
23	730.46	730.07	729.66	729.96	729.99	732.91	732.78	733.59	733.68	733.31	733.65	732.89
24	730.44	730.02	729.64	729.95	730.05	732.91	734.16	733.57	733.67	733.28	733.64	732.86
25	730.43	729.98	729.63	729.96	730.86	732.92	734.99	733.56	733.65	733.25	733.62	732.83
26	730.39	729.97	729.62	729.95	731.28	732.93	734.84	733.54	733.63	733.19	733.60	732.80
27	730.35	729.98	729.62	729.91	731.35	732.94	734.43	733.53	733.64	733.15	733.57	732.78
28	730.34	729.93	729.63	729.89	731.38	732.96	734.19	733.67	733.70	733.13	733.56	732.74
29	730.32	729.90	729.63	729.88	731.48	732.97	734.04	733.71	733.85	733.36	733.54	732.71
30	730.29	729.87	729.61	729.87	---	732.97	733.97	733.70	734.59	733.42	733.52	732.67
31	730.29	---	729.60	729.85	---	732.96	---	733.70	---	733.42	733.49	---
MEAN	730.51	---	729.72	729.74	730.16	732.68	733.23	733.83	734.04	733.59	733.31	733.09
MAX	730.71	---	729.87	730.01	731.48	732.97	734.99	734.79	736.75	734.44	733.65	733.46
MIN	730.29	---	729.60	729.48	729.85	731.71	732.78	733.53	733.63	733.13	732.82	732.67

08091900 Lake Pat Cleburne near Cleburne, TX—Continued



## BRAZOS RIVER BASIN

08092000 Nolan River at Blum, TX

LOCATION.--Lat 32°09'02", long 97°24'09", Hill County, Hydrologic Unit 12060202, on right bank 60 ft upstream from bridge on Farm Road 933, 0.6 mi northwest of Blum 2.8 mi downstream from Mustang Creek, 3.0 mi downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 3.2 mi upstream from Rock Creek, and 8.5 mi upstream from mouth.

DRAINAGE AREA.--282 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1924 to Sept. 1925, Nov. 1947 to Sept. 1985 (daily mean discharge). Oct. 1985 to current year (peaks above base discharge).

REVISED RECORDS.--WSP 1312: 1925(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 551.48 ft above NGVD of 1929. July 29, 1924, to Sept. 30, 1925, and Nov. 14, 1947, to May 28, 1949, nonrecording gage at railway bridge (now abandoned) 0.5 mi upstream at datum 5.00 ft higher. May 29 to July 7, 1949, nonrecording gage at present site and datum then in use (5.00 ft higher than present datum). Satellite telemeter at station.

REMARKS.--Records good, except those for Oct. 1 to Feb. 2, which are fair. Since water year 1965, at least 10% of contributing drainage area has been regulated. The city of Cleburne diverts water from Lake Pat Cleburne and returns wastewater effluent to a tributary upstream.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--17 years (water years 1925, 1949-64) prior to regulation by Lake Pat Cleburne, 66.1 ft<sup>3</sup>/s (47,890 acre-ft/yr).

AVERAGE DISCHARGE FOR REGULATED PERIOD.--21 years (water years 1965-85), 81.2 ft<sup>3</sup>/s (58,830 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1887, 35.0 ft May 8, 1922, present site and datum, from information by local resident.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS 1924-1925, 1949-1964: Maximum discharge prior to regulation by Lake Pat Cleburne, 25,000 ft<sup>3</sup>/s, May 17, 1949, gage height, 24.0 ft (from floodmark); no flow at times.

EXTREMES FOR REGULATED PERIOD.--Maximum discharge, 79,600 ft<sup>3</sup>/s, May 17, 1989, gage height, 33.44 ft, from rating curve extended above 22,200 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; no flow at times.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,220 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan 17	0215	2,160	6.14	Jun 9	2145	*11,000	*14.21
Feb 25	1130	1,720	5.65	Jun 30	0015	1,430	5.30
Apr 24	1345	4,760	8.69	Jul 29	0545	1,990	5.95
Apr 25	1430	3,420	7.43	Aug 19	1830	5,860	9.69
May 1	1315	2,670	6.68				

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08092000 Nolan River at Blum, 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 unfltd, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltd, std units (00400)	Specific conductance, wat unfltd, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Noncarb hardness, wat fltd, mg/L as CaCO3 (00904)	Hardness, water, mg/L as CaCO3 (00900)	Calcium, water, fltd, mg/L (00915)	Magnesium, water, fltd, mg/L (00925)
FEB 18...	1131	10	18	765	17.9	166	8.8	671	12.0	75	250	87.8	6.93
APR 01...	1440	20	2.1	745	18.3	234	9.0	744	26.5	76	250	85.9	8.66
MAY 05...	1110	170	14	769	11.8	129	8.2	404	20.0	9	160	54.9	4.61
AUG 03...	1258	30	7.1	755	12.9	183	8.9	456	33.5	13	150	54.3	4.24

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

Date	Potassium, water, fltd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat fltd, inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat fltd, incm. titr., mg/L (00453)	Carbonate, wat fltd, incm. titr., mg/L (00452)	Chloride, water, fltd, mg/L (00940)	Fluoride, water, fltd, mg/L (00950)	Silica, water, fltd, mg/L (00955)	Sulfate, water, fltd, mg/L (00945)	Residue, water, fltd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat fltd mg/L (70300)
FEB 18...	15.6	1	50.8	29	173	E201	4	47.1	.3	.6	95.8	417	--
APR 01...	15.8	2	65.2	34	175	195	9	52.5	.4	1.36	120	458	476
MAY 05...	5.25	.6	17.6	19	147	177	1	18.4	.3	6.77	26.4	225	245
AUG 03...	11.1	1	28.5	27	140	164	3	24.8	.3	9.94	50.2	274	292

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

Date	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia, water, fltd, mg/L as N (00608)	Nitrate, water, fltd, mg/L as N (00618)	Nitrite + nitrate, water, fltd, mg/L as N (00631)	Nitrite, water, fltd, mg/L as N (00613)	Orthophosphate, water, fltd, mg/L (00660)	Orthophosphate, water, fltd, mg/L as P (00671)	Phosphorus, water, fltd, mg/L (00666)	Organic carbon, water, unfltd, mg/L (00680)	BOD, water, unfltd 5 day, 20 degC mg/L (00310)	Aluminum, water, fltd, ug/L (01106)	Antimony, water, fltd, ug/L (01095)	Arsenic, water, fltd, ug/L (01000)
FEB 18...	10	<.04	1.70	1.71	.011	1.06	.347	.37oc	7.2	<2.0	2	.28	2
APR 01...	<10	<.04	--	.59	E.007n	.356	.116	.142	9.9	<2.0	3	.21	3
MAY 05...	17	<.04	.57	.58	.017	.156	.051	.079	12.2	<2.0	2	E.13n	2
AUG 03...	<10	E.02n	1.29	1.30	.009	.831	.271d	.30oc	8.3	<2.0	6	.27	3

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

Date	Barium, water, fltd, ug/L (01005)	Beryllium, water, fltd, ug/L (01010)	Cadmium, water, fltd, ug/L (01025)	Chromium, water, fltd, ug/L (01030)	Cobalt, water, fltd, ug/L (01035)	Copper, water, fltd, ug/L (01040)	Iron, water, fltd, ug/L (01046)	Lead, water, fltd, ug/L (01049)	Manganese, water, fltd, ug/L (01056)	Mercury, water, fltd, ug/L (71890)	Molybdenum, water, fltd, ug/L (01060)	Nickel, water, fltd, ug/L (01065)	Selenium, water, fltd, ug/L (01145)
FEB 18...	57	<.06	.12	1.0	.481	1.8	--	.12	2.6	<.02	36.7	2.62	<3
APR 01...	62	<.06	.36	E.5n	.645	2.3	E6n	.09	2.7	<.02	138d	2.89	<3
MAY 05...	52	<.06	E.02n	<.8	.341	1.9	6	E.05n	2.7	<.02	5.9	2.31	<3
AUG 03...	51	<.06	.12	E.5n	.561	2.2	8	.14	4.2	<.02	30.1	2.83	<3

08092000 Nolan River at Blum, TX—Continued

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

Date	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
FEB			
18...	<.2	6.7	.84
APR			
01...	<.2	4.9	.84d
MAY			
05...	<.2	2.4	.54
AUG			
03...	<.2	2.8	.37

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  
o -- Result determined by alternate method

## BRAZOS RIVER BASIN

08092500 Lake Whitney near Whitney, TX

LOCATION.--Lat 31°51'55", long 97°22'18", Bosque County, Hydrologic Unit 12060202, on State Highway 22, in intake structure of Whitney Dam on Brazos River, 2.4 mi upstream from Coon Creek, 3.5 mi upstream from Iron Creek, 7.4 mi southwest of Whitney, at mile 442.4.

DRAINAGE AREA.--27,189 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

## WATER-STAGE RECORDS

PERIOD OF RECORD.--Dec. 1951 to Sept. 2000 (U.S. Army Corps of Engineers furnished contents), Oct. 2000 to Sept. 2002 (contents), Oct. 2002 to current year. Prior to Oct. 1970, published as "Whitney Reservoir". Prior to Oct. 1980, published as "Whitney Lake".

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by U.S. Army Corps of Engineers). Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by a concrete-gravity and rolled earthfill dam 17,695 ft long, including spillway. The dam was completed in Apr. 1951, and deliberate impoundment began Dec. 10, 1951. Concrete spillway is 680 ft long and includes 17 tainter gates 38 by 40 ft each. Outlet works are comprised of 16 gate-operated conduits that are 5 by 9 ft each. The space between elevations 522 and 571 ft is reserved for flood-control storage. At maximum design elevation of 573.0 ft the spillway is designed to discharge 684,000 ft<sup>3</sup>/s. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	584.0
Design flood	573.0
Top of gates	571.0
Crest of spillway (sill of gates)	533.0
Top of conservation pool (top of designated power storage)	533.0
Lowest controlled outlet (invert)	448.8

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,980,000 acre-ft, May 29, 1957, elevation, 570.25 ft; minimum since power pool elevation first reached in Apr. 1954, 250,200 acre-ft, Nov. 1, 1956, elevation 509.52 ft.

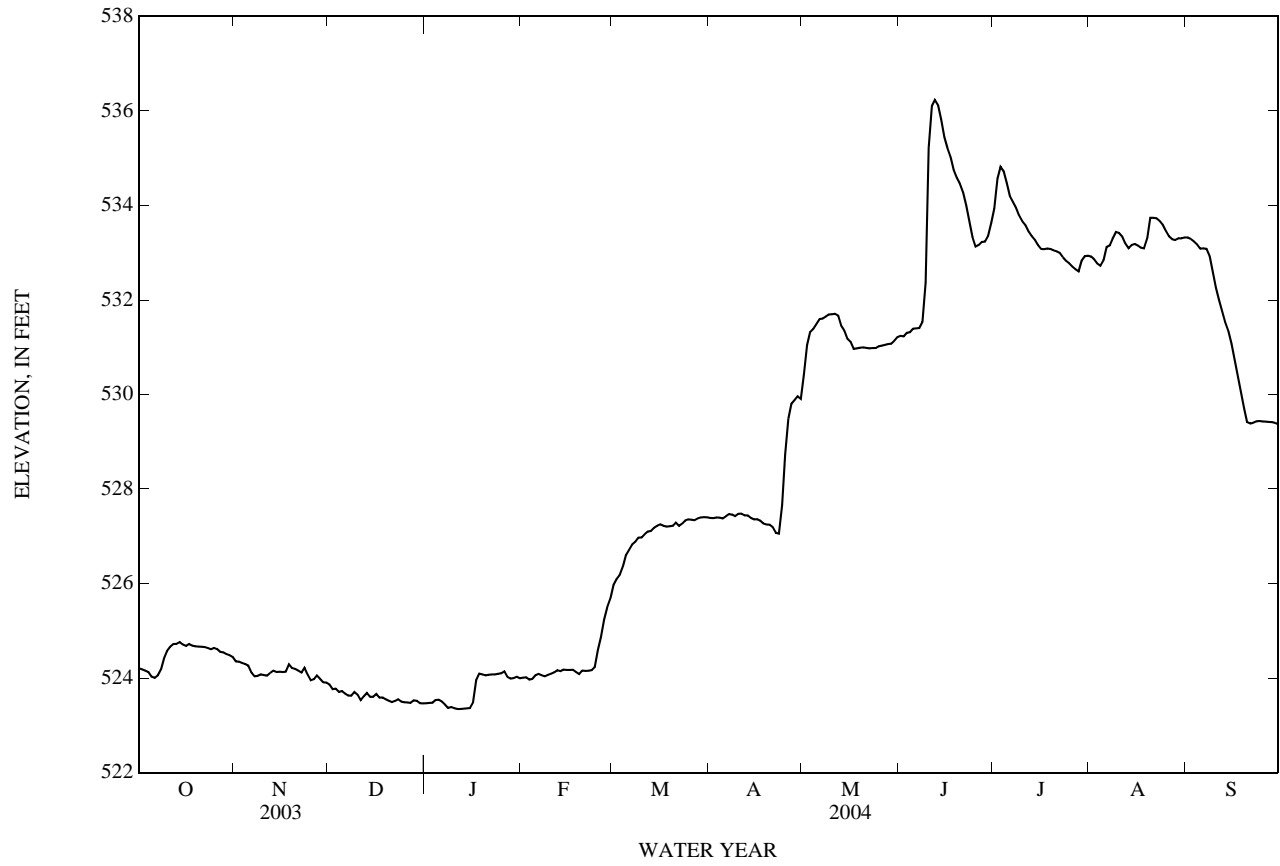
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 536.26 ft, June 12; minimum elevation, 523.33 ft, Jan. 11, 12.

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	524.21	524.35	523.87	523.47	524.01	525.97	527.39	530.42	531.24	533.94	532.92	533.32
2	524.18	524.35	523.77	523.48	524.02	526.09	527.38	531.05	531.23	534.57	532.86	533.29
3	524.16	524.32	523.78	523.48	523.97	526.18	527.40	531.32	531.31	534.81	532.77	533.24
4	524.13	524.30	523.71	523.54	523.98	526.36	527.40	531.39	531.32	534.72	532.72	533.17
5	524.03	524.26	523.73	523.54	524.06	526.60	527.38	531.49	531.39	534.48	532.84	533.08
6	524.00	524.12	523.67	523.50	524.09	526.72	527.42	531.60	531.40	534.19	533.12	533.09
7	524.05	524.04	523.63	523.44	524.06	526.83	527.47	531.61	531.41	534.07	533.15	533.08
8	524.18	524.05	523.63	523.37	524.04	526.88	527.46	531.65	531.53	533.95	533.30	532.93
9	524.42	524.08	523.71	523.39	524.07	526.97	527.43	531.69	532.37	533.78	533.44	532.60
10	524.58	524.06	523.65	523.36	524.09	526.98	527.48	531.70	535.22	533.66	533.42	532.26
11	524.66	524.05	523.53	523.35	524.12	527.04	527.48	531.71	536.10	533.58	533.34	531.99
12	524.72	524.11	523.61	523.35	524.17	527.10	527.44	531.67	536.23	533.45	533.20	531.76
13	524.72	524.16	523.69	523.35	524.15	527.12	527.44	531.45	536.12	533.35	533.10	531.53
14	524.76	524.13	523.61	523.36	524.18	527.18	527.39	531.35	535.82	533.27	533.16	531.35
15	524.71	524.14	523.60	523.37	524.17	527.22	527.36	531.18	535.45	533.16	533.19	531.07
16	524.68	524.13	523.66	523.48	524.17	527.25	527.36	531.11	535.22	533.08	533.15	530.76
17	524.72	524.14	523.59	523.96	524.18	527.22	527.33	530.97	535.02	533.08	533.10	530.42
18	524.69	524.29	523.59	524.09	524.13	527.20	527.27	530.98	534.76	533.09	533.09	530.07
19	524.68	524.21	523.55	524.08	524.09	527.21	527.25	530.99	534.59	533.08	533.30	529.71
20	524.67	524.19	523.52	524.06	524.16	527.22	527.25	531.00	534.46	533.05	533.74	529.42
21	524.66	524.16	523.49	524.07	524.15	527.29	527.20	530.99	534.28	533.03	533.74	529.39
22	524.66	524.12	523.52	524.08	524.16	527.22	527.07	530.98	533.99	532.99	533.73	529.40
23	524.64	524.22	523.55	524.08	524.17	527.27	527.06	530.98	533.67	532.91	533.67	529.43
24	524.61	524.07	523.50	524.09	524.24	527.33	527.66	530.98	533.33	532.83	533.59	529.44
25	524.64	523.95	523.49	524.10	524.60	527.36	528.73	531.02	533.13	532.78	533.46	529.43
26	524.61	523.98	523.48	524.14	524.88	527.35	529.49	531.04	533.16	532.71	533.35	529.43
27	524.56	524.05	523.48	524.03	525.25	527.34	529.81	531.05	533.23	532.65	533.28	529.42
28	524.54	523.98	523.53	523.99	525.50	527.38	529.88	531.07	533.23	532.61	533.27	529.41
29	524.51	523.91	523.52	524.00	525.69	527.40	529.96	531.07	533.35	532.83	533.30	529.40
30	524.48	523.90	523.47	524.03	---	527.40	529.91	531.14	533.63	532.92	533.30	529.37
31	524.45	---	523.46	524.00	---	527.40	---	531.21	---	532.93	533.32	---
MEAN	524.49	524.13	523.60	523.73	524.29	527.03	527.82	531.22	533.57	533.40	533.26	531.08
MAX	524.76	524.35	523.87	524.14	525.69	527.40	529.96	531.71	536.23	534.81	533.74	533.32
MIN	524.00	523.90	523.46	523.35	523.97	525.97	527.06	530.42	531.23	532.61	532.72	529.37
WTR YR	2004	MEAN	528.15	MAX	536.23	MIN	523.35					



08092500 Lake Whitney near Whitney, TX—Continued



08092500 Lake Whitney near Whitney, TX—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--CHEMICAL DATA: Sept. 1970 to Aug. 1987, Feb. 1999 to Aug 2004.

BIOCHEMICAL DATA: Sept. 1970 to Aug. 1987, Feb. 1999 to Aug 2004.

PESTICIDE DATA: Aug. 1999 to Aug 2004.

RADIOCHEMICAL DATA: Jan. 1981 to May 1981.

SEDIMENT CHEMISTRY: April 2003.

REMARKS.--Pesticide samples are composited from discrete samples collected at the surface, middle, and bottom of the reservoir. Phytoplankton data for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

315203097222601 -- LK WHITNEY SITE AC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfr uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Trans- parency Secchi disc, meters (00078)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Hard- ness, water, mg/L as CaCO3 (00900)
FEB													
18-18	1359	--	--	--	--	--	--	--	--	--	--	--	--
18...	1400	1.00	1,690	8.3	9.7	--	1.83	764	10.5	93	<1k	<1k	290
18...	1402	3.00	1,690	8.3	9.7	--	--	764	10.6	93	--	--	--
18...	1404	10.0	1,690	8.2	9.0	--	--	764	9.9	86	--	--	--
18...	1406	20.0	1,690	8.2	8.9	--	--	764	9.8	84	--	--	--
18...	1408	30.0	1,690	8.2	8.9	--	--	764	9.8	85	--	--	--
18...	1410	40.0	1,700	8.1	8.8	--	--	764	9.7	83	--	--	--
18...	1412	50.0	1,690	8.2	8.8	--	--	764	9.7	84	--	--	--
18...	1414	60.0	1,690	8.1	8.8	--	--	764	9.6	83	--	--	--
18...	1416	70.0	1,700	8.0	8.8	--	--	764	8.8	76	--	--	--
18...	1418	80.0	1,690	8.0	8.8	--	--	764	8.8	76	--	--	--
18...	1420	91.0	1,690	8.1	8.7	--	--	764	9.1	78	--	--	290
MAY													
04...	0816	1.00	1,650	8.3	20.0	18.6	1.46	760	9.0	99	--	--	280
MAY													
04-04													
04...	0817	--	--	--	--	--	--	--	--	--	--	--	--
04...	0818	2.50	1,660	8.3	19.9	--	--	760	8.8	98	--	--	--
04...	0820	10.0	1,660	8.2	19.5	--	--	760	7.9	87	--	--	--
04...	0822	20.0	1,670	8.1	19.2	--	--	760	7.2	79	--	--	--
04...	0824	30.0	1,670	8.0	19.2	--	--	760	7.0	76	--	--	--
04...	0826	40.0	1,670	8.0	19.1	--	--	760	6.9	75	--	--	--
04...	0828	50.0	1,670	8.0	19.0	--	--	760	6.8	73	--	--	--
04...	0830	60.0	1,700	7.6	18.2	--	--	760	4.3	46	--	--	--
04...	0832	70.0	1,720	7.3	16.7	--	--	760	1.8	19	--	--	--
04...	0834	80.0	1,730	7.3	16.0	--	--	760	1.1	12	--	--	--
04...	0836	90.0	1,710	7.2	14.3	--	--	760	.5	5	--	--	--
04...	0838	96.0	1,710	7.2	13.9	--	--	760	.3	3	--	--	300
04...	1252	1.00	--	--	--	--	--	--	--	--	E3k	E2k	--
AUG													
03-03	0825	--	--	--	--	--	--	--	--	--	--	--	--
03...	0826	1.00	1,630	8.4	29.6	28.0	2.35	749	8.7	117	E3k	<1k	260
03...	0827	3.90	--	--	--	--	--	--	--	--	--	--	--
03...	0828	10.0	1,620	8.1	28.6	--	--	749	5.9	78	--	--	--
03...	0829	15.0	1,630	7.9	28.5	--	--	749	4.7	62	--	--	--
03...	0830	20.0	1,630	7.8	28.4	--	--	749	3.9	51	--	--	--
03...	0832	30.0	1,640	7.6	28.1	--	--	749	2.7	36	--	--	--
03...	0834	35.0	1,630	7.6	28.1	--	--	749	2.3	31	--	--	--
03...	0836	40.0	1,640	7.4	27.2	--	--	749	E.1e	--	--	--	--
03...	0838	50.0	1,650	7.3	25.8	--	--	749	E.1e	--	--	--	--
03...	0840	60.0	1,670	7.2	24.7	--	--	749	E.1e	--	--	--	--
03...	0842	70.0	1,680	7.2	23.1	--	--	749	E.1e	--	--	--	--
03...	0844	80.0	1,710	7.2	21.0	--	--	749	E.1e	--	--	--	--
03...	0846	90.0	1,730	7.2	19.4	--	--	749	E.1e	--	--	--	--
03...	0848	96.0	1,720	7.1	19.2	--	--	749	E.1e	--	--	--	280

08092500 Lake Whitney near Whitney, TX—Continued

315203097222601 -- LK WHITNEY SITE AC  
 WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltred, mg/L (00915)	Magnes- ium, water, fltred, mg/L (00925)	Sodium, water, fltred, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltred, mg/L (00935)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltred, mg/L (00945)	Chlor- ide, water, fltred, mg/L (00940)	Fluor- ide, water, fltred, mg/L (00950)	Silica, water, fltred, mg/L (00955)	Residue water, fltred, sum of consti- tuents mg/L (70301)
FEB													
18-18	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	180	79.1	22.5	235	6	63	7.11	106	155d	371d	.3	7.2	942
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	180	78.9	23.1	234	6	63	6.99	113	157d	374d	.3	7.3	950
MAY													
04...	170	78.2	21.2	241	6	64	6.92	114	143d	359d	.3	6.0	924
MAY													
04-04	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	180	83.2	22.5	249	6	64	7.24	124	144d	366d	.3	8.2	957
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
03-03	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	150	71.3	19.6	208	6	63	6.36	113	137	346d	.3	6.5	863
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	110	77.7	21.6	217	6	62	6.46	168	130d	366d	.3	10.7	935

08092500 Lake Whitney near Whitney, TX—Continued

315203097222601 -- LK WHITNEY SITE AC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Chloro- phyll a phyto- plank- ton, acid m, ug/L (32211)	Pheophy- tin a, phyto- plank- ton, acid m, ug/L (32218)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)
FEB													
18-18	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	.10	.009	.11	<.04	.004	<.006	--	--	<6	E.7n	--	--	
18...	--	--	--	--	--	--	--	7.00	1.80	--	--	--	
18...	--	--	--	--	--	--	--	--	--	--	--	--	
18...	--	--	--	--	--	--	--	--	--	--	--	--	
18...	--	--	--	--	--	--	--	--	--	--	--	--	
18...	--	--	--	--	--	--	--	--	--	--	--	--	
18...	--	--	--	--	--	--	--	--	--	--	--	--	
18...	--	--	--	--	--	--	--	--	--	--	--	--	
18...	--	--	--	--	--	--	--	--	--	--	--	--	
18...	.09	.008	.10	.07	.009	E.004n	--	--	<6	24.0	--	--	
MAY													
04...	--	<.008	<.06	<.04	.010	<.006	--	--	<6	E.5n	<.1	<.1	
MAY													
04-04	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	7.40e	.200e	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	<.008	<.06	E.03n	.008	<.006	--	--	<6	E.7n	--	--	
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	.22	.010	.23	E.03n	.013	.006	.018	--	<6	13.1	--	--	
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	.29	.010	.30	.09	.021	.009	.028	--	9	763	--	--	
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
03-03	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	<.008	<.06	<.04	.006	<.006	--	--	<6	1.4	<.1	<.1	
03...	--	--	--	--	--	--	--	8.70	2.70	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	<.008	<.06	<.04	.006	<.006	--	--	<6	.9	--	--	
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	<.008	<.06	.06	.007	<.006	--	--	E3n	10.4	--	--	
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	<.008	<.06	1.93d	.37oc	.366d	1.12	--	63	1,490	--	--	













## BRAZOS RIVER BASIN

08092500 Lake Whitney near Whitney, TX—Continued

315214097222001 -- LK WHITNEY SITE AL  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
FEB									
18...	1455	1.00	1,690	8.2	9.6	--	765	10.5	93
18...	1457	10.0	1,690	8.2	9.3	--	765	10.5	91
18...	1459	20.0	1,690	8.2	8.9	--	765	10.0	86
18...	1501	30.0	1,700	8.2	8.9	--	765	9.9	86
18...	1503	40.0	1,690	8.2	8.8	--	765	9.8	85
18...	1505	48.0	1,700	8.1	8.9	--	765	9.7	84
MAY									
04...	0850	1.00	1,650	8.3	20.1	20.2	760	9.3	104
04...	0852	10.0	1,660	8.2	19.4	--	760	8.3	91
04...	0854	20.0	1,670	8.1	19.1	--	760	7.5	82
04...	0856	30.0	1,670	8.1	19.1	--	760	7.3	80
04...	0858	40.0	1,670	8.0	19.1	--	760	7.3	79
04...	0900	50.0	1,660	8.0	19.1	--	760	7.0	76
AUG									
03...	0916	1.00	1,620	8.3	29.4	29.5	750	8.0	108
03...	0918	10.0	1,630	8.0	28.6	--	750	5.3	70
03...	0920	20.0	1,620	7.7	28.4	--	750	3.8	50
03...	0922	30.0	1,630	7.7	28.1	--	750	3.0	40
03...	0924	40.0	1,640	7.4	27.1	--	750	E.1e	--
03...	0926	50.0	1,650	7.3	25.8	--	750	E.1e	--
03...	0928	56.0	1,640	7.3	25.5	--	750	E.1e	--

315432097234601 -- LK WHITNEY SITE CC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
FEB									
18...	1006	1.00	1,690	8.3	9.6	--	770	11.2	98
18...	1008	10.0	1,710	8.3	9.4	--	770	11.1	96
18...	1010	20.0	1,690	8.3	9.3	--	770	10.8	94
18...	1012	30.0	1,700	8.2	9.0	--	770	10.6	91
18...	1014	40.0	1,690	8.2	8.8	--	770	10.4	89
18...	1016	50.0	1,690	8.2	8.6	--	770	10.1	86
18...	1018	60.0	1,690	8.2	8.6	--	770	10.0	85
18...	1020	70.0	1,700	8.1	8.6	--	770	10.0	85
18...	1022	80.0	1,700	8.1	8.6	--	770	9.3	80
MAY									
04...	0934	1.00	1,670	8.3	19.6	22.2	760	8.8	96
04...	0936	10.0	1,680	8.3	19.6	--	760	8.7	96
04...	0938	20.0	1,670	8.2	19.5	--	760	8.1	88
04...	0940	30.0	1,670	8.1	19.2	--	760	7.2	79
04...	0942	40.0	1,670	8.0	19.1	--	760	6.5	71
04...	0944	50.0	1,670	7.9	19.0	--	760	6.2	67
04...	0946	60.0	1,680	7.7	18.6	--	760	5.0	54
04...	0948	70.0	1,700	7.4	17.4	--	760	2.4	25
04...	0950	80.0	1,710	7.3	16.5	--	760	1.1	11
04...	0952	85.0	1,710	7.3	16.2	--	760	.9	10
AUG									
03...	1004	1.00	1,620	8.4	30.5	30.8	750	8.7	118
03...	1006	10.0	1,620	8.0	28.8	--	750	5.8	77
03...	1008	20.0	1,650	7.8	28.5	--	750	3.8	50
03...	1010	30.0	1,640	7.6	28.2	--	750	2.3	30
03...	1012	40.0	1,640	7.4	27.6	--	750	E.1e	--
03...	1014	50.0	1,650	7.3	25.8	--	750	E.1e	--
03...	1016	60.0	1,660	7.2	24.7	--	750	E.1e	--
03...	1018	70.0	1,690	7.2	23.2	--	750	E.1e	--
03...	1020	80.0	1,720	7.1	21.1	--	750	E.1e	--
03...	1022	86.0	1,720	7.1	20.6	--	750	E.2e	--

08092500 Lake Whitney near Whitney, TX—Continued

315722097240201 -- LK WHITNEY SITE DC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Trans- parency Secchi disc, meters (00078)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC col/ 100 mL (31625)	E coli, m-TEC MF, col/ 100 mL (31633)	Hard- ness, water, mg/L as CaCO3 (00900)
FEB													
18...	1038	1.00	1,710	8.3	9.4	--	1.19	770	11.0	96	<1k	<1k	300
18...	1040	2.00	1,710	8.3	9.4	--	--	770	11.1	96	--	--	--
18...	1042	10.0	1,710	8.3	9.2	--	--	770	10.8	93	--	--	--
18...	1044	20.0	1,710	8.2	8.9	--	--	770	10.4	89	--	--	--
18...	1046	30.0	1,710	8.2	8.6	--	--	770	10.1	86	--	--	--
18...	1048	40.0	1,720	8.2	8.4	--	--	770	10.1	85	--	--	--
18...	1050	50.0	1,720	8.2	8.2	--	--	770	9.9	83	--	--	--
18...	1052	60.0	1,720	8.1	8.1	--	--	770	9.4	79	--	--	--
18...	1054	70.0	1,730	8.1	8.1	--	--	770	9.2	77	--	--	300
MAY													
04...	1000	1.00	1,690	8.4	21.2	22.0	1.07	760	9.1	103	--	--	280
04...	1002	10.0	1,690	8.4	21.1	--	--	760	8.9	101	--	--	--
04...	1004	20.0	1,690	8.4	20.7	--	--	760	8.4	95	--	--	--
04...	1006	30.0	1,720	8.1	19.9	--	--	760	6.7	75	--	--	--
04...	1008	40.0	1,710	8.0	19.7	--	--	760	6.4	70	--	--	--
04...	1010	50.0	1,710	8.0	19.5	--	--	760	6.2	68	--	--	--
04...	1012	60.0	1,720	7.5	18.6	--	--	760	3.5	38	--	--	--
04...	1014	74.0	1,730	7.4	17.7	--	--	760	1.7	18	--	--	300
04...	1232	--	--	--	--	--	--	--	--	--	E4k	E4k	--
AUG													
03...	1036	1.00	1,620	8.4	31.6	32.5	1.86	750	8.4	117	<1k	<1k	260
03...	1038	10.0	1,620	8.3	30.1	--	--	750	7.8	106	--	--	--
03...	1040	15.0	1,630	8.1	28.8	--	--	750	5.7	75	--	--	--
03...	1042	20.0	1,630	7.7	28.4	--	--	750	3.0	40	--	--	--
03...	1044	30.0	1,600	7.5	28.1	--	--	750	1.4	18	--	--	--
03...	1046	35.0	1,610	7.5	28.0	--	--	750	1.1	14	--	--	--
03...	1048	40.0	1,440	7.4	26.8	--	--	750	E.1e	--	--	--	--
03...	1050	50.0	1,650	7.2	25.9	--	--	750	E.1e	--	--	--	--
03...	1052	60.0	1,650	7.2	24.6	--	--	750	E.1e	--	--	--	--
03...	1054	70.0	1,700	7.1	23.1	--	--	750	E.1e	--	--	--	--
03...	1056	75.0	1,690	7.1	23.0	--	--	750	E.1e	--	--	--	280

## BRAZOS RIVER BASIN

08092500 Lake Whitney near Whitney, TX—Continued

315722097240201 -- LK WHITNEY SITE DC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of consti- tuents mg/L (70301)
FEB													
18...	190	80.9	23.0	241	6	63	7.11	108	158d	381d	.3	6.9	964
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	180	81.4	22.8	240	6	63	6.97	113	160d	386d	.3	6.7	972
MAY													
04...	170	77.8	21.3	243	6	65	6.87	116	146d	367d	.3	5.7	938
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	180	82.2	22.5	255	6	64	7.25	118	148d	377d	.3	7.0	971
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
03...	140	70.0	19.7	207	6	63	6.36	115	137	349d	.3	6.5	864
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	110	76.7	20.6	213	6	62	6.48	164	129	351d	.3	9.4	909

08092500 Lake Whitney near Whitney, TX—Continued

315722097240201 -- LK WHITNEY SITE DC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Phos- phorus, water, fltrd, mg/L as P (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Chloro- phyll a phyto- plank- ton, acid m, ug/L (32211)	Pheophy- tin a, phyto- plank- ton, acid m, ug/L (32218)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
FEB											
18...	--	E.007n	.09	<.04	.005	<.006	--	--	--	<6	<.8
18...	--	--	--	--	--	--	--	7.20	.700	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	E.006n	.08	.05	.004	<.006	--	--	--	<6	12.1
MAY											
04...	--	<.008	<.06	<.04	.009	<.006	--	--	--	<6	E.7n
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	.008	E.03n	.04	.009	<.006	--	--	--	E4n	3.7
04...	--	--	--	--	--	--	--	--	--	--	--
04...	.09	.020	.11	.16	.017	.006	.018	--	--	7	196
04...	--	--	--	--	--	--	--	--	--	--	--
AUG											
03...	--	<.008	<.06	<.04	.006	<.006	--	--	--	<6	1.3
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	<.008	<.06	<.04	.006	<.006	--	--	--	<6	1.4
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	<.008	<.06	.12	.009	<.006	--	--	--	E5n	15.8
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	<.008	<.06	2.32d	.33oc	.317d	.972	--	--	84	843

320122097260901 -- LK WHITNEY SITE FC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sampl- ing depth, feet (00003)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Trans- parency Secchi disc, meters (00078)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of satura- tion (00301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)
FEB													
18...	1202	1.00	1,760	8.4	9.8	--	1.01	770	11.5	101	--	E.007n	.07
18...	1204	1.60	1,750	8.4	9.5	--	--	770	11.3	98	--	--	--
18...	1206	10.0	1,770	8.4	8.5	--	--	770	10.8	92	--	--	--
18...	1208	20.0	1,780	8.2	8.0	--	--	770	9.9	83	--	--	--
18...	1210	30.0	1,790	8.2	7.6	--	--	770	9.2	76	--	--	--
18...	1212	43.0	1,790	8.0	7.4	--	--	770	8.0	66	.09	.008	.10
MAY													
04...	1100	1.00	1,550	8.7	21.6	23.0	.61	760	11.1	127	--	<.008	<.06
04...	1102	10.0	1,540	8.7	21.4	--	--	760	10.7	122	--	--	--
04...	1104	20.0	1,510	8.6	20.8	--	--	760	9.9	112	--	--	--
04...	1106	30.0	1,580	8.1	20.2	--	--	760	6.4	72	--	--	--
04...	1108	40.0	1,730	7.8	19.7	--	--	760	4.5	49	--	--	--
04...	1110	48.0	1,760	7.6	19.5	--	--	760	2.5	28	--	.014	E.04n
AUG													
03...	1156	1.00	1,610	8.4	32.1	32.5	1.04	750	9.3	131	--	<.008	<.06
03...	1158	10.0	1,620	8.2	30.2	--	--	750	8.6	117	--	--	--
03...	1200	20.0	1,620	7.6	28.7	--	--	750	2.4	31	--	--	--
03...	1202	30.0	1,640	7.4	28.4	--	--	750	E.7e	--	--	--	--
03...	1204	40.0	1,640	7.4	28.1	--	--	750	E.2e	--	--	--	--
03...	1206	49.0	1,670	7.1	26.6	--	--	750	E.2e	--	--	<.008	<.06

## BRAZOS RIVER BASIN

08092500 Lake Whitney near Whitney, TX—Continued

320122097260901 -- LK WHITNEY SITE FC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Ammonia water, fltrd, mg/L (00608)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Chloro- phyll a phyto- plank- ton, acid m, ug/L (32211)	Pheophy- tin a, phyto- plank- ton, acid m, ug/L (32218)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
FEB								
18...	<.04	.006	<.006	--	--	--	<6	E.7n
18...	--	--	--	--	7.80	<.200	--	--
18...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--
18...	.08	.006	<.006	--	--	--	E6n	11.8
MAY								
04...	<.04	.013	<.006	--	--	--	E4n	1.2
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
04...	.25	.016	E.004n	--	--	--	E6n	157
AUG								
03...	<.04	.007	<.006	--	--	--	<6	3.3
03...	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--
03...	2.06d	.32oc	.314d	.963	--	--	89	1,530

315907097222801 -- LK WHITNEY SITE P07  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Trans- parency Secchi disc, meters (00078)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)
FEB													
18...	1125	1.00	1,700	8.3	9.3	--	.98	770	10.9	95	--	E.006n	.10
18...	1127	1.60	1,700	8.3	9.2	--	--	770	10.7	93	--	--	--
18...	1129	10.0	1,700	8.3	9.1	--	--	770	10.6	91	--	--	--
18...	1131	20.0	1,720	8.3	8.7	--	--	770	10.3	88	--	--	--
18...	1135	30.0	1,720	8.2	8.4	--	--	770	9.8	83	--	--	--
18...	1137	41.0	1,730	8.0	8.4	--	--	770	8.1	69	--	E.006n	.10
MAY													
04...	1030	1.00	1,690	8.4	20.6	23.0	.73	760	8.7	97	--	<.008	<.06
04...	1032	10.0	1,690	8.4	20.5	--	--	760	8.7	97	--	--	--
04...	1034	20.0	1,680	8.3	20.3	--	--	760	8.2	92	--	--	--
04...	1036	30.0	1,660	8.0	19.8	--	--	760	6.0	66	--	--	--
04...	1038	40.0	1,630	7.9	19.6	--	--	760	5.3	59	--	--	--
04...	1040	48.0	1,580	7.8	19.5	--	--	760	5.2	57	.05	.008	.06
AUG													
03...	1122	1.00	1,570	8.4	32.5	32.1	1.46	749	8.8	124	--	<.008	<.06
03...	1124	10.0	1,590	8.3	29.6	--	--	749	7.5	102	--	--	--
03...	1126	20.0	1,560	7.4	28.4	--	--	749	1.2	16	--	--	--
03...	1128	30.0	1,580	7.4	28.1	--	--	749	E.7e	--	--	--	--
03...	1130	40.0	1,440	7.4	27.5	--	--	749	E.1e	--	--	--	--
03...	1132	49.0	1,360	7.3	26.3	--	--	749	E.1e	--	--	<.008	<.06

08092500 Lake Whitney near Whitney, TX—Continued

315907097222801 -- LK WHITNEY SITE P07  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Ammonia water, fltrd, mg/L as N (00608)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Chloro- phyll a phyto- plank- ton, acid m, ug/L (32211)	Pheophy- tin a, phyto- plank- ton, acid m, ug/L (32218)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
FEB								
18...	<.04	.004	<.006	--	--	--	<6	1.2
18...	--	--	--	--	11.0	<.200	--	--
18...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--
18...	.07	.005	<.006	--	--	--	E6n	27.2
MAY								
04...	<.04	.009	<.006	--	--	--	<6	.9
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
04...	.10	.010	<.006	--	--	--	<6	21.8
AUG								
03...	<.04	.010	<.006	--	--	--	<6	2.1
03...	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--
03...	.69	.100	.081	.248	--	--	102	793

320401097291301 -- LK WHITNEY SITE P11  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Trans- parency Secchi disc, meters (00078)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC col/ 100 mL (31625)	E coli, m-TEC MF, col/ 100 mL (31633)	Hard- ness, water, mg/L as CaCO3 (00900)
FEB													
18...	1245	1.00	1,860	8.8	9.7	--	.52	768	13.6	119	E3k	E1k	340
18...	1247	10.0	1,870	8.7	9.3	--	--	768	12.5	108	--	--	--
18...	1249	16.0	1,940	8.1	8.8	--	--	768	7.3	63	--	--	350
MAY													
04...	1136	.60	1,460	8.5	21.5	24.3	.40	760	10.3	118	--	--	260
04...	1138	10.0	1,500	8.4	21.0	--	--	760	9.1e	103	--	--	--
04...	1140	22.0	1,930	7.8	19.2	--	--	760	6.5	71	--	--	310
04...	1210	--	--	--	--	--	--	--	--	--	E40k	E45k	--
AUG													
03...	1226	1.00	1,520	8.4	33.3	33.2	.85	749	11.0	157	<1k	E1k	230
03...	1228	5.00	1,560	8.3	32.4	--	--	749	9.9	140	--	--	--
03...	1230	10.0	1,460	7.5	29.9	--	--	749	2.6	35	--	--	--
03...	1232	15.0	1,260	7.2	28.6	--	--	749	E.1e	--	--	--	--
03...	1234	20.0	773	7.3	26.8	--	--	749	E.1e	--	--	--	--
03...	1236	24.0	807	7.3	26.8	--	--	749	E.2e	--	--	--	150

## BRAZOS RIVER BASIN

08092500 Lake Whitney near Whitney, TX—Continued

320401097291301 -- LK WHITNEY SITE P11  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of consti- tuents mg/L (70301)
FEB													
18...	210	92.5	25.3	269	6	63	9.60	125	175d	414d	.3	3.1	1,060
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	220	96.7	26.2	283	7	63	8.45	132	180d	434d	.3	4.1	1,110
MAY													
04...	120	76.2	17.0	185	5	60	6.10	136	118	297	.3	5.1	786
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	180	87.8	21.6	262	6	64	6.45	129	154d	435d	.3	4.8	1,050
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
03...	98	64.7	17.6	190	5	63	6.54	136	120	276d	.3	7.1	764
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	42	47.8	8.12	84.9	3	53	7.49	111	60.7	134	.2	8.5	421

320401097291301 -- LK WHITNEY SITE P11  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Chloro- phyll a phyto- plank- ton, acid m, ug/L (32211)	Pheophy- tin a, phyto- plank- ton, acid m, ug/L (32218)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
FEB											
18...	.13	.022	.15	<.04	.011	<.006	--	36.0	3.30	E5n	1.6
18...	--	--	--	--	--	--	--	--	--	--	--
18...	.15	.019	.17	.24	.011	<.006	--	--	--	E6n	46.4
MAY											
04...	--	<.008	<.06	<.04	.017	<.006	--	--	--	14	.9
04...	--	<.008	E.05n	<.04	.015	<.006	--	--	--	E6n	1.2
04...	--	E.006n	.13	.04	.013	<.006	--	--	--	E5n	6.0
04...	--	--	--	--	--	--	--	--	--	--	--
AUG											
03...	--	<.008	<.06	<.04	.012	<.006	--	--	--	<6	1.6
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	<.008	<.06	<.04	.015	<.006	--	--	--	E4n	8.5
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	.14	.111	.25	.42	.23oc	.203d	.622	--	--	256	278

315500097204001 -- LK WHITNEY SITE P15  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Trans- parency Secchi disc, meters (00078)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)
FEB													
18...	0928	1.00	1,680	8.3	9.6	--	.94	770	11.5	100	.09	.008	.10
18...	0930	10.0	1,690	8.2	9.2	--	--	770	10.7	93	--	--	--
18...	0932	21.0	1,700	8.2	9.1	--	--	770	10.2	88	.10	.008	.10
18...	0934	1.50	1,690	8.3	9.6	--	--	770	11.2	98	--	--	--
MAY													
04...	0912	1.00	1,640	8.4	20.4	21.0	.85	761	9.0	100	--	<.008	<.06
04...	0914	10.0	1,650	8.4	20.2	--	--	761	9.0	100	--	--	--
04...	0916	20.0	1,640	8.2	19.6	--	--	761	8.2	90	--	--	--
04...	0918	27.0	1,640	8.0	19.4	--	--	761	6.3	69	--	<.008	<.06
AUG													
03...	0942	1.00	1,610	8.4	31.0	30.3	2.07	750	8.8	121	--	<.008	<.06
03...	0944	10.0	1,610	8.2	29.1	--	--	750	6.9	91	--	--	--
03...	0946	20.0	1,620	7.5	28.3	--	--	750	1.7	22	--	--	--
03...	0948	28.0	1,600	7.3	28.3	--	--	750	E.7e	--	--	<.008	<.06



08092500 Lake Whitney near Whitney, TX—Continued

315500097204001 -- LK WHITNEY SITE P15  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Ammonia water, fltrd, mg/L as N (00608)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Chloro- phyll a phyto- plank- ton, acid m, ug/L (32211)	Pheophy- tin a, phyto- plank- ton, acid m, ug/L (32218)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
FEB							
18...	<.04	.005	<.006	--	--	E4n	E.7n
18...	--	--	--	--	--	--	--
18...	<.04	.004	<.006	--	--	E3n	3.0
18...	--	--	--	12.3	.300	--	--
MAY							
04...	<.04	.009	<.006	--	--	<6	E.5n
04...	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--
04...	<.04	.008	<.006	--	--	<6	1.4
AUG							
03...	<.04	.006	<.006	--	--	<6	1.7
03...	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--
03...	E.03n	.007	<.006	--	--	<6	174

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  
e -- See field comment  
k -- Counts outside acceptable range  
n -- Below the LRL and above the LT-MDL  
o -- Result determined by alternate method

08092600 Brazos River at Whitney Dam near Whitney, TX

LOCATION.--Lat 31°52'00", long 97°22'00", Hill County, Hydrologic Unit 12060202, immediately below Whitney Dam, 4.0 mi upstream from Iron Creek, 7.4 mi southwest of Whitney, 9.0 mi upstream from gaging station near Whitney.

DRAINAGE AREA.--27,189 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--

CHEMICAL DATA: Aug. 1946 to Sept. 1997, Oct. 1998 to current year.

BIOCHEMICAL DATA: Oct. 1998 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1947 to Sept. 1997 (local observer).

WATER TEMPERATURE: Aug. 1947 to June 1953 (local observer). July 1953 to Sept. 1966. Oct. 1966 to Sept. 1997 (local observer).

REMARKS.--No appreciable inflow between dam and gaging station except during periods of heavy local rains. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous years using the daily (or continuous) records of specific conductance and regression relations 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 District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,620 microsiemens/cm, Aug. 24, 1978; minimum daily, 203 microsiemens/cm, May 23, 1952.

WATER TEMPERATURE: Maximum daily, 33.5 oC July 3, 1973; minimum daily, 0.0 oC on Jan. 28, 29, 1948.

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

Date	Time	Turbidity, wat unflab, 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)	Specific conductance, wat unfltrd 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)
FEB 18...	1324	6.6	765	13.7	126	8.3	1,700	11.4	190	300	82.7	23.2	7.20
MAY 05...	1300	3.5	769	14.5	156	8.3	1,690	19.0	170	280	76.0	22.4	6.21
JUL 15...	1045	<2.0	755	7.4	96	8.4	1,620	27.9	150	260	72.4	19.9	6.71
AUG 02...	1210	<2.0	766	5.0	63	7.6	1,620	26.9	150	260	72.3	19.9	6.85

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

Date	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 incm. titr., field, mg/L (00453)	Carbonate, wat flt incm. 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 (70301)	Residue on evap. at 180degC wat flt (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)
FEB 18...	6	246	63	109	131	1	372d	.3	6.9	157d	962	--	<10
MAY 05...	6	229	63	116	138	2	375d	.3	6.85	153	938	967	<10
JUL 15...	6	216	63	111	131	2	352d	.3	6.7	138	879	--	<10
AUG 02...	6	209	63	118	143	<1	348d	.3	6.89	135	870	921	<10

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

Date	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)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
FEB 18...	<.04	.10	.10	.009	--	<.006	.009	5.2	E1n	.21	E1n	128	<.06
MAY 05...	<.04	.17	.18	.010	--	<.006	.009	5.5	2	E.18n	Mn	129	<.06
JUL 15...	.08	--	<.06	<.008	--	<.006	.009	7.6	2	E.18n	2	110	<.06
AUG 02...	.22	--	<.06	<.008	.040	.013	.020	8.5	10	E.12n	E1n	114	<.06

## 08092600 Brazos River at Whitney Dam near Whitney, TX—Continued

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

Date	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)	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)
FEB 18...	E.03n	<.8	.189	1.1	--	<.08	9.7	<.02	6.5	1.71	<3	<.2	.7
MAY 05...	E.02n	<.8	.262	1.8	E4n	E.05n	9.0	<.02	6.4	2.15	<3	<.2	1.7
JUL 15...	<.04	<.8	.284	1.2	--	.19	148	<.02	4.8	2.06	<3	<.2	1.4
AUG 02...	<.04	<.8	.296	1.1	15	<.08	164	<.02	4.4	2.21	<3	<.2	.7

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

Date	Uranium natural water, fltrd, ug/L (22703)
FEB 18...	1.22
MAY 05...	1.28
JUL 15...	1.11
AUG 02...	.91

Remark codes used in  
this table:  
< -- Less than  
E -- Estimated  
value  
M-- Presence  
verified, not  
quantified

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

## BRAZOS RIVER BASIN

08093100 Brazos River near Aquilla, TX

LOCATION.--Lat 31°48'44", long 97°17'51". Bosque County, Hydrologic Unit 12060202, on right bank at downstream side of highway embankment near right end of bridge on Farm Road 2114, 2.0 mi downstream from Tener Creek, 4.9 mi downstream from Iron Creek, 5.4 mi southwest of Aquilla, 9.0 mi downstream from Whitney Dam, and at river mile 434.0.

DRAINAGE AREA.--27,244 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--Oct. 1938 to current year. Prior to Oct. 1974, published as "Brazos River near Whitney".

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 404.29 ft above NGVD of 1929. Prior to Oct. 1, 1948, nonrecording gage at site 13.9 mi upstream at datum 27.77 ft higher. Oct. 1, 1948, to Feb. 12, 1975, at site 5.6 mi upstream at datum 13.10 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1941, at least 10% of contributing drainage area has been regulated. Most flow occurs as releases from Lake Whitney (station 08092500) 9.0 mi upstream. Brazos River at Whitney Dam (station 08092600) uses the discharge record at this station for publication of water-quality records. There are diversions above station for irrigation and industrial operations.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--2 years (water years 1939-40) prior to regulation by Possum Kingdom Lake. 1,149 ft<sup>3</sup>/s (832,500 acre-ft/yr), at site and datum in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1853, 45 ft, May 9, 1922, at site and datum in use Oct. 1, 1948, to Feb. 12, 1975, from information by local residents.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS, 1939-1940: Maximum discharge, 39,800 ft<sup>3</sup>/s, June 19, 1939, gage height, 19.16 ft, maximum gage height, 19.92 ft, Aug. 20 1940, at site and datum then in use.

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	19	1,160	988	29	30	84	345	399	20	1,140	987	740
2	19	33	765	28	553	76	42	391	16	2,750	1,390	993
3	18	672	51	28	55	124	21	1,540	17	5,430	1,270	1,070
4	374	83	826	27	35	635	19	1,140	20	5,400	790	1,160
5	1,120	1,360	53	25	91	700	18	389	34	5,380	1,030	1,670
6	917	1,600	28	24	46	99	27	49	19	5,350	1,570	1,100
7	32	507	27	170	39	75	181	1,150	15	2,790	1,700	1,120
8	58	48	28	919	38	61	133	53	109	2,810	477	2,770
9	77	240	29	48	39	55	320	42	557	2,780	1,520	5,490
10	39	477	144	25	39	564	122	1,790	661	2,510	1,600	5,470
11	25	217	920	25	43	70	255	222	5,560	1,480	2,810	4,440
12	24	183	50	73	41	48	228	2,410	5,810	2,590	2,310	4,030
13	26	22	218	37	37	526	23	4,060	7,050	2,340	551	4,260
14	23	19	443	25	40	90	256	2,390	8,800	1,920	498	3,690
15	21	20	50	27	41	60	23	1,660	7,640	1,880	844	5,430
16	97	295	29	124	39	53	272	2,000	5,630	655	1,390	5,420
17	26	440	78	549	301	408	405	1,760	5,580	90	925	5,430
18	20	104	166	47	348	639	463	51	5,560	105	852	5,410
19	21	542	285	39	56	185	712	23	2,630	465	693	5,310
20	22	26	47	173	39	388	39	21	2,550	687	2,030	2,950
21	22	412	148	50	35	87	1,270	19	3,390	261	1,920	101
22	103	55	32	122	35	773	1,650	17	5,450	626	1,170	28
23	243	31	28	45	35	57	78	16	5,470	1,270	1,120	25
24	25	1,050	27	35	41	43	1,530	17	5,460	929	1,920	23
25	21	738	27	36	1,510	66	2,350	16	2,400	683	2,400	21
26	19	211	28	149	355	450	434	15	543	294	2,270	21
27	21	23	30	779	229	291	1,390	15	860	394	1,610	22
28	21	21	28	103	80	345	629	15	1,210	324	652	22
29	21	327	28	40	88	362	819	14	179	959	2,140	22
30	21	27	196	30	---	37	2,510	15	204	870	760	21
31	968	---	47	29	---	21	---	18	---	808	479	---
TOTAL	4,463	10,943	5,844	3,860	4,358	7,472	16,564	21,717	83,444	55,970	41,678	68,259
MEAN	144	365	189	125	150	241	552	701	2,781	1,805	1,344	2,275
MAX	1,120	1,600	988	919	1,510	773	2,510	4,060	8,800	5,430	2,810	5,490
MIN	18	19	27	24	30	21	18	14	15	90	477	21
AC-FT	8,850	21,710	11,590	7,660	8,640	14,820	32,850	43,080	165,500	111,000	82,670	135,400

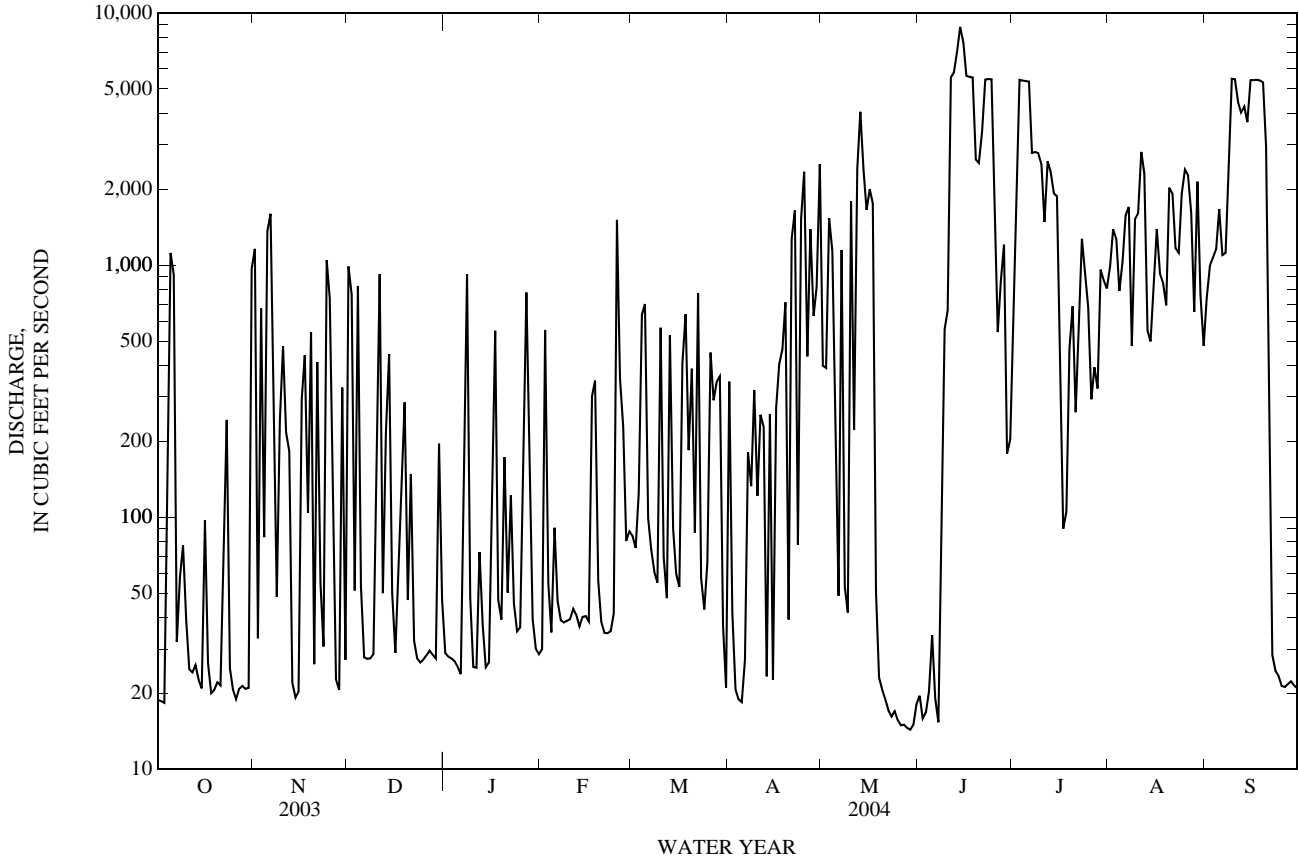
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004z, BY WATER YEAR (WY)

MEAN	1,534	1,041	854	1,055	1,194	1,571	1,494	3,386	3,157	1,337	970	1,025
MAX	12,300	7,201	7,148	18,010	11,190	13,700	14,340	29,670	35,640	8,110	5,252	8,249
(WY)	(1982)	(1975)	(1992)	(1992)	(1992)	(1992)	(1942)	(1957)	(1957)	(1982)	(1995)	(1966)
MIN	24.5	20.5	28.9	9.92	15.6	26.7	12.5	13.0	95.5	28.6	61.5	28.1
(WY)	(1989)	(1984)	(2000)	(1953)	(1984)	(1953)	(1953)	(1988)	(1999)	(1978)	(1988)	(1999)

08093100 Brazos River near Aquilla, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1941 - 2004z	
ANNUAL TOTAL	110,016.1		324,572		1,553	
ANNUAL MEAN	301		887		6,566	
HIGHEST ANNUAL MEAN					141	1992
LOWEST ANNUAL MEAN					141	1953
HIGHEST DAILY MEAN	3,280	Feb 25	8,800	Jun 14	66,100	May 18, 1949
LOWEST DAILY MEAN	1.2	Jan 27	14	May 29	0.40	May 9, 1953
ANNUAL SEVEN-DAY MINIMUM	1.3	Jan 15	15	May 24	0.80	May 4, 1953
MAXIMUM PEAK FLOW			8,960	Jun 13	71,800	May 18, 1949
MAXIMUM PEAK STAGE			14.73	Jun 13	g31.03	May 18, 1949
ANNUAL RUNOFF (AC-FT)	218,200		643,800		1,125,000	
10 PERCENT EXCEEDS	900		2,600		3,090	
50 PERCENT EXCEEDS	78		190		600	
90 PERCENT EXCEEDS	19		21		39	

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





08093160 Aquilla Creek near Peoria, TX—Continued

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

Date	Purpose site visit, code (50280)	Sample purpose code (71999)	Sampler type, code (84164)	Transit rate, sampler ft/s (50015)	Type of sample related QA data, code (99111)
FEB 19...	1,001	10.00	3070	--	1
MAY 26...	1,001	10.00	3070	--	1
JUL 26...	--	--	--	--	--
AUG 24...	1,001	10.00	3045	--o	1

## Remark codes used in this table:

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

## Value qualifier codes used in this table:

@-- Holding time exceeded  
 d -- Diluted sample: method hi range exceeded  
 n -- Below the LRL and above the LT-MDL

## Null value qualifier codes used in this table:

e -- Required equipment not functional/avail  
 o -- Insufficient amount of water





08093260 Hackberry Creek below Hillsboro, TX—Continued

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

Date	Purpose site visit, code (50280)	Sample purpose code (71999)	Sampler type, code (84164)	Transit rate, sampler ft/s (50015)	Transit rate, sampler maximum ft/s (50016)	Transit rate, sampler minimum ft/s (50014)	Type of sample related QA data, code (99111)
FEB 19...	1,001	10.00	3045	.2	.3	.1	1
MAY 27...	1,001	10.00	3045	--	--	--	1
JUL 27...	1,001	10.00	3070	--	--	--	1
AUG 24...	1,001	10.00	3045	--o	--	--	1

## Remark codes used in this table:

< -- Less than  
E -- Estimated value

## Value qualifier codes used in this table:

@-- Holding time exceeded  
c -- See laboratory comment  
d -- Diluted sample: method hi range exceeded  
n -- Below the LRL and above the LT-MDL  
o -- Result determined by alternate method

## Null value qualifier codes used in this table:

e -- Required equipment not functional/avail  
o -- Insufficient amount of water

## BRAZOS RIVER BASIN

08093350 Aquilla Lake above Aquilla, TX

LOCATION.--Lat 31°53'59", long 97°12'09", Hill County, Hydrologic Unit 12060202, 450 ft upstream from Farm Road 310 which runs on top of Aquilla Dam on Aquilla Creek, and 3.4 miles north-northeast of Aquilla.

DRAINAGE AREA.--255 mi<sup>2</sup>.

## WATER-STAGE RECORDS

PERIOD OF RECORD.--Oct. 1983 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. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by an earthfill dam with a crest length of 11,890 ft and a top width of 38.0 ft. A reinforced concrete inlet structure, near center of dam, houses the flood-control gates and operating equipment. Closure of the dam began Mar. 20, 1982, and the dam was completed in Jan. 1983. The dam was built and is owned by the U.S. Army Corps of Engineers. Deliberate impoundment began Apr. 29, 1983. The lake was built for water supply, flood control, and recreation purposes. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	582.5
Spillway crest (uncontrolled)	564.5
Top of flood-control pool	556.0
Lowest gated outlet (invert)	503.0

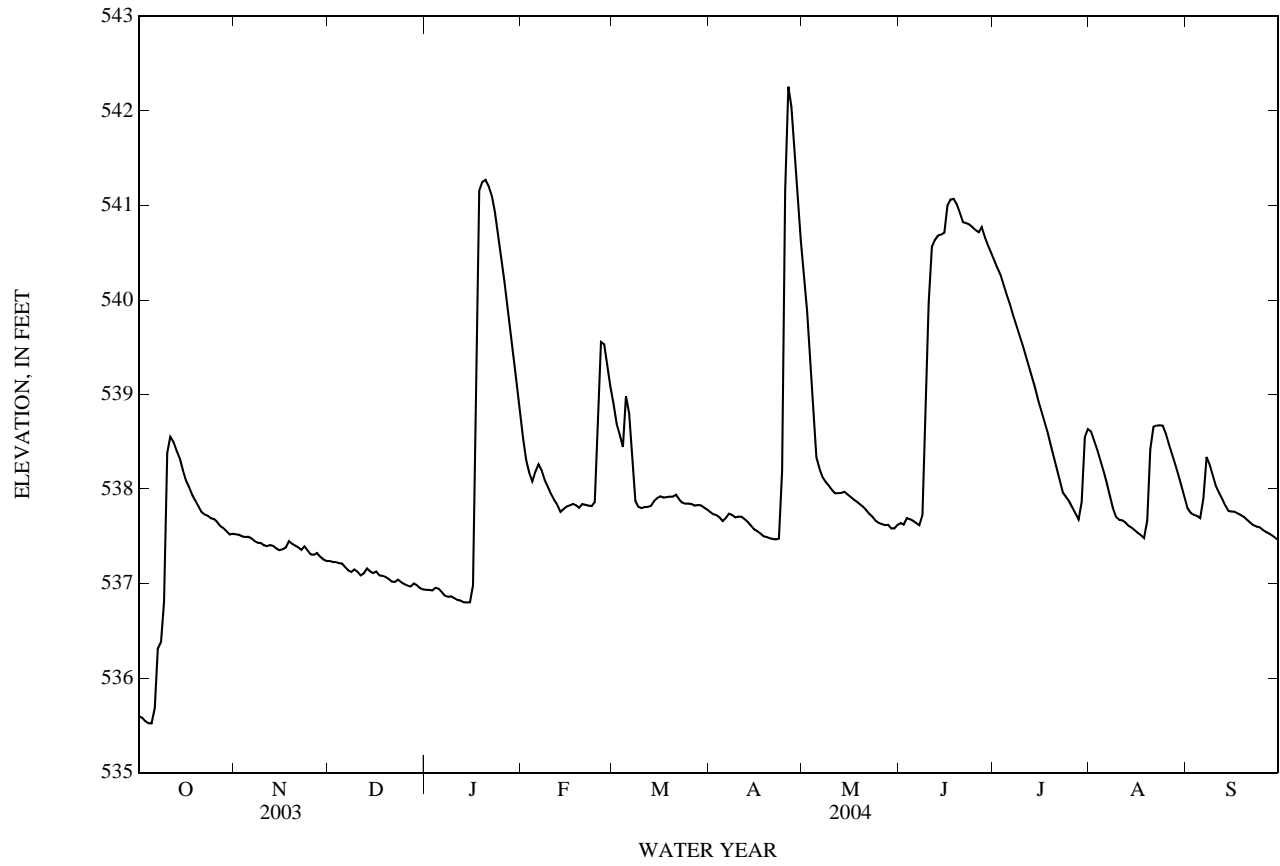
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 119,000 acre-ft, Dec. 23, 1991, elevation, 551.89 ft; minimum contents after initial filling, 35,080 acre-ft, Feb. 22, Mar. 20, 2000, elevation, 533.73 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 542.33 ft, Apr. 26; minimum elevation, 535.51 ft, Oct. 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	535.60	537.52	537.24	536.93	538.54	538.90	537.76	540.26	537.64	540.42	538.61	537.79
2	535.58	537.52	537.23	536.93	538.31	538.69	537.73	539.89	537.62	540.34	538.51	537.75
3	535.55	537.50	537.23	536.93	538.17	538.58	537.72	539.38	537.69	540.27	538.41	537.73
4	535.52	537.49	537.22	536.96	538.08	538.45	537.70	538.83	537.68	540.16	538.31	537.71
5	535.52	537.49	537.21	536.95	538.19	538.98	537.66	538.34	537.66	540.06	538.19	537.69
6	535.68	537.48	537.18	536.91	538.26	538.80	537.69	538.21	537.64	539.95	538.07	537.90
7	536.31	537.45	537.14	536.87	538.19	538.35	537.74	538.13	537.62	539.84	537.93	538.34
8	536.38	537.43	537.12	536.86	538.09	537.87	537.72	538.07	537.72	539.74	537.80	538.26
9	536.81	537.43	537.15	536.87	538.02	537.81	537.70	538.04	538.66	539.64	537.71	538.14
10	538.38	537.40	537.12	536.85	537.95	537.80	537.71	537.99	539.97	539.53	537.68	538.04
11	538.55	537.40	537.09	536.83	537.88	537.81	537.71	537.95	540.56	539.42	537.67	537.96
12	538.50	537.41	537.11	536.82	537.83	537.81	537.68	537.96	540.63	539.31	537.65	537.90
13	538.41	537.40	537.16	536.80	537.76	537.82	537.65	537.96	540.68	539.20	537.61	537.83
14	538.33	537.37	537.13	536.80	537.79	537.87	537.62	537.97	540.69	539.08	537.59	537.77
15	538.21	537.35	537.11	536.80	537.81	537.90	537.58	537.94	540.71	538.95	537.56	537.76
16	538.09	537.36	537.13	536.98	537.83	537.92	537.56	537.92	540.99	538.84	537.54	537.76
17	538.02	537.38	537.09	539.84	537.84	537.91	537.53	537.89	541.06	538.73	537.51	537.74
18	537.94	537.45	537.08	541.15	537.83	537.92	537.50	537.86	541.07	538.61	537.48	537.72
19	537.88	537.42	537.07	541.25	537.80	537.92	537.49	537.84	541.01	538.48	537.67	537.70
20	537.82	537.40	537.05	541.27	537.84	537.92	537.48	537.81	540.92	538.35	538.42	537.67
21	537.76	537.38	537.02	541.20	537.83	537.94	537.47	537.78	540.82	538.22	538.66	537.64
22	537.73	537.36	537.02	541.10	537.82	537.89	537.47	537.74	540.81	538.09	538.67	537.62
23	537.72	537.39	537.04	540.93	537.82	537.86	537.48	537.71	540.80	537.96	538.68	537.60
24	537.69	537.35	537.01	540.67	537.86	537.84	538.19	537.66	540.77	537.91	538.67	537.60
25	537.68	537.31	536.99	540.44	538.69	537.85	541.15	537.64	540.74	537.87	538.58	537.57
26	537.65	537.30	536.98	540.20	539.56	537.84	542.26	537.63	540.72	537.80	538.47	537.55
27	537.61	537.32	536.97	539.92	539.53	537.83	542.04	537.62	540.77	537.74	538.36	537.53
28	537.59	537.28	537.00	539.63	539.30	537.83	541.59	537.62	540.66	537.68	538.26	537.51
29	537.56	537.26	536.98	539.36	539.08	537.83	541.11	537.58	540.58	537.86	538.15	537.48
30	537.52	537.24	536.95	539.10	---	537.80	540.63	537.59	540.50	538.55	538.03	537.46
31	537.53	---	536.94	538.81	---	537.78	---	537.62	---	538.63	537.90	---
MEAN	537.33	537.39	537.09	538.55	538.19	538.04	538.41	538.08	539.85	538.94	538.08	537.76
MAX	538.55	537.52	537.24	541.27	539.56	538.98	542.26	540.26	541.07	540.42	538.68	538.34
MIN	535.52	537.24	536.94	536.80	537.76	537.78	537.47	537.58	537.62	537.68	537.48	537.46
CAL YR	2003	MEAN	537.22	MAX	538.60	MIN	535.52					
WTR YR	2004	MEAN	538.14	MAX	542.26	MIN	535.52					

08093350 Aquilla Lake above Aquilla, TX—Continued











## BRAZOS RIVER BASIN

08093350 Aquilla Lake above Aquilla, TX—Continued

315402097115401 -- AQUILLA LK SITE AL  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
FEB									
19...	0825	1.00	341	8.1	8.9	--	755	10.4	91
19...	0827	10.0	342	8.1	8.9	--	755	10.4	91
19...	0829	20.0	343	8.1	8.8	--	755	10.4	90
19...	0831	25.0	341	8.1	8.8	--	755	10.4	90
MAY									
26...	0944	1.00	376	7.9	24.3	25.6	752	6.9	84
26...	0946	10.0	377	7.9	24.2	--	752	6.9	83
26...	0948	24.0	377	7.8	24.1	--	752	6.6	80
JUL									
26...	1204	1.00	334	8.2	28.8	25.2	754	6.7	88
26...	1206	10.0	334	8.2	28.8	--	754	6.7	88
26...	1208	20.0	336	8.1	28.7	--	754	6.4	84
26...	1210	26.0	337	8.1	28.4	--	754	6.4	83

315354097125701 -- AQUILLA LK SITE AR  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
FEB									
19...	0906	1.00	342	8.1	8.8	--	755	10.3	90
19...	0908	10.0	341	8.1	8.8	--	755	10.3	89
19...	0910	20.0	342	8.1	8.8	--	755	10.2	89
19...	0912	32.0	342	8.1	8.8	--	755	10.2	89
MAY									
26...	0932	1.00	377	7.8	24.2	25.8	752	6.7	81
26...	0934	10.0	377	7.8	24.2	--	752	6.6	80
26...	0936	20.0	376	7.7	24.1	--	752	6.2	76
26...	0938	29.0	377	7.6	23.9	--	752	5.1	62
JUL									
26...	1152	1.00	329	8.3	29.0	25.3	754	7.1	94
26...	1154	10.0	329	8.3	29.0	--	754	7.1	93
26...	1156	20.0	329	8.2	29.0	--	754	7.0	92
26...	1158	31.0	343	7.8	28.5	--	754	5.2	68

315601097111501 -- AQUILLA LK SITE BC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Trans- parency Secchi disc, meters (00078)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC col/ 100 mL (31625)	E coli, m-TEC MF, col/ 100 mL (31633)	Hard- ness, water, mg/L as CaCO3 (00900)
FEB													
19-19	0749	--	--	--	--	--	--	--	--	--	--	--	--
19...	0750	1.00	360	8.1	9.4	--	.46	757	10.6	93	--	--	150
19...	0752	10.0	365	8.1	9.4	--	--	757	10.5	92	--	--	--
19...	0756	25.0	400	8.0	9.3	--	--	757	10.5	92	--	--	180
19...	1010	1.00	--	--	--	--	--	--	--	--	24	E12k	--
MAY													
26-26	1052	--	--	--	--	--	--	--	--	--	--	--	--
26...	1054	1.00	380	8.0	24.8	26.3	.30	753	7.1	87	--	--	150
26...	1056	10.0	381	8.0	24.8	--	--	753	7.1	86	--	--	--
26...	1058	24.0	380	8.0	24.7	--	--	753	6.8	82	--	--	150
26...	1104	1.00	--	--	--	--	--	753	--	--	E7k	E15k	--
JUL													
26-26	1311	--	--	--	--	--	--	--	--	--	--	--	--
26...	1312	1.00	341	7.8	28.6	25.1	.40	753	4.6	60	--	--	130
26...	1314	10.0	340	7.8	28.5	--	--	753	4.7	61	--	--	--
26...	1316	24.0	342	7.6	28.3	--	--	753	3.9	50	--	--	130
26...	1335	1.00	--	--	--	--	--	--	--	--	E2k	E1k	--









## BRAZOS RIVER BASIN

08093350 Aquilla Lake above Aquilla, TX—Continued

315518097123401 -- AQUILLA LK SITE DC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Trans- parency Secchi disc, meters (00078)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of satu- ration (00301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)
FEB													
19...	0930	1.00	341	8.2	9.2	--	.46	755	10.6	93	2.03	.093	2.12
19...	0932	10.0	343	8.2	9.2	--	--	755	10.6	93	--	--	--
19...	0934	20.0	341	8.2	9.2	--	--	755	10.6	93	--	--	--
19...	0936	30.0	340	8.1	9.2	--	--	755	10.7	94	2.06	.093	2.15
MAY													
26...	0916	1.00	375	7.9	24.4	25.8	.37	755	7.0	84	2.18	.032	2.21
26...	0918	10.0	375	7.9	24.4	--	--	755	6.9	84	--	--	--
26...	0920	20.0	375	7.8	24.4	--	--	755	7.0	84	--	--	--
26...	0922	28.0	375	7.8	24.4	--	--	755	7.0	85	2.18	.029	2.21
JUL													
26...	1132	1.00	325	8.2	28.8	25.3	.82	753	6.7	88	.26	.030	.29
26...	1134	10.0	326	8.1	28.8	--	--	753	6.5	86	--	--	--
26...	1136	20.0	327	8.1	28.8	--	--	753	6.3	83	--	--	--
26...	1138	28.0	361	7.2	27.9	--	--	753	E.2	--	--	<.008	<.06

315518097123401 -- AQUILLA LK SITE DC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Ammonia water, fltrd, mg/L as N (00608)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
FEB						
19...	.05	.014	.008	.025	16	1.9
19...	--	--	--	--	--	--
19...	--	--	--	--	--	--
19...	.06	.015	.008	.025	19	1.6
MAY						
26...	<.04	.013	E.003n	--	<6	<.8
26...	--	--	--	--	--	--
26...	--	--	--	--	--	--
26...	<.04	.013	E.003n	--	<6	.9
JUL						
26...	<.04	.009	<.006	--	7	6.2
26...	--	--	--	--	--	--
26...	--	--	--	--	--	--
26...	.34	.011	<.006	--	11	590

315748097144901 -- AQUILLA LK SITE EC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Trans- parency Secchi disc, meters (00078)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of satu- ration (00301)	Fecal coli- form, M-FC col/ 100 mL (31625)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Hard- ness, water, mg/L as CaCO3 (00900)
FEB													
19-19	1110	--	409	8.3	11.8	--	--	755	10.9	102	--	--	180
19...	1135	1.00	409	8.3	11.8	--	--	755	10.9	102	E280k	290	--
MAY													
26...	1158	1.00	--	--	--	--	--	--	--	--	43	E30k	--
26...	1200	1.00	474	8.1	25.2	29.0	--	753	7.1	88	--	--	--
MAY													
26-26	1200	--	463	7.9	--	--	E.30e	--	--	--	--	--	180
26...	1202	3.50	475	8.2	25.2	--	--	753	6.7	82	--	--	--
26...	1204	7.00	475	8.2	25.2	--	--	753	6.7	83	--	--	--
JUL													
26...	1420	1.00	324	7.7	28.9	27.5	.67	753	5.2	69	E4k	E4k	120

08093350 Aquilla Lake above Aquilla, TX—Continued

315748097144901 -- AQUILLA LK SITE EC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of consti- tuents mg/L (70301)
FEB 19-19	59	64.2	3.68	22.8	.7	21	5.63	116	61.6	12.4	.4	6.3	263
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 26-26	46	65.7	4.35	24.2	.8	22	5.68	136	60.6	17.9	.4	1.3	265
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	18	41.5	3.00	17.5	.7	24	5.51	98	43.3	11.9	.4	7.0	189

315748097144901 -- AQUILLA LK SITE EC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	2,6-Di- ethyl- aniline water fltrd 0.7u GF ug/L (82660)	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)
FEB 19-19	3.57	.116	3.69	<.04	.008	<.006	18	2.2	<.006	<.006	<.005	<.005	4.65
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 26-26	.66	.043	.70	E.02n	.018	<.006	<6	E.4n	E.002t	<.006	.230	<.005	2.01
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	.011	E.05n	<.04	.019	E.003n	<6	E.5n	<.006	<.006	.114	<.005	1.31

315748097144901 -- AQUILLA LK SITE EC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Azin- phos- methyl, water, fltrd 0.7u GF ug/L (82686)	Ben- flur- alin, water, fltrd 0.7u GF ug/L (82673)	Butyl- ate, water, fltrd, ug/L (04028)	Car- baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo- furan, water, fltrd 0.7u GF ug/L (82674)	Chlor- pyrifos water, fltrd, ug/L (38933)	cis- Per- methrin water fltrd 0.7u GF ug/L (82687)	Cyana- zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	CIAT, water, fltrd, ug/L (04040)	Desulf- inyl- fipron- nil amide, wat flt ug/L (62169)	Desulf- inyl fipron- nil, water, fltrd, ug/L (62170)	Diazi- non, water, fltrd, ug/L (39572)
FEB 19-19	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	E.358	<.029	<.012	<.005
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 26-26	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	E.262	<.029	<.012	<.005
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	E.234	<.029	<.012	<.005

## BRAZOS RIVER BASIN

08093350 Aquilla Lake above Aquilla, TX—Continued

315748097144901 -- AQUILLA LK SITE EC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd, 0.7u GF (82677)	EPTC, water, fltrd, 0.7u GF (82668)	Ethalfluralin, water, fltrd, 0.7u GF (82663)	Ethoprop, water, fltrd, 0.7u GF (82672)	Fipronil, water, fltrd, ug/L (62166)	Fipronil sulfide, water, fltrd, ug/L (62167)	Fipronil sulfone, water, fltrd, ug/L (62168)	Fonofos, water, fltrd, ug/L (04095)	Lindane, water, fltrd, ug/L (39341)	Linuron, water, fltrd, 0.7u GF (82666)	Malathion, water, fltrd, ug/L (39532)	Metolachlor, water, fltrd, ug/L (39415)
FEB 19-19 19...	<.009	<.02	<.004	<.009	<.005	<.016	<.013	<.024	<.003	<.004	<.035	<.027	E.010n
MAY 26... 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 26-26 26... 26...	<.009	<.02	<.004	<.009	<.005	<.016	<.013	<.024	<.003	<.004	<.035	<.027	.438
JUL 26...	<.009	<.02	<.004	<.009	<.005	<.016	<.013	<.024	<.003	<.004	<.035	<.027	.241

315748097144901 -- AQUILLA LK SITE EC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd, 0.7u GF (82671)	Napropamide, water, fltrd, 0.7u GF (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Methyl parathion, water, fltrd, 0.7u GF (82667)	Pebulate, water, fltrd, 0.7u GF (82669)	Pendimethalin, water, fltrd, 0.7u GF (82683)	Phorate, water, fltrd, 0.7u GF (82664)	Prometon, water, fltrd, ug/L (04037)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd, 0.7u GF (82679)	Propargite, water, fltrd, 0.7u GF (82685)
FEB 19-19 19...	<.006	<.003	<.007	<.003	<.010	<.015	<.004	<.022	<.011	<.01	<.025	<.011	<.04
MAY 26... 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 26-26 26... 26...	<.006	<.003	<.007	<.003	<.010	<.015	<.004	<.022	<.011	.01	<.025	<.011	<.02
JUL 26...	<.006	<.003	<.007	<.003	<.010	<.015	<.004	<.022	<.011	<.01	<.025	<.011	<.02

315748097144901 -- AQUILLA LK SITE EC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Propyzamide, water, fltrd, 0.7u GF (82676)	Simazine, water, fltrd, ug/L (04035)	Tebu-thiuron, water, fltrd, 0.7u GF (82670)	Terbacil, water, fltrd, 0.7u GF (82665)	Terbufos, water, fltrd, 0.7u GF (82675)	Thio-bencarb, water, fltrd, 0.7u GF (82681)	Tri-allate, water, fltrd, 0.7u GF (82678)	Tri-fluralin, water, fltrd, 0.7u GF (82661)
FEB 19-19 19...	<.004	.047	<.02	<.034	<.02	<.010	<.002	<.009
MAY 26... 26...	--	--	--	--	--	--	--	--
MAY 26-26 26... 26...	<.004	.022	<.02	<.034	<.02	<.010	<.002	<.009
JUL 26...	<.004	.015	<.02	<.034	<.02	<.010	<.002	<.009

Remark codes used in this table:

&lt; -- Less than

E -- Estimated value

Value qualifier codes used in this table:

c -- See laboratory comment

e -- See field comment

k -- Counts outside acceptable range

n -- Below the LRL and above the LT-MDL

t -- Below the long-term MDL

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## BRAZOS RIVER BASIN

08093360 Aquilla Creek above Aquilla, TX

LOCATION.--Lat 31°53'43", long 97°12'10", Hill County, Hydrologic Unit 12060202, on right bank of excavated outlet channel, 0.2 mi downstream from Aquilla Dam on Aquilla Creek and Farm Road 310 (on top of Aquilla Dam), and 3.3 mi north-northeast of Aquilla.

DRAINAGE AREA.--255 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Sept. 1979 to Mar. 1982 (daily mean discharge), Apr. 1982 to Sept. 1992 (low-flow only), May 2001 to current year.

GAGE.--Water-stage recorder and concrete weir with sharp-crested, 90 degree v-notch weir section for low flows. Datum of gage is 478.71 ft above NGVD of 1929, (levels by U.S. Army Corps of Engineers). Prior to Mar. 15, 1982, at site 0.2 mi downstream at same datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since Apr. 1983, flow has been completely regulated.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--3 years (water years 1980-82) 41.3 ft<sup>3</sup>/s, 29,920 acre-ft/yr.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 31, 1887, reached a stage of 35 ft, from information by local resident. Flood of Sept. 27, 1936, reached a stage of 34 ft from floodmark at downstream site and adjusted to gage site (Discharge not determined for either peak).

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1980-1982: Maximum discharge, 7,100 ft<sup>3</sup>/s, June 16, 1981, gage height, 26.98 ft; no flow for many days in 1980-86.

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	0.24	0.58	0.59	0.17	447	453	25	782	0.46	137	172	94
2	0.12	0.60	0.59	0.17	348	451	25	777	0.34	142	171	3.0
3	0.11	0.63	0.59	0.17	193	450	25	771	0.43	145	170	2.9
4	0.11	0.63	0.58	0.17	189	575	25	764	0.27	147	170	2.7
5	0.12	0.58	0.58	0.16	188	731	25	470	0.24	152	169	2.6
6	0.21	0.27	0.59	0.15	189	721	25	174	0.25	152	167	2.6
7	0.14	0.27	0.59	0.16	188	715	25	116	e0.22	154	169	145
8	0.13	0.26	0.59	0.17	187	496	25	73	e0.17	156	168	265
9	0.40	0.26	0.60	0.16	186	25	25	74	e0.13	148	65	261
10	75	0.25	0.59	0.16	185	25	25	75	e0.07	154	2.0	202
11	141	0.33	0.59	0.16	186	25	24	46	0.04	157	2.0	131
12	141	0.38	0.67	0.16	185	25	25	25	0.05	162	1.8	128
13	141	0.40	0.64	0.15	89	25	25	25	0.18	165	1.7	123
14	139	0.41	0.62	0.15	26	25	25	25	0.70	164	1.5	68
15	136	0.42	0.61	0.15	26	25	25	25	0.16	169	1.4	2.6
16	135	0.45	0.58	1.2	26	25	25	25	0.19	163	1.4	3.2
17	100	0.54	0.58	0.45	26	25	25	25	0.23	166	1.5	3.9
18	66	0.50	0.58	0.18	26	25	25	25	36	169	1.6	4.2
19	66	0.48	0.58	0.16	26	25	12	25	113	170	2.0	4.3
20	66	0.50	0.59	148	25	25	1.0	25	114	177	1.7	4.6
21	41	0.50	0.59	259	25	25	0.98	25	42	178	1.6	4.8
22	0.49	0.50	0.59	259	25	25	0.95	25	0.09	184	1.6	4.9
23	0.58	0.50	0.57	351	25	19	0.98	25	0.07	129	1.6	5.0
24	0.59	0.52	0.57	454	25	10	1.7	11	0.09	41	97	5.0
25	0.59	0.53	0.57	451	112	15	1.5	0.64	59	41	159	4.9
26	0.63	0.54	0.52	448	178	25	307	0.61	132	41	159	4.8
27	0.67	0.55	0.20	448	346	25	683	0.59	133	41	158	4.5
28	0.65	0.56	0.18	448	455	25	802	0.59	132	41	159	4.4
29	0.53	0.58	0.17	449	454	25	793	0.54	134	41	158	4.3
30	0.54	0.58	0.16	448	---	25	787	0.61	137	110	157	4.2
31	0.55	---	0.16	446	---	25	---	0.52	---	172	156	---
TOTAL	1,254.40	14.10	16.21	4,613.40	4,586	5,136	3,840.11	4,437.10	1,036.38	4,168	2,647.4	1,500.4
MEAN	40.5	0.47	0.52	149	158	166	128	143	34.5	134	85.4	50.0
MAX	141	0.63	0.67	454	455	731	802	782	137	184	172	265
MIN	0.11	0.25	0.16	0.15	25	10	0.95	0.52	0.04	41	1.4	2.6
AC-FT	2,490	28	32	9,150	9,100	10,190	7,620	8,800	2,060	8,270	5,250	2,980

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004hz, BY WATER YEAR (WY)

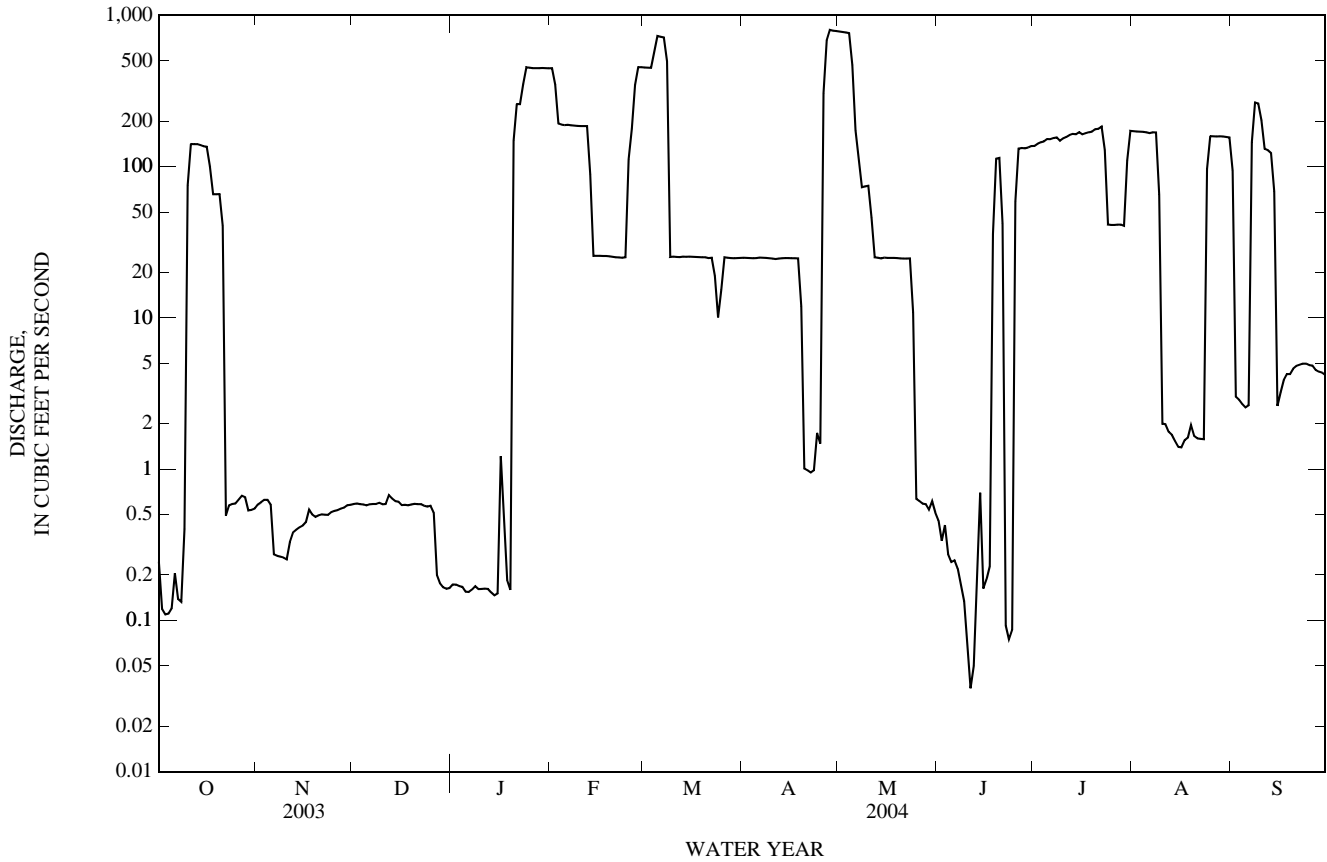
MEAN	4.23	0.46	29.2	32.3	62.3	39.7	46.6	30.4	7.70	16.3	10.0	6.53
MAX	40.5	2.21	217	149	189	166	210	143	34.5	134	85.4	50.0
(WY)	(2004)	(1986)	(2002)	(2004)	(2002)	(2004)	(2002)	(2004)	(2004)	(2004)	(2004)	(2004)
MIN	0.00	0.00	0.00	0.01	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00
(WY)	(1983)	(1984)	(1984)	(1984)	(1985)	(1984)	(1984)	(1984)	(1983)	(1984)	(1983)	(1983)



08093360 Aquilla Creek above Aquilla, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004 <sup>h</sup>	
ANNUAL TOTAL	7,040.67		33,249.50		37.2	
ANNUAL MEAN	19.3		90.8		90.8	
HIGHEST ANNUAL MEAN					0.01	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	391	Feb 25	802	Apr 28	802	Apr 28, 2004
LOWEST DAILY MEAN	0.02	Jun 24	0.04	Jun 11	0.00	Oct 1, 1982
ANNUAL SEVEN-DAY MINIMUM	0.02	Jun 24	0.12	Jun 7	0.00	Oct 1, 1982
MAXIMUM PEAK FLOW			821	Apr 27	821	Apr 27, 2004
MAXIMUM PEAK STAGE			10.60	Apr 27	10.60	Apr 27, 2004
ANNUAL RUNOFF (AC-FT)	13,970		65,950		26,920	
10 PERCENT EXCEEDS	27		219		117	
50 PERCENT EXCEEDS	0.59		25		0.47	
90 PERCENT EXCEEDS	0.16		0.18		0.00	

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



08093360 Aquilla Creek above Aquilla, TX—Continued

## WATER-QUALITY RECORDS

## PERIOD OF RECORD.--

CHEMICAL DATA: Oct. 1979 to Apr. 1983 and Feb. 2004 to current year.

BIOCHEMICAL DATA: Oct. 1979 to Apr. 1983 and Feb. 2004 to current year.

RADIOCHEMICAL DATA: Feb 1981 to July 1981.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unflab, 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)	Specific conductance, wat unfltrd 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 18...	1457	26	24	765	11.5	100	8.3	360	23.0	9.2	38	130	48.2
MAY 26...	1639	.60	17	752	9.6	128	8.3	414	--e	29.3	29	160	58.8
JUL 27...	1419	42	9.6	757	7.7	102	8.3	338	37.5	29.1	25	120	44.0

## 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 fltr 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)
FEB 18...	3.02	5.08	.8	20.3	24	95	11.8	.4	5.01	50.2	210	13	.54
MAY 26...	2.77	4.03	.8	21.8	23	129	11.1	.4	7.66	47.8	240	12	.45
JUL 27...	2.72	5.07	.7	16.9	22	96	11.3	.4	5.78	43.3	188	11	.37

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

Date	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)	Orthophosphate, water, fltrd, mg/L (00660)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Organic carbon, water, unfltrd mg/L (00680)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)
FEB 18...	.07	2.00	2.09	.091	.48	.028	.009	.017	5.8	<2.0	E1n	.37	2.3
MAY 26...	.08	1.76	1.78	.019	.37	.080	.026	.040	6.7	<2.0	E1n	.24	4.5
JUL 27...	<.04	.31	.34	.029	--	--	<.006	.005	7.5	2.5	E1n	.33	2.5

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

Date	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)
FEB 18...	43	<.06	<.04	<.8	.200	1.3	E.06n	1.9	<.02	5.5	2.99	E.4n	<.2
MAY 26...	51	<.06	<.04	<.8	.217	2.0	<.08	2.9	<.02	4.6	1.53	E.4n	<.2
JUL 27...	44	<.06	<.04	<.8	.205	1.2	<.08	.6	<.02	4.8	2.33	.6	<.2

08093360 Aquilla Creek above Aquilla, TX—Continued

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

Date	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
FEB 18...	<.6	1.15
MAY 26...	.6	1.59
JUL 27...	<.6	1.00

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

Null value qualifier codes used in this table:

e -- Required equipment not  
functional/avail

08094800 North Bosque River at Hico, TX

LOCATION.--Lat 31°58'41", long 98°02'04", Hamilton County, Hydrologic Unit 12060204, on left bank at downstream side of bridge on U.S. Highway 281 near south boundary of Hico, 2.6 mi downstream from Gilmore Creek, 5.0 mi upstream from Honey Creek, and 92.4 mi upstream from mouth.

DRAINAGE AREA.--359 mi<sup>2</sup>.

PERIOD OF RECORD.--Jan. 1962 to Sept. 1998 (daily mean discharge), Oct. 1998 to current year (peaks above base discharge). Water-quality records: Chemical data: Sept. 1991 to Mar. 1994. Biochemical data: Sept. 1991 to Mar. 1994

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 977.46 ft above NGVD of 1929. Prior to Jan. 20, 2000, datum was 982.46 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good. Since installation of gage in Jan. 1962, at least 10% of contributing drainage area has been regulated. At times flow is affected by discharge from floodwater-retarding structures controlling runoff from 202 mi<sup>2</sup> in the North Bosque River and Green Creek drainage basins. The city of Stephenville discharges wastewater effluent into the river above this station. No known diversions.

AVERAGE DISCHARGE.--36 years (water years 1963-98), 68.6 ft<sup>3</sup>/s (49,710 acre-ft/year).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft<sup>3</sup>/s Dec. 20, 1991 (gage height, 23.27 ft).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1880, 27.6 ft May 23, 1952, from floodmarks (discharge, 87,800 ft<sup>3</sup>/s, by contracted-opening measurement).

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr 24	1000	4,390	16.49	Jun 9	-----	*5,330	*a18.11

a From Floodmark.

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08095000 North Bosque River near Clifton, TX  
(Hydrologic index station)

LOCATION.--Lat 31°47'09", long 97°34'04", Bosque County, Hydrologic Unit 12060204, on right bank at downstream side of bridge on Farm Road 219, 0.5 mi northeast of Clifton, 2.5 mi downstream from Meridian Creek, and 42.0 mi upstream from mouth.

DRAINAGE AREA.--968 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1923 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 788: 1924-26, 1928, 1930. WSP 1058: 1945(M). WSP 1512: 1924(M), 1927, 1928(M), 1929, 1930(M), 1931-33, 1934(M), 1935-37, 1939. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 605.43 ft above NGVD of 1929. Prior to Oct. 1, 1955, and from Apr. 23, 1957, to Mar. 26, 1958, nonrecording gage at site 1.1 mi upstream at datum 17.02 ft higher; Oct. 1, 1955, to Apr. 22, 1957, Mar. 27, 1958, to Sept. 30, 1959, and Jan 2, 1961, to current year, water-stage recorder at present site and datum; Oct. 1, 1959, to Jan. 1, 1961, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. The cities of Meridian, Stephenville and Clifton discharge wastewater effluent into the river above this station. The city of Clifton diverts water from the river upstream from this station for municipal use. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 9, 1922, reached a stage of about 32 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	11	25	21	14	27	242	61	12,700	79	1,030	115	79
2	9.3	24	20	14	30	209	61	2,520	72	620	76	71
3	7.9	25	21	15	27	194	91	1,170	70	399	60	67
4	7.2	24	21	15	27	222	180	783	73	297	49	64
5	6.8	20	20	14	34	604	154	576	78	237	43	62
6	1,230	18	19	12	34	365	220	472	103	198	36	70
7	193	18	19	12	31	242	259	411	122	174	33	66
8	59	23	20	12	29	177	208	376	140	194	35	73
9	3,740	26	21	13	29	148	147	344	15,000	153	37	67
10	1,290	28	19	17	31	130	117	311	8,450	132	36	57
11	447	29	18	17	36	121	130	287	1,680	116	34	52
12	505	28	20	17	37	115	112	268	981	104	32	48
13	354	25	30	17	34	125	109	251	646	93	28	45
14	199	23	33	18	36	132	102	234	474	83	27	44
15	127	23	29	17	38	140	93	215	399	78	26	43
16	95	24	25	230	36	140	86	206	426	72	25	42
17	78	37	23	459	34	125	83	194	345	67	23	39
18	66	146	22	106	32	120	76	178	293	67	23	37
19	59	56	21	76	31	107	67	161	255	63	4,390	36
20	48	43	21	56	30	101	65	146	218	59	4,900	34
21	40	40	22	49	28	94	66	134	195	55	1,460	33
22	35	34	22	43	26	84	64	124	175	50	1,100	32
23	32	30	21	39	26	81	65	114	161	45	571	31
24	32	26	20	37	55	89	6,150	113	149	43	333	30
25	36	25	19	37	2,070	85	7,430	108	157	42	241	29
26	32	26	19	33	906	83	3,030	103	398	40	184	28
27	30	25	20	29	399	83	1,310	95	292	39	146	26
28	30	23	21	27	257	80	854	85	893	38	125	27
29	28	21	21	26	227	75	665	79	832	93	112	27
30	27	21	20	26	---	70	528	80	977	132	102	26
31	26	---	17	26	---	64	---	88	---	117	90	---
TOTAL	8,880.2	936	665	1,523	4,637	4,647	22,583	22,926	34,133	4,930	14,492	1,385
MEAN	286	31.2	21.5	49.1	160	150	753	740	1,138	159	467	46.2
MAX	3,740	146	33	459	2,070	604	7,430	12,700	15,000	1,030	4,900	79
MIN	6.8	18	17	12	26	64	61	79	70	38	23	26
AC-FT	17,610	1,860	1,320	3,020	9,200	9,220	44,790	45,470	67,700	9,780	28,740	2,750

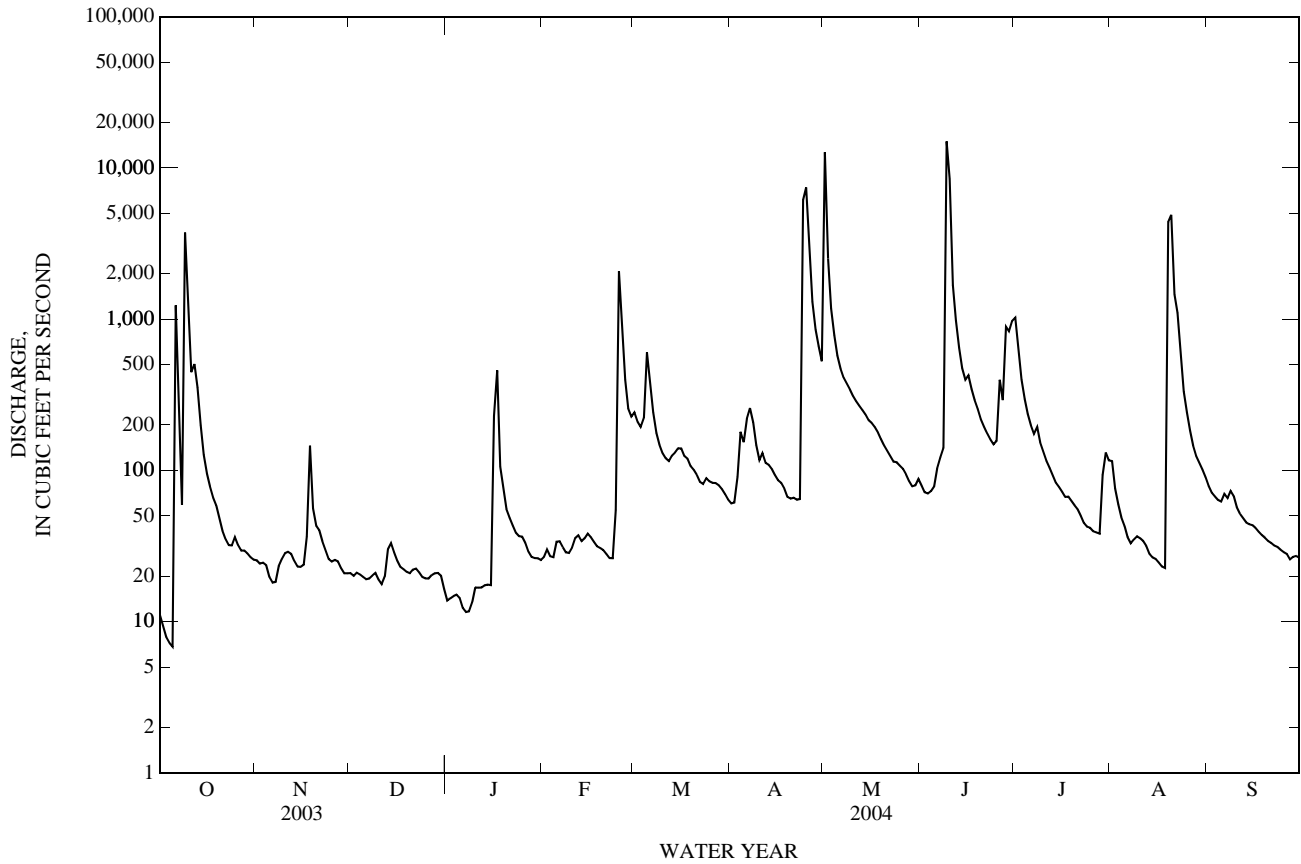
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2004, BY WATER YEAR (WY)

MEAN	140	74.3	188	158	295	284	374	523	270	80.9	60.8	103
MAX	1,438	845	7,330	1,442	3,738	2,681	3,739	2,626	1,529	995	1,238	1,484
(WY)	(1960)	(1941)	(1992)	(1938)	(1992)	(1998)	(1957)	(1957)	(1942)	(1945)	(1995)	(1936)
MIN	0.00	0.03	0.05	0.25	1.16	0.66	1.26	1.40	0.44	0.00	0.00	0.00
(WY)	(1952)	(1956)	(1956)	(1957)	(1952)	(1956)	(1925)	(1984)	(1984)	(1954)	(1929)	(1952)

08095000 North Bosque River near Clifton, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1924 - 2004	
ANNUAL TOTAL	32,723.87		121,737.2		212	
ANNUAL MEAN	89.7		333		1,366	
HIGHEST ANNUAL MEAN					1992	
LOWEST ANNUAL MEAN					11.7	
HIGHEST DAILY MEAN	3,740	Oct 9	15,000	Jun 9	96,800	Dec 21, 1991
LOWEST DAILY MEAN	0.92	Aug 8	6.8	Oct 5	0.00	Jun 25, 1925
ANNUAL SEVEN-DAY MINIMUM	1.1	Aug 5	13	Jan 3	0.00	Jul 13, 1925
MAXIMUM PEAK FLOW			38,900	May 1	200,000	Dec 20, 1991
MAXIMUM PEAK STAGE			26.48	May 1	a38.30	Dec 20, 1991
ANNUAL RUNOFF (AC-FT)	64,910		241,500		153,600	
10 PERCENT EXCEEDS	173		463		336	
50 PERCENT EXCEEDS	30		64		24	
90 PERCENT EXCEEDS	2.6		20		1.4	

a From floodmark.



08095200 North Bosque River at Valley Mills, TX

LOCATION.--Lat 31°40'10", long 97°28'09", Bosque County, Hydrologic Unit 12060204, on right bank at downstream side of bridge on Farm Road 56, about 0.8 mi downstream from Thompson Hollow, 0.8 mi north of intersection of State Highway 6 and Farm Road 56 in Valley Mills, and 28.0 mi upstream from mouth.

DRAINAGE AREA.--1,146 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 524.55 ft above NGVD of 1929. Prior to Dec. 29, 1959, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage, at least 10% of contributing drainage area has been regulated. There are several small diversions above station. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1868, flood in May 1908 reached a stage of 43 ft. Floods in Sept. 1936 and Apr. 1945 reached a stage of about 38 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	19	49	44	33	46	452	108	14,800	87	1,340	186	108
2	18	51	43	31	60	379	108	3,630	73	754	128	98
3	17	49	42	31	53	342	149	1,730	78	535	108	94
4	15	51	45	33	50	452	211	1,160	72	403	93	90
5	15	49	44	33	69	932	245	874	72	327	84	90
6	1,020	45	43	33	67	640	387	729	93	284	74	233
7	307	42	42	30	58	428	487	637	113	252	67	114
8	85	47	41	29	51	325	367	571	153	286	66	93
9	5,360	53	37	29	53	277	254	526	13,000	234	69	96
10	2,190	56	42	31	54	243	208	478	13,400	207	69	84
11	751	55	40	32	64	222	253	429	2,350	184	66	76
12	701	55	46	34	70	214	217	399	1,260	167	62	72
13	588	52	56	33	65	238	194	370	823	153	58	69
14	353	49	68	33	65	249	182	351	613	138	54	66
15	235	48	58	34	70	256	166	319	509	127	52	68
16	179	47	52	254	69	269	154	301	538	118	51	65
17	154	55	47	1,080	65	246	142	275	451	111	49	63
18	132	221	46	239	60	223	134	250	372	109	46	61
19	117	127	45	129	56	198	119	225	325	104	2,270	59
20	106	76	43	99	58	179	115	200	283	98	7,160	57
21	87	74	41	83	54	173	113	181	248	93	1,590	54
22	77	61	41	75	53	158	108	159	224	87	1,450	53
23	71	58	43	67	51	146	106	147	208	80	684	53
24	65	54	41	62	74	153	5,390	144	194	74	372	52
25	69	51	38	55	2,990	149	9,200	135	182	72	268	50
26	67	50	39	54	1,490	139	4,360	125	494	70	208	51
27	63	51	38	52	723	141	1,790	113	461	70	170	50
28	62	49	41	47	466	137	1,210	101	1,260	70	149	49
29	59	44	42	46	429	131	962	87	1,320	447	138	51
30	52	44	39	47	---	121	785	85	994	250	126	50
31	51	---	39	46	---	115	---	97	---	162	116	---
TOTAL	13,085	1,813	1,366	2,914	7,533	8,327	28,224	29,628	40,250	7,406	16,083	2,269
MEAN	422	60.4	44.1	94.0	260	269	941	956	1,342	239	519	75.6
MAX	5,360	221	68	1,080	2,990	932	9,200	14,800	13,400	1,340	7,160	233
MIN	15	42	37	29	46	115	106	85	72	70	46	49
AC-FT	25,950	3,600	2,710	5,780	14,940	16,520	55,980	58,770	79,840	14,690	31,900	4,500

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2004, BY WATER YEAR (WY)

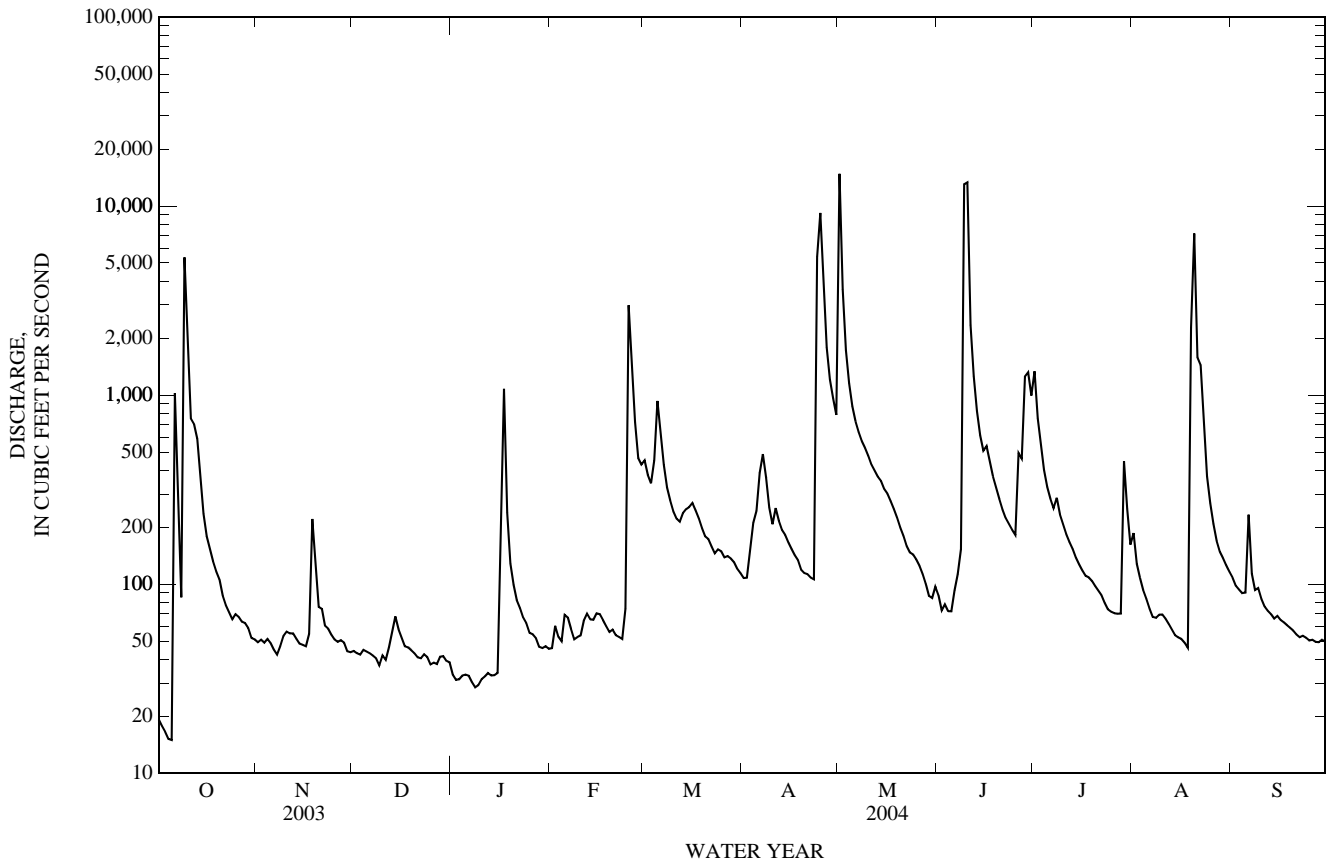
MEAN	211	102	285	227	453	456	421	613	386	94.0	96.2	87.2
MAX	2,834	549	7,469	1,833	5,156	2,865	2,392	3,247	1,609	712	1,625	544
(WY)	(1960)	(1992)	(1992)	(1961)	(1992)	(1998)	(1977)	(1965)	(1989)	(1968)	(1995)	(1996)
MIN	1.35	2.69	4.10	6.78	6.71	8.82	6.02	2.94	0.63	0.11	0.19	0.00
(WY)	(1979)	(1984)	(1979)	(1984)	(2000)	(2000)	(1984)	(1984)	(1984)	(1984)	(2000)	(1984)



08095200 North Bosque River at Valley Mills, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1959 - 2004	
ANNUAL TOTAL	44,493.6		158,898			
ANNUAL MEAN	122		434		285	
HIGHEST ANNUAL MEAN					1,664	1992
LOWEST ANNUAL MEAN					14.6	1984
HIGHEST DAILY MEAN	5,360	Oct 9	14,800	May 1	123,000	Dec 21, 1991
LOWEST DAILY MEAN	7.0	Aug 24	15	Oct 4	0.00	Oct 5, 1963
ANNUAL SEVEN-DAY MINIMUM	7.4	Aug 20	31	Jan 5	0.00	Oct 5, 1963
MAXIMUM PEAK FLOW			42,600	May 1	i220,000	Dec 21, 1991
MAXIMUM PEAK STAGE			34.78	May 1	a44.60	Dec 21, 1991
ANNUAL RUNOFF (AC-FT)	88,250		315,200		206,600	
10 PERCENT EXCEEDS	209		708		469	
50 PERCENT EXCEEDS	53		96		44	
90 PERCENT EXCEEDS	10		42		6.6	

a From floodmark.  
 i From indirect measurement of peak flow.





08095200 North Bosque River at Valley Mills, TX—Continued

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

Date	Uranium natural water, fltrd, ug/L (22703)
FEB 26...	.78
MAY 20...	1.01
JUL 28...	.90
AUG 25...	--

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

## BRAZOS RIVER BASIN

08095300 Middle Bosque River near McGregor, TX

LOCATION.--Lat 31°30'33", long 97°21'56", McLennan County, Hydrologic Unit 12060203, on left downstream side of bridge on Farm Road 3047, 1,100 ft downstream from Pecan Creek, 5.0 mi upstream from mouth, and 5.2 mi northeast of McGregor.

DRAINAGE AREA.--182 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Aug. 1959 to Sept. 1985 (daily mean discharge), Oct. 1985 to current year (peak discharges greater than base discharge).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 530.51 ft above NGVD of 1929. Prior to Oct. 27, 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), 78.4 ft<sup>3</sup>/s (56,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,300 ft<sup>3</sup>/s Oct. 31, 1974 (gage height, 24.62 ft). No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1889, which reached a stage of 28.5 ft. A flood in 1957 reached a stage of 28.2 ft; and floods in 1913 and 1942 or 1943 reached a stage of about 28 ft, from information by local residents.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 9	1330	*16,600	*19.65	Jun 27	0115	4,620	8.84
Jan 17	0100	6,440	10.65	Jun 28	1945	5,150	9.36
May 1	0500	8,600	12.74				

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08095300 Middle Bosque River near McGregor, TX—Continued

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

Date	Uranium natural water, fltrd, ug/L (22703)
FEB 27...	.84
MAY 19...	.66
JUL 28...	.59
AUG 25...	--

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

## BRAZOS RIVER BASIN

08095400 Hog Creek near Crawford, TX

LOCATION.--Lat 31°33'20", long 97°21'22", McLennan County, Hydrologic Unit 12060203, on downstream side of bridge on Farm Road 185, 5.6 mi east of Crawford, and 9.8 mi upstream from South Bosque River.

DRAINAGE AREA.--78.2 mi<sup>2</sup>.

PERIOD OF RECORD.--Aug. 1959 to Sept. 1985 (daily mean discharge), Oct. 1985 to current year (peak discharges greater than base discharge).

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 560.54 ft above NGVD of 1929. Prior to Oct. 27, 1959, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good. Since water year 1980, at least 10% of the contributing drainage area has been regulated. These structures control runoff from 42.0 mi<sup>2</sup> in the Hog Creek drainage basin.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--20 years (water years 1960-1979), 37.7 ft<sup>3</sup>/s (27,310 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1900, 17.5 ft Sept. 26, 1936. Flood in Apr. or May 1957 reached a stage of 15.7 ft, from information by local residents.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS 1959-1979: Maximum discharge, 15,400 ft<sup>3</sup>/s Oct. 4, 1959 (gage height, 14.31 ft); no flow at times.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 9	1215	1,010	4.67	May 1	0000	*2,180	*6.30
Jan 17	0000	1,740	5.74	Jul 29	1415	1,990	6.07



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## BRAZOS RIVER BASIN

08095550 Waco Lake near Waco, TX

LOCATION.--Lat 31°34'46", long 97°11'51", McLennan County, Hydrologic Unit 12060203, in intake structure at Waco Dam on Bosque River, at northwest edge of city limits of Waco, and 4.6 mi upstream from mouth.

DRAINAGE AREA.--1,652 mi<sup>2</sup>.

## WATER-STAGE RECORDS

PERIOD OF RECORD.--Feb. 1965 to Sept. 2000 (contents furnished by U.S. Army Corps of Engineers), Oct. 2000 to Sept. 2002 (daily mean contents). Oct. 2002 to current year. Prior to Oct. 1970, published as "Waco Reservoir".

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by U.S. Army Corps of Engineers). Satellite telemeter at station.

REMARKS.--Records fair. The lake is formed by a rolled earthfill dam 24,618 ft long, including spillway. The lake was built for flood control and water conservation. From Oct. 1, 1964, to Feb. 26, 1965, the lake was operated as a detention basin only. On Feb. 26, 1965, old Lake Waco was breached and deliberate impoundment began. The spillway is controlled by fourteen 40.0-by 35.0-foot tainter gates. The outlet works consists of three gate-controlled outlets, 6.7 by 20.0 ft, opening into a 20.0-foot-diameter concrete conduit and two 54-inch concrete pipes. Low-flow releases are made through two 54-inch butterfly valves. Flow into two wet wells is controlled by four 5.0- by 6.0-foot slide gates that are used to release water downstream for the city of Waco municipal water supply. An unknown amount of water was diverted for municipal and industrial uses. The dam is the property of the U.S. Army Corps of Engineers. Data regarding the dam are given in the following table:

	Elevation
	(feet)
Top of dam	510.0
Design flood	505.0
Top of gates	500.0
Crest of spillway	465.0
Top of conservation pool	462.0
Lowest controlled outlet (invert)	400.0

COOPERATION.--Prior to Oct. 1, 2000, record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey. A new capacity table, provided by the Texas Water Development Board, was put into use beginning Oct. 1, 1995.

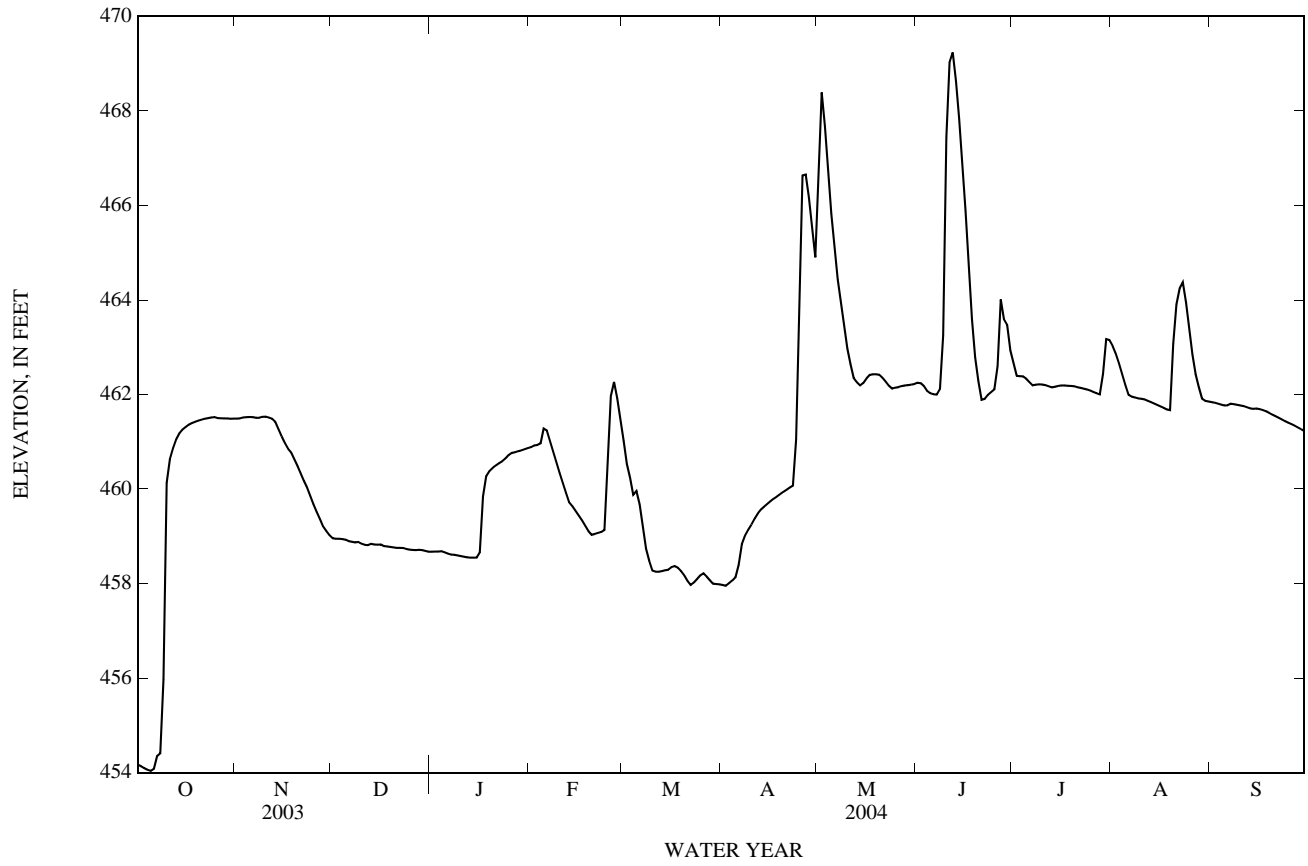
EXTREMES FOR PERIOD OF RECORD.--Feb. 1965 to Sept. 2002: Maximum contents, 521,100 acre-ft, Dec. 24, 1991; minimum since normal operating level was reached, 86,300 acre-ft, Oct. 8, 1984; Feb. 1965 to current year: Maximum elevation, 488.48 ft, Dec. 24, 1991, minimum elevation, 445.10 ft, Oct. 8, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 469.32 ft, Jun. 12; minimum elevation, 454.02 ft, Oct. 5.

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	454.17	461.49	458.96	458.67	460.89	461.02	457.97	466.63	462.25	462.67	463.03	461.84
2	454.13	461.49	458.95	458.68	460.92	460.53	457.95	468.39	462.24	462.40	462.87	461.83
3	454.10	461.51	458.95	458.68	460.93	460.24	458.01	467.68	462.18	462.39	462.66	461.81
4	454.06	461.52	458.94	458.69	460.97	459.88	458.07	466.70	462.08	462.38	462.44	461.78
5	454.04	461.52	458.93	458.66	461.28	459.96	458.13	465.82	462.02	462.34	462.20	461.77
6	454.08	461.52	458.90	458.63	461.24	459.68	458.40	465.12	462.01	462.26	461.99	461.77
7	454.35	461.51	458.88	458.61	461.02	459.22	458.83	464.44	462.00	462.19	461.96	461.81
8	454.41	461.51	458.87	458.61	460.80	458.74	459.02	463.93	462.12	462.21	461.94	461.80
9	455.97	461.53	458.88	458.60	460.57	458.48	459.14	463.44	463.25	462.21	461.92	461.78
10	460.13	461.53	458.84	458.58	460.34	458.27	459.25	462.98	467.44	462.21	461.91	461.77
11	460.63	461.51	458.82	458.57	460.14	458.25	459.38	462.64	469.03	462.20	461.90	461.75
12	460.86	461.49	458.81	458.55	459.92	458.25	459.48	462.35	469.24	462.18	461.87	461.73
13	461.05	461.42	458.84	458.55	459.72	458.26	459.57	462.26	468.63	462.15	461.84	461.71
14	461.18	461.27	458.83	458.55	459.63	458.28	459.63	462.19	467.83	462.17	461.81	461.70
15	461.26	461.12	458.82	458.55	459.54	458.29	459.69	462.24	466.78	462.18	461.78	461.71
16	461.31	460.97	458.83	458.66	459.44	458.35	459.74	462.34	465.88	462.19	461.75	461.69
17	461.36	460.85	458.79	459.84	459.34	458.37	459.80	462.41	464.69	462.19	461.72	461.67
18	461.40	460.77	458.79	460.27	459.22	458.33	459.84	462.43	463.60	462.19	461.68	461.65
19	461.42	460.62	458.78	460.38	459.11	458.26	459.89	462.43	462.78	462.18	461.67	461.61
20	461.45	460.48	458.76	460.44	459.03	458.17	459.94	462.42	462.28	462.17	463.07	461.58
21	461.47	460.33	458.76	460.50	459.05	458.06	459.98	462.35	461.89	462.16	463.91	461.54
22	461.49	460.17	458.76	460.55	459.07	457.97	460.03	462.27	461.91	462.14	464.24	461.51
23	461.50	460.03	458.75	460.59	459.09	458.02	460.07	462.18	461.99	462.12	464.37	461.47
24	461.51	459.85	458.73	460.64	459.13	458.10	461.05	462.12	462.05	462.11	463.95	461.44
25	461.52	459.68	458.72	460.72	460.78	458.17	464.45	462.14	462.11	462.08	463.40	461.40
26	461.50	459.52	458.71	460.77	461.97	458.22	466.63	462.16	462.59	462.05	462.84	461.37
27	461.50	459.37	458.71	460.78	462.26	458.15	466.65	462.18	464.01	462.03	462.43	461.34
28	461.50	459.21	458.72	460.80	461.92	458.07	466.17	462.19	463.59	462.00	462.15	461.31
29	461.49	459.11	458.71	460.82	461.45	458.00	465.56	462.20	463.47	462.43	461.92	461.27
30	461.49	459.02	458.69	460.84	---	457.99	464.90	462.21	462.93	463.17	461.87	461.23
31	461.49	---	458.67	460.86	---	457.98	---	462.22	---	463.15	461.85	---
MEAN	459.28	460.73	458.81	459.57	460.30	458.63	460.57	463.32	463.83	462.27	462.42	461.62
MAX	461.52	461.53	458.96	460.86	462.26	461.02	466.65	468.39	469.24	463.17	464.37	461.84
MIN	454.04	459.02	458.67	458.55	459.03	457.97	457.95	462.12	461.89	462.00	461.67	461.23
CAL YR	2003	MEAN	456.30	MAX	461.53	MIN	452.99					
WTR YR	2004	MEAN	460.94	MAX	469.24	MIN	454.04					

08095550 Waco Lake near Waco, TX—Continued



## WATER-QUALITY RECORDS

## PERIOD OF RECORD.--

CHEMICAL DATA: Jan. 1981 to Aug. 1982, Feb. 1998 to current year.

BIOCHEMICAL DATA: Jan. 1981 to Aug. 1982, Feb. 1998 to current year.

RADIOLOGICAL DATA: Jan. 1981 to May 1981.

PESTICIDE DATA: July 1999 to current year.

SEDIMENT CHEMISTRY: May 2003.

REMARKS.--Pesticide samples are composited from discrete samples collected at the surface, middle, and bottom of the reservoir. Phytoplankton data for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

313430097113801 -- WACO LK SITE AC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Trans- parency Secchi disc, meters (00078)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of satura- tion (00301)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Hard- ness, water, mg/L as CaCO3 (00900)
FEB													
26-26	1123	--	--	--	--	--	--	--	--	--	--	--	--
26...	1124	1.50	323	8.3	11.1	--	.91	762	10.5	96	--	--	140
26...	1126	10.0	324	8.3	10.5	--	--	762	10.4	94	--	--	--
26...	1128	20.0	322	8.3	10.4	--	--	762	10.4	93	--	--	--
26...	1130	30.0	322	8.3	10.3	--	--	762	10.4	93	--	--	--
26...	1132	40.0	323	8.3	10.2	--	--	762	10.3	92	--	--	--
26...	1134	50.0	324	8.2	10.2	--	--	762	10.3	92	--	--	--
26...	1136	60.0	324	8.2	10.2	--	--	762	10.3	92	--	--	--
26...	1138	70.0	323	8.2	10.2	--	--	762	10.3	92	--	--	--
26...	1140	76.0	322	8.2	10.2	--	--	762	10.5	93	--	--	140
26...	1500	1.00	--	--	--	--	--	--	--	--	E9k	E15k	--
MAR													
02...	0908	.50	338	8.4	12.4	--	.67	757	10.3	97	--	--	--
02...	0910	3.00	338	8.4	12.4	--	--	757	10.5	99	--	--	--
MAY													
19...	0844	1.00	--	--	--	--	--	--	--	--	--	--	--
19...	0906	1.50	340	8.0	23.6	25.3	.99	758	7.8	92	--	--	160
MAY													
19-19	0906	--	--	--	--	--	--	--	--	--	--	--	--
19...	0907	1.60	--	--	--	--	--	--	--	--	--	--	--
19...	0908	10.0	341	8.0	23.3	--	--	758	7.3	87	--	--	--
19...	0910	20.0	343	7.8	22.9	--	--	758	6.8	79	--	--	--
19...	0912	30.0	340	7.8	22.7	--	--	758	6.4	75	--	--	--
19...	0914	40.0	340	7.6	21.8	--	--	758	5.0	58	--	--	--
19...	0916	45.0	339	7.5	21.7	--	--	758	4.8	55	--	--	--
19...	0918	50.0	339	7.5	21.6	--	--	758	4.5	52	--	--	--
19...	0920	60.0	339	7.4	21.1	--	--	758	2.9	32	--	--	--
19...	0922	70.0	326	7.2	19.9	--	--	758	E.1	--	--	--	--
19...	0924	75.0	327	7.2	19.7	--	--	758	E.1	--	--	--	150
19...	1144	1.00	--	--	--	--	--	--	--	--	E2k	E4k	--
JUL													
27-27	0759	--	--	--	--	--	--	--	--	--	--	--	--
27...	0800	1.00	331	7.8	28.6	22.5	1.16	755	5.3	69	--	--	150
27...	0801	1.90	--	--	--	--	--	755	--	--	--	--	--
27...	0802	10.0	329	7.8	28.6	--	--	755	5.3	69	--	--	--
27...	0804	20.0	331	7.8	28.6	--	--	755	5.2	68	--	--	--
27...	0806	30.0	331	7.8	28.6	--	--	755	4.7	61	--	--	--
27...	0808	35.0	335	7.7	28.4	--	--	755	4.0	52	--	--	--
27...	0810	40.0	345	7.3	28.1	--	--	755	E.1e	--	--	--	--
27...	0812	50.0	351	7.3	27.6	--	--	755	E.1e	--	--	--	--
27...	0814	60.0	353	7.3	27.5	--	--	755	E.1e	--	--	--	--
27...	0816	74.0	360	7.2	27.1	--	--	755	E.2e	--	--	--	150
27...	1015	1.00	--	--	--	--	--	--	--	--	<1k	E1k	--















08095550 Waco Lake near Waco, TX—Continued

313430097113801 -- WACO LK SITE AC  
 WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water, fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)
FEB					
26-26	<.034	<.02	<.010	<.002	<.009
26...	--	--	--	--	--
26...	--	--	--	--	--
26...	--	--	--	--	--
26...	--	--	--	--	--
26...	--	--	--	--	--
26...	--	--	--	--	--
26...	--	--	--	--	--
26...	--	--	--	--	--
26...	--	--	--	--	--
MAR					
02...	--	--	--	--	--
02...	--	--	--	--	--
MAY					
19...	--	--	--	--	--
19...	--	--	--	--	--
MAY					
19-19	<.034	<.02	<.010	<.002	<.009
19...	--	--	--	--	--
19...	--	--	--	--	--
19...	--	--	--	--	--
19...	--	--	--	--	--
19...	--	--	--	--	--
19...	--	--	--	--	--
19...	--	--	--	--	--
19...	--	--	--	--	--
19...	--	--	--	--	--
19...	--	--	--	--	--
19...	--	--	--	--	--
19...	--	--	--	--	--
19...	--	--	--	--	--
19...	--	--	--	--	--
JUL					
27-27	<.034	<.02	<.010	<.002	<.009
27...	--	--	--	--	--
27...	--	--	--	--	--
27...	--	--	--	--	--
27...	--	--	--	--	--
27...	--	--	--	--	--
27...	--	--	--	--	--
27...	--	--	--	--	--
27...	--	--	--	--	--
27...	--	--	--	--	--
27...	--	--	--	--	--
27...	--	--	--	--	--
27...	--	--	--	--	--
27...	--	--	--	--	--
27...	--	--	--	--	--

313511097122801 -- WACO LK SITE AL  
 WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
FEB									
26...	1204	1.00	324	8.3	11.2	--	761	10.5	96
26...	1206	10.0	322	8.3	10.6	--	761	10.4	94
26...	1208	20.0	324	8.3	10.5	--	761	10.3	93
26...	1210	30.0	323	8.3	10.6	--	761	10.3	93
26...	1212	44.0	323	8.3	10.6	--	761	10.3	92
MAY									
19...	1016	1.00	342	8.0	23.5	25.8	760	7.8	92
19...	1018	10.0	343	8.0	23.4	--	760	7.7	91
19...	1020	20.0	344	8.0	23.3	--	760	7.4	87
19...	1022	30.0	345	7.9	23.1	--	760	7.2	84
19...	1024	38.0	345	7.9	23.0	--	760	7.0	82
JUL									
27...	0850	1.00	329	7.9	28.6	24.2	754	5.9	77
27...	0852	10.0	328	7.9	28.6	--	754	5.9	77
27...	0854	20.0	329	7.9	28.6	--	754	5.8	76
27...	0856	30.0	331	7.8	28.6	--	754	5.5	72
27...	0858	38.0	336	7.6	28.4	--	754	3.3	43

## BRAZOS RIVER BASIN

08095550 Waco Lake near Waco, TX—Continued

313338097130301 -- WACO LK SITE BC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
FEB									
26...	1010	1.50	322	8.3	10.9	--	761	10.5	95
26...	1012	10.0	324	8.3	10.8	--	761	10.6	96
26...	1014	20.0	324	8.2	10.8	--	761	10.6	95
26...	1016	30.0	328	8.2	10.7	--	761	10.5	95
26...	1018	38.0	327	8.2	10.4	--	761	10.4	94
MAY									
19...	1000	1.00	343	7.9	23.0	25.8	760	7.2	85
19...	1002	10.0	345	7.9	22.9	--	760	7.0	82
19...	1004	20.0	348	7.8	22.7	--	760	6.7	77
19...	1006	30.0	348	7.8	22.6	--	760	6.3	73
19...	1008	38.0	345	7.7	22.1	--	760	5.3	61
JUL									
27...	1022	1.00	328	8.0	29.0	24.8	755	5.9	78
27...	1024	10.0	330	7.9	28.9	--	755	5.7	75
27...	1026	20.0	330	7.9	28.9	--	755	5.6	73
27...	1028	30.0	334	7.6	28.7	--	755	3.0	40
27...	1030	37.0	347	7.3	28.2	--	755	E.1e	--

313148097140601 -- WACO LK SITE CC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Trans- parency Secchi disc, meters (00078)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Hard- ness, water, mg/L as CaCO3 (00900)
FEB													
26...	0940	1.00	331	8.1	11.2	--	.21	761	9.8	90	--	--	150
26...	0941	.40	--	--	--	--	--	--	--	--	--	--	--
26...	0942	10.0	326	8.0	11.0	--	--	761	9.6	87	--	--	--
26...	0944	20.0	299	7.9	10.8	--	--	761	9.5	86	--	--	--
26...	0946	29.0	252	7.7	10.3	--	--	761	9.2	82	--	--	120
26...	1500	1.00	--	--	--	--	--	--	--	--	E2700k	E2900k	--
MAY													
19...	1156	1.00	360	7.7	22.9	26.8	.64	760	6.1	72	E10k	E9k	160
19...	1158	10.0	359	7.7	22.7	--	--	760	6.2	72	--	--	--
19...	1200	20.0	353	7.7	22.6	--	--	760	5.8	67	--	--	--
19...	1202	29.0	350	7.6	21.9	--	--	760	4.0	46	--	--	160
JUL													
27...	1038	1.00	--	--	--	--	--	--	--	--	E6k	E5k	--
27...	1040	1.00	332	8.1	29.0	25.2	.61	755	6.5	85	--	--	150
27...	1042	10.0	330	8.0	28.8	--	--	755	6.2	81	--	--	--
27...	1044	20.0	337	8.0	28.7	--	--	755	6.1	79	--	--	--
27...	1046	25.0	344	7.9	28.7	--	--	755	5.5	72	--	--	--
27...	1048	29.0	351	7.5	28.5	--	--	755	2.3	30	--	--	160

08095550 Waco Lake near Waco, TX—Continued

313148097140601 -- WACO LK SITE CC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium, percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue water, fltrd, sum of consti- tuents mg/L (70301)
FEB													
26...	25	55.0	3.16	11.6	.4	14	2.93	125	23.4	9.67	.3	8.0	197
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	25	43.9	1.65	5.37	.2	9	2.96	92	14.7	3.85	.2	10.7	155
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
19...	18	59.9c	3.07c	9.97c	.3	12	3.16c	145	18.2c	9.25c	.2	9.6	204
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	21	57.8c	3.23c	9.74c	.3	12	3.24c	137	17.3c	8.95c	.2	9.9	196
JUL													
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
27...	19	53.6	3.47	9.51	.3	12	3.64	129	16.4	9.42	.2	9.6	183
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
27...	18	56.8	3.35	9.62	.3	12	3.51	138	16.3	9.32	.2	10.6	193

313148097140601 -- WACO LK SITE CC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Chloro- phyll a phyto- plank- ton, acid m, ug/L (32211)	Pheophy- tin a, phyto- plank- ton, acid m, ug/L (32218)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
FEB											
26...	1.83	.041	1.87	.04	.012	.008	.025	--	--	8	1.4
26...	--	--	--	--	--	--	--	19.2	<.200	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	3.69	.088	3.78	.13	.065	.051	.156	--	--	35	8.5
26...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	.94	.051	.99	<.04	.019	.011	.034	--	--	<6c	5.4c
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	.77	.069	.84	E.03n	.025	.014	.043	--	--	E3nc	104c
JUL											
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	.010	E.06n	<.04	.007	<.006	--	--	--	<6	3.2
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
27...	.07	.014	.09	.05	.006	<.006	--	--	--	<6	77.7
27...	.07	.014	.09	.14	.007	<.006	--	--	--	<6	190

## BRAZOS RIVER BASIN

08095550 Waco Lake near Waco, TX—Continued

313534097142401 -- WACO LK SITE DC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sam- pling depth, feet (00003)	Specif. conduc- tance, wat unfr uS/cm (00095)	pH, water, unfltrd field, std units (00400)	Temper- ature, water, deg C (00010)	Temper- ature, air, deg C (00020)	Trans- parency Secchi disc, meters (00078)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of satura- tion (00301)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)
FEB													
26...	1318	1.00	333	8.2	11.3	--	.61	761	10.1	92	.45	.014	.47
26...	1320	10.0	335	8.2	10.4	--	--	761	9.9	89	--	--	--
26...	1322	20.0	327	8.2	10.1	--	--	761	10.1	90	--	--	--
26...	1324	30.0	326	8.2	10.1	--	--	761	10.1	90	--	--	--
26...	1326	42.0	325	8.2	10.0	--	--	761	10.2	90	.58	.017	.60
MAY													
19...	1032	1.00	352	8.3	24.5	26.1	1.01	760	9.1	109	.47	.024	.49
19...	1034	10.0	346	8.2	24.1	--	--	760	8.2	98	--	--	--
19...	1036	20.0	345	8.1	24.1	--	--	760	8.0	95	--	--	--
19...	1038	30.0	392	7.6	23.1	--	--	760	4.7	55	--	--	--
19...	1040	42.0	424	7.3	22.5	--	--	760	E.8	--	.17	.027	.20
JUL													
27...	0908	1.00	337	7.6	28.4	24.2	.98	755	3.3	43	.06	.025	.09
27...	0910	10.0	336	7.6	28.4	--	--	755	3.3	43	--	--	--
27...	0912	20.0	335	7.6	28.4	--	--	755	3.3	43	--	--	--
27...	0914	30.0	337	7.5	28.3	--	--	755	3.0	39	--	--	--
27...	0916	40.0	349	7.3	28.1	--	--	755	E.1	--	--	<.008	<.06

313534097142401 -- WACO LK SITE DC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Ammonia water, fltrd, mg/L as N (00608)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Chloro- phyll a phyto- plank- ton, acid m, ug/L (32211)	Pheophy- tin a, phyto- plank- ton, acid m, ug/L (32218)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
FEB							
26...	<.04	.004	<.006	9.20	3.20	E4n	1.3
26...	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--
26...	<.04	.005	<.006	--	--	E4n	1.6
MAY							
19...	<.04	.010	<.006	--	--	<6	1.9
19...	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--
19...	.42	.015	E.005n	--	--	E5n	360
JUL							
27...	E.03n	.005	<.006	--	--	<6	3.8
27...	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--
27...	.32	.009	E.003n	--	--	220	574



## BRAZOS RIVER BASIN

08095550 Waco Lake near Waco, TX—Continued

313608097164501 -- WACO LK SITE EC  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Phos- phorus, water, fltrd, mg/L (00666)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
FEB									
26...	.49	.013	.50	<.04	.021	.012	.037	23	7.8
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	.33	.010	.34	<.04	.017	.009	.028	27	2.6
26...	--	--	--	--	--	--	--	--	--
MAY									
19...	--	E.006n	.19	<.04	.006	E.003n	--	E3n	2.1
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	.16	.009	.17	.17	.009	<.006	--	E3n	27.9
19...	--	E.006n	<.06	.39	.013	E.003n	--	E5n	464
19...	--	--	--	--	--	--	--	--	--
JUL									
27...	--	<.008	E.04n	.06	.006	<.006	--	<6	4.6
27...	--	--	--	--	--	--	--	--	--
27...	--	<.008	E.03n	.23	.009	<.006	--	26	440
27...	--	--	--	--	--	--	--	--	--
27...	--	<.008	<.06	5.04d	.73oc	.801d	2.46	6,920	3,790
27...	--	--	--	--	--	--	--	--	--

Remark codes used in this table:

&lt; -- Less than

E -- Estimated value

Value qualifier codes used in this table:

c -- See laboratory comment

d -- Diluted sample: method hi range exceeded

e -- See field comment

k -- Counts outside acceptable range

n -- Below the LRL and above the LT-MDL

o -- Result determined by alternate method

t -- Below the long-term MDL



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## BRAZOS RIVER BASIN

08095600 Bosque River near Waco, TX

## WATER-QUALITY RECORDS

## PERIOD OF RECORD.--

CHEMICAL DATA: Jan. 1962 to July 1964, Jan. 1981 to Aug. 1982, Feb. 1998 to current year.

BIOCHEMICAL DATA: Jan. 1962 to July 1964, Jan. 1981 to Aug. 1982, Feb. 1998 to current year.

RADIOCHEMICAL DATA: Jan. 1981 to May 1981.

## 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, mi <sup>2</sup> (81024)	Sampling method, code (82398)	Turbidity, wat unfltrd, 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)	Specific conductance, wat unfltrd lab, uS/cm 25 degC (90095)
FEB 26...	1215	1028	80020	365.44	570	1,656	10	12	763	11.5	8.4	8.2	321
MAY 19...	1600	1028	80020	365.44	296	1,656	70	11	756	8.6	7.9	7.9	321
JUL 29...	1015	1028	80020	365.44	20	1,656	55	350	756	7.3	7.9	E7.3	174

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

Date	Specific conductance, wat unfltrd 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 fltrd inc tit field, mg/L as CaCO <sub>3</sub> (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 total at 105 deg. C, suspended, mg/L (00530)
FEB 26...	330	14.5	10.5	51.6	4.04	3.21	13.3	127	11.8	.2	8.73	23.2	<10
MAY 19...	350	34.5	22.3	55.8	3.19	3.31	9.43	135	9.20	.2	10.2	16.6	<10
JUL 29...	167	23.3	24.6	26.8	1.29	2.63	3.82	67	4.08	<.2	4.99	7.1	310d

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

Date	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)	Total nitrogen, wat fltrd by analysis, mg/L (62854)	Organic carbon, water, unfltrd mg/L (00680)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
FEB 26...	.29	<.04	.56	.015	<.006	.006	.83	4.0	<2.0	<2	<.20	2.4	35
MAY 19...	.42	<.04	.87	.027	.017	.028	1.16	5.0	<2.0	E1n	E.12n	2.7	39
JUL 29...	.51	.20	.28	.012	.082	.101	.86	11.1	5.7e	3	<.20	4.9	20

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

Date	Beryllium, water, fltrd, ug/L (01010)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
FEB 26...	<.06	<.04	<.8	.167	.9	<.08	.6	<.02	1.6	1.90	E.4n	<.2	2.4
MAY 19...	<.06	<.04	<.8	.243	1.0	E.06n	4.8	<.02	1.2	1.51	E.3n	<.2	.9
JUL 29...	<.06	<.04	<.8	.263	1.1	.11	145	<.02	.8	1.15	.4	<.2	1.7

08095600 Bosque River near Waco, TX—Continued

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

Date	Uranium natural water, fltrd, ug/L (22703)	Purpose site visit, code (50280)	Sample purpose code (71999)	Sampler type, code (84164)	Transit rate, sampler ft/s (50015)	Transit rate, sampler maximum ft/s (50016)	Transit rate, sampler minimum ft/s (50014)	Type of sample related QA data, code (99111)
FEB 26...	.72	1,001	10.00	3053	.2	.3	.3	1
MAY 19...	.57	1,001	10.00	3060	--	--	--	1
JUL 29...	.21	1,001	10.00	3060	--	--	--	10

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
- e -- See field comment
- n -- Below the LRL and above the LT-MDL

## 08096500 Brazos River at Waco, TX

LOCATION.--Lat 31°32'09", long 97°04'23", McLennan County, Hydrologic Unit 12060202, on left bank downstream side of Loop 340 bridge; on left bank 2.2 mi downstream from bridge on LaSalle Avenue and at mile 400.7.

DRAINAGE AREA.--29,559 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--Sept. 1898 to current year. Monthly discharge only for some periods published in WSP 1312.

REVISED RECORDS.--WSP 850 and 878: 1899-1900, 1907-09 (monthly and yearly summaries only). WSP 1512: 1901-05, 1910, 1915, 1925-26(M), 1927-29. WSP 1922: 1957. WDR TX-76-2: Drainage area. WDR TX-03-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 349.34 ft above NGVD of 1929. Sept. 14, 1898, to Mar. 28, 1918, May 6, 1922, to Feb. 12, 1925, nonrecording gage, and Mar. 28, 1918, to May 5, 1922, Feb. 13, 1925, to Aug. 14, 1969, water-stage recorder. Prior to Aug. 14, 1969, at site 3.9 mi upstream at datum 7.46 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1941, at least 10% of contributing drainage area has been regulated. The city of Waco diverts water above station for municipal use, and the Brazos River Authority returns treated wastewater effluent to the river above station. There are many other small diversions above station for municipal supply, irrigation, and for oil field operations that will not appreciably affect flow.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--42 years (water years 1899-1940), 2,560 ft<sup>3</sup>/s (1,855,000 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage for 1847-98, 34.63 ft May 28, 1885, from floodmark at site 3.9 mi upstream.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS 1899-1940: Maximum discharge since 1847, 246,000 ft<sup>3</sup>/s Sept. 27, 1936 (gage height, 40.90 ft), at former site and datum, levee on left bank was overtopped and broken by flood; no flow Aug. 20, 21, 1918, and for several days in Aug. 1923.

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	53	1,080	335	160	573	4,070	685	16,100	172	4,210	1,840	378
2	45	245	1,010	126	435	3,890	328	11,400	690	3,480	1,930	660
3	42	164	354	113	40	5,060	181	10,600	290	4,830	2,250	832
4	41	406	302	110	42	4,110	170	9,540	393	5,090	2,030	717
5	543	200	442	349	1,280	7,290	162	6,810	265	5,170	1,740	734
6	894	1,360	140	102	2,230	4,720	556	4,830	211	5,040	1,460	1,270
7	377	741	125	66	1,680	4,380	304	4,640	132	3,520	1,650	759
8	62	188	117	171	1,610	3,440	305	3,410	615	2,730	1,090	965
9	2,160	160	126	406	1,500	2,240	272	3,080	2,740	2,610	448	3,720
10	1,530	187	397	150	1,570	1,500	352	2,670	4,970	2,580	1,130	4,030
11	306	600	264	2,320	1,540	1,160	336	3,250	3,690	1,900	1,450	3,390
12	268	188	400	643	1,580	942	238	1,820	6,920	2,020	1,630	3,040
13	231	601	116	362	1,230	820	222	4,260	9,710	2,170	1,710	3,100
14	215	716	354	206	927	1,210	197	3,070	12,200	1,650	177	2,900
15	197	702	209	173	828	979	261	1,980	12,600	1,690	441	4,000
16	196	682	172	332	910	1,060	193	837	10,100	1,540	460	4,000
17	213	1,150	121	2,330	815	1,150	241	2,490	10,500	566	1,090	3,990
18	191	856	123	2,290	1,070	1,810	542	757	9,140	162	482	4,140
19	148	924	179	986	1,110	1,220	503	497	6,540	204	741	3,990
20	136	832	222	544	474	1,310	419	757	4,320	672	928	3,720
21	133	695	184	349	234	1,260	165	391	3,480	547	1,490	737
22	124	982	182	495	244	895	1,260	590	4,080	246	693	361
23	108	701	140	429	244	459	897	581	4,230	850	2,090	170
24	165	716	114	374	944	269	7,810	373	4,270	911	3,210	111
25	118	1,590	110	576	3,780	236	11,100	169	3,260	673	4,270	169
26	81	986	108	785	3,220	791	5,160	182	3,510	340	3,880	197
27	67	709	115	646	2,400	974	6,240	185	6,390	399	3,000	298
28	61	591	112	907	4,040	1,010	7,310	157	7,910	164	2,440	151
29	59	392	104	933	4,130	748	5,880	125	5,800	1,950	1,240	144
30	62	419	97	673	---	646	7,520	127	5,290	1,760	1,790	128
31	64	---	140	589	---	397	---	142	---	1,840	594	---
TOTAL	8,890	19,763	6,914	18,695	40,680	60,046	59,809	95,820	144,418	61,514	49,374	52,801
MEAN	287	659	223	603	1,403	1,937	1,994	3,091	4,814	1,984	1,593	1,760
MAX	2,160	1,590	1,010	2,330	4,130	7,290	11,100	16,100	12,600	5,170	4,270	4,140
MIN	41	160	97	66	40	236	162	125	132	162	177	111
AC-FT	17,630	39,200	13,710	37,080	80,690	119,100	118,600	190,100	286,500	122,000	97,930	104,700

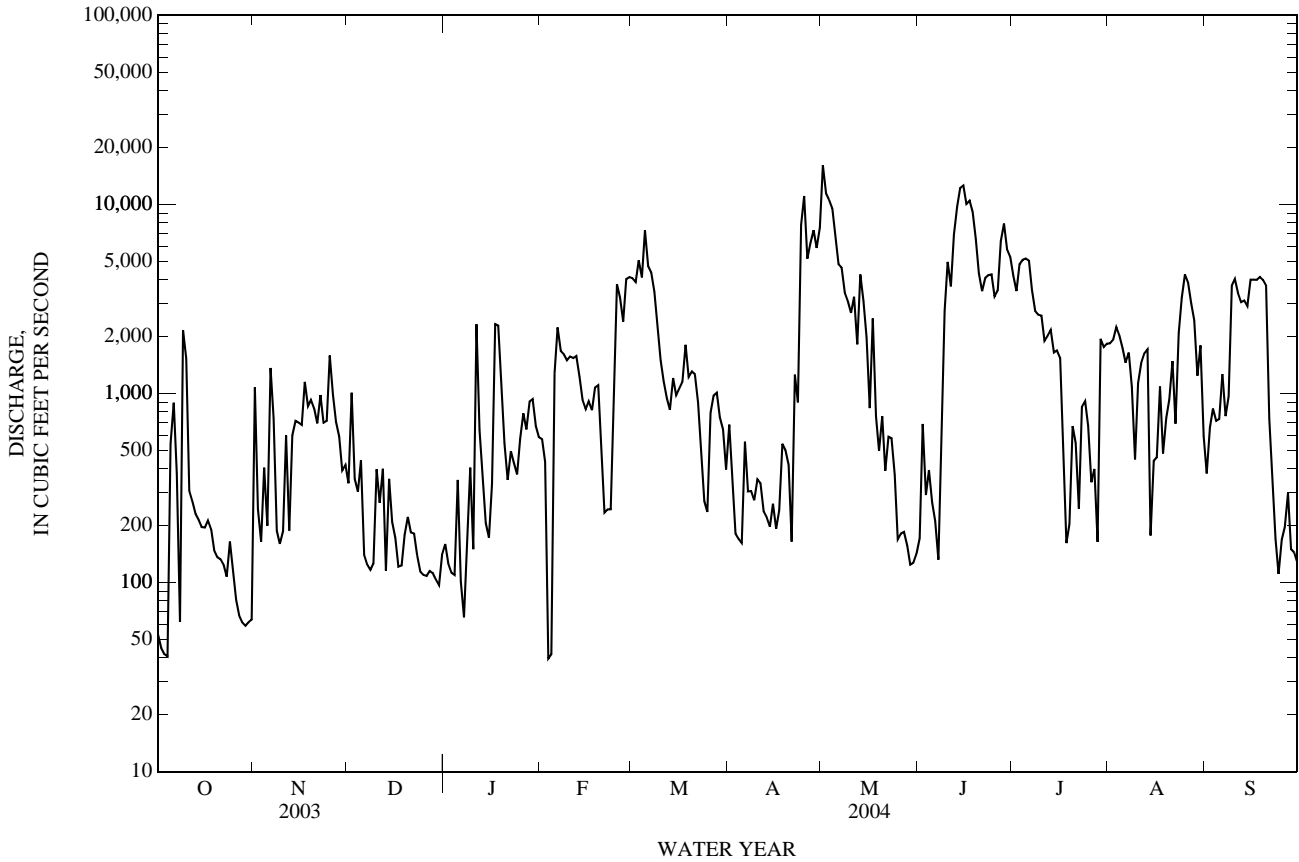
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004z, BY WATER YEAR (WY)

MEAN	1,824	1,417	1,543	1,824	2,134	2,680	2,772	5,163	4,123	1,633	1,088	1,192
MAX	13,540	11,150	15,070	28,140	16,860	20,260	22,470	36,340	37,140	9,427	7,300	9,492
(WY)	(1960)	(1975)	(1992)	(1992)	(1992)	(1992)	(1942)	(1957)	(1957)	(1982)	(1995)	(1966)
MIN	38.6	43.2	40.8	44.6	28.0	71.2	160	43.5	142	49.2	98.3	33.3
(WY)	(2000)	(2000)	(1955)	(1955)	(1984)	(2000)	(1955)	(1988)	(1999)	(1978)	(1988)	(1999)

08096500 Brazos River at Waco, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1941 - 2004z	
ANNUAL TOTAL	239,661		618,724			
ANNUAL MEAN	657		1,691		2,167	
HIGHEST ANNUAL MEAN					7,707 1957	
LOWEST ANNUAL MEAN					322 1984	
HIGHEST DAILY MEAN	4,210	Feb 22	16,100	May 1	121,000	Apr 22, 1945
LOWEST DAILY MEAN	21	Sep 18	40	Feb 3	0.12	Aug 7, 1988
ANNUAL SEVEN-DAY MINIMUM	73	Oct 25	73	Oct 25	4.4	May 13, 1988
MAXIMUM PEAK FLOW			22,000	May 1	144,000	Apr 22, 1945
MAXIMUM PEAK STAGE			17.86	May 1	ag36.70	Apr 22, 1945
ANNUAL RUNOFF (AC-FT)	475,400		1,227,000		1,570,000	
10 PERCENT EXCEEDS	1,830		4,280		4,560	
50 PERCENT EXCEEDS	360		716		816	
90 PERCENT EXCEEDS	77		127		124	

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



## BRAZOS RIVER BASIN

08098290 Brazos River near Highbank, TX

LOCATION.--Lat 31°08'02", long 96°49'29", Falls County, Hydrologic Unit 12070101, on right bank 45 ft downstream from bridge on Farm Road 413, 1.4 mi downstream from Highbank Slough and Spring Branch, 2.6 mi south of Highbank, and at mile 346.6.

DRAINAGE AREA.--30,436 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--Oct. 1965 to current year. Water-quality records: Chemical data: Nov. 1967 to Aug. 1997. Biochemical data: Nov. 1967 to Aug. 1997. Pesticide data: Nov. 1976 to June 1981. Sediment data: Oct. 1974 to July 1994. Specific conductance: Nov. 1967 to Sept. 1997. Water temperature: Nov. 1967 to Feb. 1984, Dec. 1989 to Sept. 1997.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 279.29 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those estimated daily discharges, which are fair. Since installation of gage in Oct. 1965, at least 10% of contributing drainage area has been regulated. Water is diverted from the river about 52 miles upstream from this station by Texas Power and Light Co. to Tradinghouse Reservoir. Many diversions above station for municipal supply, irrigation, and industrial uses.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1909, 42 ft in Dec. 1913 and 40 ft in Sept. 1936, from information by local residents.

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

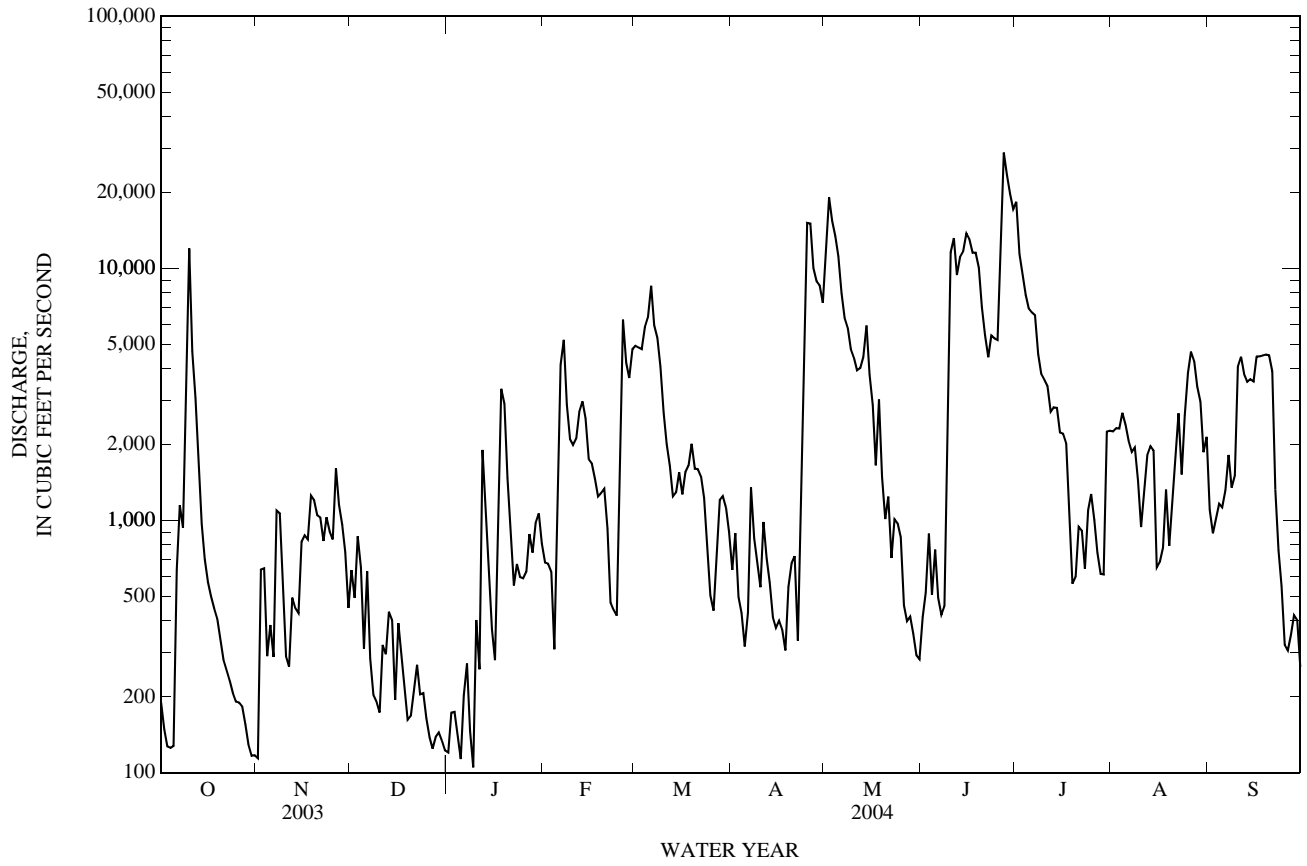
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	190	114	636	120	682	4,940	637	10,900	413	18,400	2,260	1,100
2	148	639	494	173	674	4,860	892	19,100	517	e11,400	2,320	890
3	127	646	866	174	626	4,780	497	15,500	888	e9,500	2,320	1,020
4	125	290	652	142	309	5,850	429	13,400	507	e7,850	2,680	1,170
5	128	385	310	113	1,100	6,400	317	11,200	767	e6,940	2,400	1,130
6	638	288	630	203	4,150	8,540	431	7,970	493	e6,690	2,070	1,320
7	1,150	1,100	284	271	5,210	5,950	1,350	6,370	423	6,520	1,870	1,820
8	935	1,070	204	147	2,890	5,300	850	5,810	457	4,570	1,950	1,350
9	2,980	501	192	105	2,110	4,080	678	4,780	3,610	3,810	1,430	1,510
10	12,000	290	173	403	1,990	2,680	544	4,410	11,600	3,620	942	4,070
11	4,690	263	321	257	2,120	2,010	988	3,940	13,200	3,420	1,310	4,460
12	3,060	495	295	1,910	2,700	1,640	707	4,030	9,420	2,700	1,820	3,820
13	1,660	450	435	1,000	2,970	1,250	568	4,450	11,100	2,810	1,970	3,550
14	970	430	403	595	2,540	1,290	413	5,940	11,700	2,800	1,900	3,640
15	702	823	194	370	1,750	1,550	375	3,800	13,800	2,240	652	3,560
16	570	873	392	279	1,690	1,270	401	2,870	13,100	2,210	685	4,470
17	502	843	280	826	1,460	1,550	370	1,660	11,500	2,030	781	4,480
18	449	1,260	208	3,330	1,250	1,650	306	3,020	11,600	1,170	1,330	4,520
19	409	1,210	162	2,900	1,290	2,020	545	1,490	10,100	561	794	4,560
20	334	1,050	168	1,480	1,340	1,610	678	1,010	7,030	598	1,210	4,530
21	281	1,030	213	920	932	1,600	723	1,240	5,420	945	1,840	3,900
22	254	830	268	553	473	1,490	334	710	4,440	912	2,670	1,330
23	232	1,030	204	672	441	1,230	1,230	1,010	5,420	643	1,520	761
24	207	904	207	596	420	757	3,530	973	5,280	1,100	2,610	549
25	191	842	164	590	2,100	505	15,200	859	5,200	1,270	3,850	321
26	190	1,610	138	627	6,260	439	15,100	461	10,800	1,000	4,680	305
27	183	1,150	125	884	4,230	770	10,000	399	28,800	746	4,290	353
28	155	963	139	746	3,680	1,210	8,900	416	23,400	615	3,400	421
29	129	751	145	977	4,780	1,250	8,580	356	19,800	612	2,960	403
30	117	450	134	1,070	---	1,120	7,300	292	17,200	2,250	1,870	263
31	117	---	122	808	---	900	---	282	---	2,270	2,150	---
TOTAL	33,823	22,580	9,158	23,241	62,167	80,491	82,873	138,648	257,985	112,202	64,534	65,576
MEAN	1,091	753	295	750	2,144	2,596	2,762	4,473	8,600	3,619	2,082	2,186
MAX	12,000	1,610	866	3,330	6,260	8,540	15,200	19,100	28,800	18,400	4,680	4,560
MIN	117	114	122	105	309	439	306	282	413	561	652	263
AC-FT	67,090	44,790	18,160	46,100	123,300	159,700	164,400	275,000	511,700	222,600	128,000	130,100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2004, BY WATER YEAR (WY)

MEAN	1,591	1,984	2,409	2,591	3,018	4,075	3,302	5,424	4,732	1,725	1,257	1,215
MAX	13,740	18,050	16,830	31,930	21,820	22,730	15,700	30,140	17,520	10,050	8,600	9,865
(WY)	(1982)	(1975)	(1992)	(1992)	(1992)	(1992)	(1977)	(1990)	(1989)	(1982)	(1995)	(1966)
MIN	93.6	72.6	163	167	30.8	84.7	196	179	216	84.4	167	116
(WY)	(1984)	(1984)	(1984)	(1984)	(1984)	(1971)	(1978)	(1988)	(1999)	(1978)	(1988)	(1999)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1966 - 2004	
ANNUAL TOTAL	378,405		953,278			
ANNUAL MEAN	1,037		2,605		2,775	
HIGHEST ANNUAL MEAN					11,320	
LOWEST ANNUAL MEAN					329	
HIGHEST DAILY MEAN	20,700	Feb 22	28,800	Jun 27	70,300	Dec 22, 1991
LOWEST DAILY MEAN	105	Sep 7	105	Jan 9	23	Feb 24, 1984
ANNUAL SEVEN-DAY MINIMUM	138	Dec 25	132	Dec 26	23	Sep 15, 1984
MAXIMUM PEAK FLOW			30,400		78,700	
MAXIMUM PEAK STAGE			18.87		30.78	
ANNUAL RUNOFF (AC-FT)	750,600		1,891,000		2,010,000	
10 PERCENT EXCEEDS	2,080		6,570		6,140	
50 PERCENT EXCEEDS	502		1,060		1,020	
90 PERCENT EXCEEDS	165		207		213	

08098290 Brazos River near Highbank, TX—Continued



## BRAZOS RIVER BASIN

08098300 Little Pond Creek at Burlington, TX

LOCATION.--Lat 31°01'35", long 96°59'17", Milam County, Hydrologic Unit 12070101, on left bank downstream from bridge on U.S. Highway 77, 1.0 mi north of Burlington, 2.5 mi downstream from Keys Creek, and 12.6 mi upstream from mouth.

DRAINAGE AREA.--23.0 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1, 1962 to Sept. 30, 1982, Oct. 1, 2002 to current year. Water-quality records: Sediment records: Jan. 1966 to Sept. 1975.

REVISED RECORDS.--WSP 2122: 1965. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 388.51 ft above NGVD of 1929. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1938, 17.5 ft in 1950, 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	0.03	18	0.00	27	3.5	74	0.00	0.00
2	0.00	0.00	0.00	0.00	0.04	3.7	0.00	13	5.3	6.9	0.00	0.00
3	0.00	0.00	0.00	0.01	0.03	3.0	0.00	1.8	1.5	3.5	0.00	0.00
4	0.00	0.00	0.00	0.01	29	92	0.00	0.39	0.32	2.2	0.00	0.00
5	91	0.00	0.00	0.00	273	100	0.00	0.18	7.9	1.5	0.00	0.00
6	583	0.00	0.00	0.00	25	16	60	0.11	3.7	0.95	0.00	0.15
7	30	0.00	0.00	0.00	4.4	2.8	35	0.03	0.47	0.53	0.00	0.04
8	4.3	0.00	0.00	0.00	1.3	0.73	3.5	0.02	32	0.28	0.00	0.00
9	1,290	0.00	0.00	0.00	0.80	0.39	0.57	0.02	757	0.01	0.00	0.00
10	203	0.00	0.00	0.00	62	0.25	1.2	0.01	925	5.0	0.00	0.00
11	8.3	0.00	0.00	0.00	320	0.18	43	0.01	15	1.8	0.00	0.00
12	2.2	0.00	0.01	0.00	146	0.12	15	0.01	5.2	0.92	0.00	0.00
13	0.83	0.00	0.00	0.01	18	0.14	2.7	717	2.6	0.43	0.00	0.00
14	0.42	0.00	0.00	0.01	76	0.14	0.58	267	1.1	0.19	0.00	0.00
15	0.20	0.00	0.00	0.02	30	0.17	0.25	17	0.43	0.03	0.00	0.00
16	0.09	0.03	0.00	0.10	7.5	0.19	0.14	5.4	0.29	0.00	0.00	0.00
17	0.06	2.6	0.00	28	2.4	0.17	0.04	1.5	0.19	0.00	0.00	0.00
18	0.04	12	0.00	6.6	1.1	0.13	0.01	0.42	0.19	0.00	0.00	0.00
19	0.00	2.6	0.00	1.3	0.63	0.12	0.02	0.23	0.13	0.00	4.4	0.00
20	0.00	0.45	0.00	0.47	0.43	0.14	0.00	0.15	0.03	0.00	24	0.00
21	0.00	0.17	0.00	0.24	0.27	0.17	0.00	0.08	0.01	0.00	169	0.00
22	0.00	0.08	0.00	0.17	0.21	0.16	0.00	0.03	0.00	0.00	326	0.00
23	0.00	0.06	0.00	0.10	0.18	0.10	0.00	0.01	0.00	0.00	4.5	0.00
24	0.00	0.06	0.00	0.12	1.7	0.07	231	0.01	15	0.00	1.2	0.00
25	0.00	0.03	0.00	0.28	125	0.19	209	0.00	22	0.00	0.35	0.00
26	0.00	0.01	0.00	0.25	42	0.15	25	0.00	835	0.00	0.15	0.00
27	0.00	0.00	0.00	0.22	8.8	0.07	6.3	0.00	754	0.00	0.07	0.00
28	0.00	0.00	0.01	0.15	2.2	0.03	0.99	0.00	494	0.00	0.06	0.00
29	0.00	0.00	0.01	0.08	9.5	0.03	0.65	0.00	387	0.00	0.04	0.00
30	0.00	0.00	0.00	0.09	---	0.01	0.52	0.00	957	0.00	0.00	0.00
31	0.00	---	0.00	0.08	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	2,213.44	18.09	0.03	38.31	1,187.52	239.35	635.47	1,051.41	5,225.86	98.24	529.77	0.19
MEAN	71.4	0.60	0.00	1.24	40.9	7.72	21.2	33.9	174	3.17	17.1	0.01
MAX	1,290	12	0.01	28	320	100	231	717	957	74	326	0.15
MIN	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	4,390	36	0.06	76	2,360	475	1,260	2,090	10,370	195	1,050	0.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2004h, BY WATER YEAR (WY)

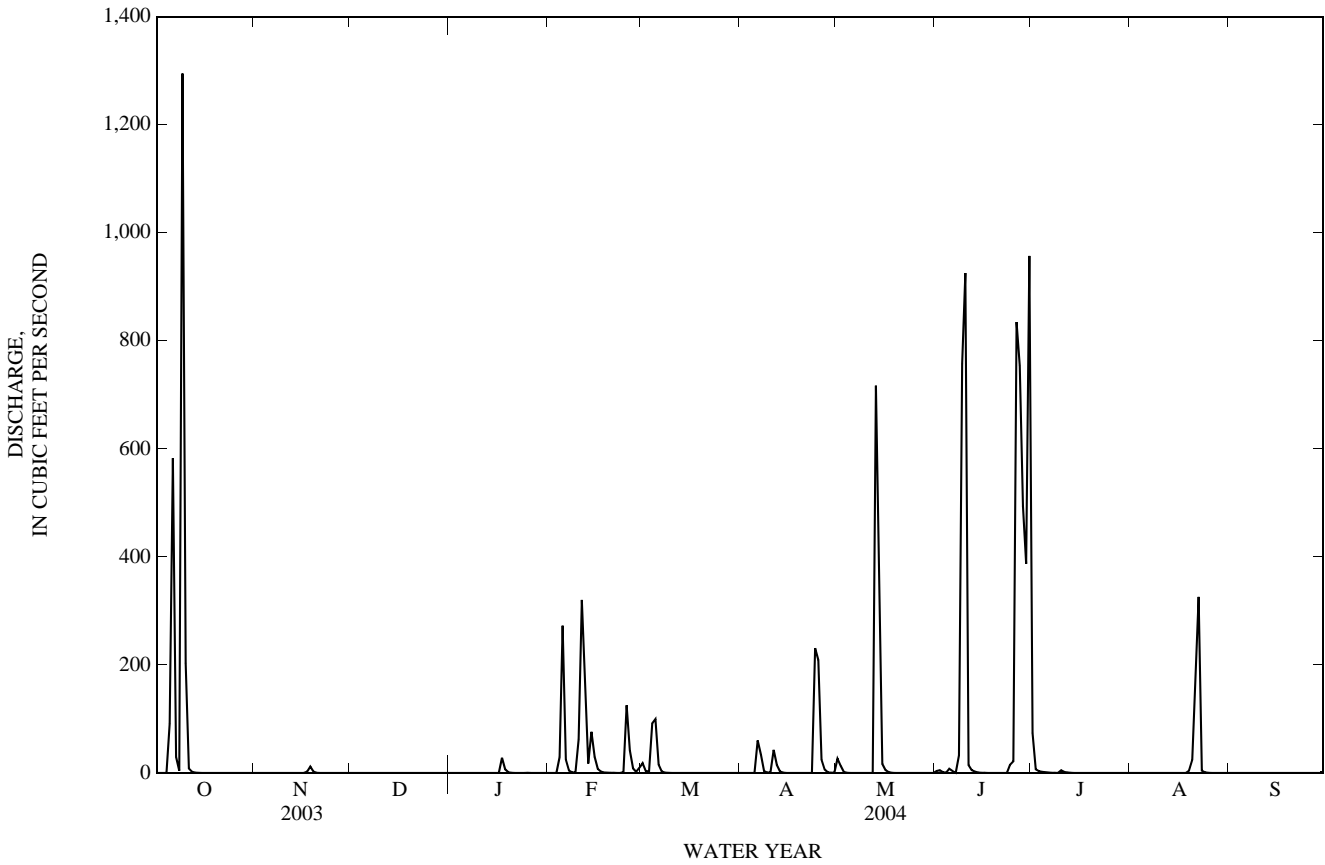
MEAN	16.5	11.3	9.55	11.5	16.6	8.28	22.1	42.8	21.3	2.48	1.71	6.18
MAX	106	90.7	47.0	92.2	72.9	46.5	146	175	174	28.8	17.1	78.0
(WY)	(1974)	(1975)	(1977)	(1968)	(1977)	(1979)	(1976)	(1975)	(2004)	(1968)	(2004)	(1974)
MIN	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1964)	(1964)	(1965)	(1967)	(1967)	(1971)	(1978)	(1963)	(1963)	(1963)	(1963)	(1963)



08098300 Little Pond Creek at Burlington, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1963 - 2004h	
ANNUAL TOTAL	4,414.90		11,237.68		14.2	
ANNUAL MEAN	12.1		30.7		30.8	
HIGHEST ANNUAL MEAN					1.20	
LOWEST ANNUAL MEAN					1975	
HIGHEST DAILY MEAN	1,290	Oct 9	1,290	Oct 9	2,690	May 24, 1975
LOWEST DAILY MEAN	0.00	Apr 8	0.00	Oct 1	0.00	Oct 1, 1962
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 13	0.00	Oct 19	0.00	Oct 1, 1962
MAXIMUM PEAK FLOW			4,650	Oct 9	8,570	May 24, 1975
MAXIMUM PEAK STAGE			15.76	Oct 9	16.90	May 24, 1975
ANNUAL RUNOFF (AC-FT)	8,760		22,290		10,280	
10 PERCENT EXCEEDS	1.7		26		4.3	
50 PERCENT EXCEEDS	0.00		0.03		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

h See Period of Record paragraph.  
a From floodmark.



## BRAZOS RIVER BASIN

08099000 Leon Reservoir near Ranger, TX

LOCATION.--Lat 32°21'49", long 98°40'31", Eastland County, Hydrologic Unit 12070201, behind Lake Patrol Office, 180 ft upstream from dam and 100 ft left of outlet works near left end of dam on Leon River, 7.4 mi south of Ranger, 8.7 mi southeast of Eastland, and 274.1 mi upstream from mouth.

DRAINAGE AREA.--259 mi<sup>2</sup>.

PERIOD OF RECORD.--Jan. 1955 to Sept. 1983, Mar. 1999 to Sept. 2002 (contents), Oct. 2002 to current year. Water-quality records: Chemical data: Oct. 1969 to May 1983.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Jan. 1955 to Sept. 1983 nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good. The reservoir is formed by a rolled earthfill dam 3,700 ft long. Storage began in Apr. 1954 and dam was completed in June 1954. The emergency spillway is a 1,200-foot-wide cut through natural ground near the left end of dam. The service spillway is an uncontrolled circular concrete drop inlet designed for a maximum discharge of 5,000 ft<sup>3</sup>/s through an 11-foot-diameter concrete conduit. The dam is the property of Eastland County Water Supply District and was built to impound water for municipal use by the cities of Ranger, Olden, and Eastland. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	1,398.0
Crest of emergency spillway	1,382.0
Crest of service spillway	1,375.0
Lowest gated outlet (invert)	1,335.0

COOPERATION.--Records of diversions may be obtained from the Eastland County Water Supply District.

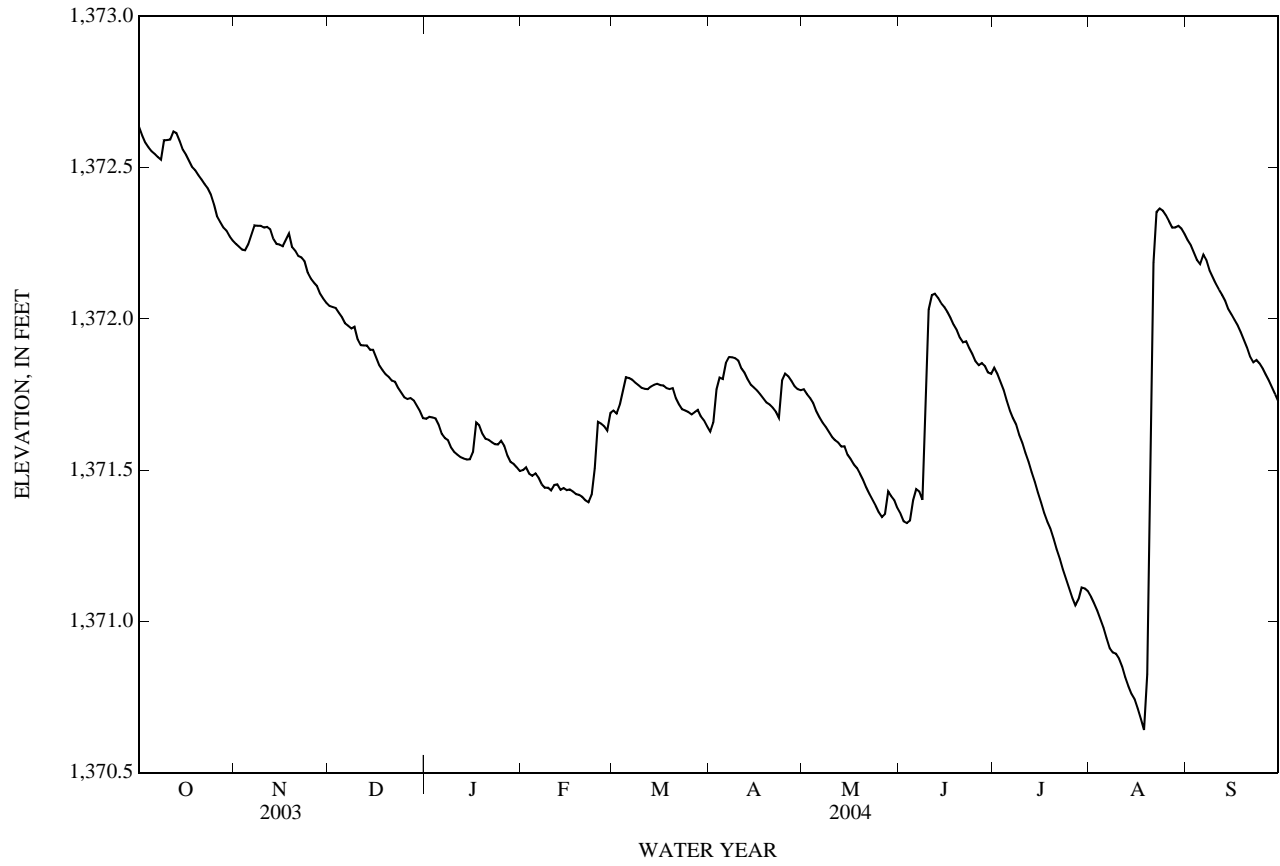
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 40,640 acre-ft, June 13, 1967, elevation, 1,382.20 ft; minimum contents, 14,420 acre-ft, Oct. 15, 2000, elevation, 1,364.79 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,372.65 ft, Oct. 1; minimum elevation, 1,370.62 ft, Aug. 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	1,372.63	1,372.25	1,372.04	1,371.67	1,371.50	1,371.70	1,371.63	1,371.77	1,371.36	1,371.84	1,371.08	1,372.26
2	1,372.61	1,372.24	1,372.04	1,371.68	1,371.51	1,371.69	1,371.66	1,371.75	1,371.33	1,371.82	1,371.06	1,372.24
3	1,372.58	1,372.23	1,372.04	1,371.67	1,371.49	1,371.71	1,371.77	1,371.74	1,371.33	1,371.79	1,371.04	1,372.22
4	1,372.57	1,372.23	1,372.02	1,371.67	1,371.48	1,371.76	1,371.81	1,371.72	1,371.33	1,371.77	1,371.01	1,372.19
5	1,372.55	1,372.25	1,372.01	1,371.65	1,371.49	1,371.81	1,371.80	1,371.69	1,371.40	1,371.73	1,370.98	1,372.18
6	1,372.55	1,372.28	1,371.98	1,371.62	1,371.47	1,371.80	1,371.86	1,371.67	1,371.44	1,371.70	1,370.94	1,372.21
7	1,372.54	1,372.31	1,371.98	1,371.61	1,371.45	1,371.80	1,371.87	1,371.66	1,371.43	1,371.67	1,370.91	1,372.19
8	1,372.53	1,372.31	1,371.97	1,371.60	1,371.44	1,371.79	1,371.87	1,371.64	1,371.40	1,371.65	1,370.90	1,372.16
9	1,372.59	1,372.31	1,371.97	1,371.57	1,371.44	1,371.78	1,371.87	1,371.63	1,371.70	1,371.62	1,370.89	1,372.14
10	1,372.59	1,372.30	1,371.93	1,371.56	1,371.43	1,371.77	1,371.86	1,371.61	1,372.03	1,371.59	1,370.88	1,372.12
11	1,372.59	1,372.30	1,371.91	1,371.55	1,371.45	1,371.77	1,371.84	1,371.60	1,372.08	1,371.56	1,370.85	1,372.10
12	1,372.62	1,372.30	1,371.91	1,371.54	1,371.45	1,371.77	1,371.82	1,371.59	1,372.08	1,371.53	1,370.82	1,372.08
13	1,372.61	1,372.27	1,371.91	1,371.54	1,371.43	1,371.78	1,371.80	1,371.58	1,372.07	1,371.49	1,370.79	1,372.06
14	1,372.59	1,372.25	1,371.90	1,371.54	1,371.44	1,371.78	1,371.78	1,371.58	1,372.05	1,371.46	1,370.76	1,372.03
15	1,372.56	1,372.25	1,371.90	1,371.54	1,371.43	1,371.79	1,371.77	1,371.55	1,372.04	1,371.43	1,370.74	1,372.01
16	1,372.54	1,372.24	1,371.87	1,371.56	1,371.44	1,371.78	1,371.76	1,371.54	1,372.02	1,371.39	1,370.71	1,372.00
17	1,372.52	1,372.26	1,371.85	1,371.66	1,371.43	1,371.78	1,371.75	1,371.52	1,372.00	1,371.36	1,370.68	1,371.98
18	1,372.50	1,372.28	1,371.83	1,371.65	1,371.42	1,371.77	1,371.74	1,371.51	1,371.98	1,371.33	1,370.64	1,371.96
19	1,372.49	1,372.24	1,371.82	1,371.62	1,371.42	1,371.77	1,371.72	1,371.49	1,371.96	1,371.31	1,370.83	1,371.93
20	1,372.47	1,372.22	1,371.81	1,371.60	1,371.41	1,371.77	1,371.72	1,371.47	1,371.94	1,371.27	1,371.39	1,371.90
21	1,372.46	1,372.21	1,371.80	1,371.60	1,371.40	1,371.74	1,371.71	1,371.44	1,371.92	1,371.24	1,372.18	1,371.87
22	1,372.44	1,372.20	1,371.79	1,371.59	1,371.39	1,371.72	1,371.69	1,371.42	1,371.93	1,371.21	1,372.35	1,371.86
23	1,372.43	1,372.19	1,371.77	1,371.59	1,371.42	1,371.70	1,371.67	1,371.40	1,371.90	1,371.17	1,372.37	1,371.86
24	1,372.41	1,372.15	1,371.76	1,371.59	1,371.51	1,371.70	1,371.80	1,371.38	1,371.88	1,371.14	1,372.36	1,371.85
25	1,372.38	1,372.13	1,371.74	1,371.60	1,371.66	1,371.69	1,371.82	1,371.36	1,371.86	1,371.11	1,372.34	1,371.84
26	1,372.34	1,372.12	1,371.73	1,371.58	1,371.65	1,371.68	1,371.81	1,371.35	1,371.85	1,371.08	1,372.32	1,371.82
27	1,372.32	1,372.11	1,371.74	1,371.55	1,371.64	1,371.69	1,371.80	1,371.36	1,371.85	1,371.05	1,372.30	1,371.80
28	1,372.30	1,372.08	1,371.73	1,371.53	1,371.63	1,371.70	1,371.78	1,371.43	1,371.84	1,371.07	1,372.30	1,371.77
29	1,372.29	1,372.07	1,371.71	1,371.52	1,371.69	1,371.68	1,371.77	1,371.41	1,371.82	1,371.11	1,372.31	1,371.75
30	1,372.27	1,372.05	1,371.69	1,371.51	---	1,371.66	1,371.76	1,371.40	1,371.82	1,371.11	1,372.30	1,371.73
31	1,372.26	---	1,371.67	1,371.50	---	1,371.64	---	1,371.37	---	1,371.10	1,372.28	---
MEAN	1,372.49	1,372.22	1,371.87	1,371.59	1,371.48	1,371.74	1,371.78	1,371.54	1,371.79	1,371.41	1,371.40	1,372.00
MAX	1,372.63	1,372.31	1,372.04	1,371.68	1,371.69	1,371.81	1,371.87	1,371.77	1,372.08	1,371.84	1,372.37	1,372.26
MIN	1,372.26	1,372.05	1,371.67	1,371.50	1,371.39	1,371.64	1,371.63	1,371.35	1,371.33	1,371.05	1,370.64	1,371.73
WTR YR	2004	MEAN	1,371.78	MAX	1,372.63	MIN	1,370.64					

08099000 Leon Reservoir near Ranger, TX—Continued



08099100 Leon River near DeLeon, TX

LOCATION.--Lat 32°10'25", long 98°31'58", Comanche County, Hydrologic Unit 12070201, on left bank at downstream end of bridge on State Highway 16, 1.5 mi upstream from Flat Creek, 4.4 mi northeast of De Leon, 6.0 mi downstream from Hog Creek, and 250.1 mi upstream from mouth.

DRAINAGE AREA.--479 mi<sup>2</sup>.

PERIOD OF RECORD.--Sept. 1960 to Sept. 1986 (daily mean discharge), Oct. 1986 to Sept. 1995 (daily mean discharges greater than 600 ft<sup>3</sup>/s), Oct. 1995 to current year (peak discharges greater than base discharge). Water-quality records: Chemical data: May 1981 to July 1982, Nov. 1990 to Aug. 1997. Biochemical data: May 1981 to July 1982, Nov. 1990 to Aug. 1997.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,209.93 ft above NGVD of 1929. Prior to Nov. 22, 1960, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good. Since installation of gage in Sept. 1960, at least 10% of contributing drainage area has been regulated. There are numerous diversions above station for municipal, steam powerplant operation, and other uses.

AVERAGE DISCHARGE.--26 years (water years 1961-86), 41.1 ft<sup>3</sup>/s (29,760 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft<sup>3</sup>/s Apr. 26, 1990 (gage height, 19.00 ft, from floodmarks), from rating curve extended above 17,600 ft<sup>3</sup>/s; prior to Apr. 26, 1990, maximum discharge, 7,540 ft<sup>3</sup>/s June 21, 1968, (gage height, 15.50 ft); no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 19.3 ft occurred in May 1908 at a point 2,000 ft downstream from present gage site and is the highest since that time, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
June 9	2330	666	5.99	Sept. 6	1300	*1,830	*11.18

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BRAZOS RIVER BASIN

08099300 Sabana River near DeLeon, TX

LOCATION.--Lat 32°06'50", long 98°36'19". Comanche County, Hydrologic Unit 12070201, on left bank at downstream end of bridge on Farm Road 587, 0.6 mi downstream from Spring Branch, 4.0 mi west of De Leon, 4.2 mi upstream from Turkey Creek, and 12.2 mi upstream from mouth.

DRAINAGE AREA.--264 mi<sup>2</sup>.

PERIOD OF RECORD.--Sept. 1960 to Sept. 1986 (daily mean discharge), Oct. 1986 to Sept. 1995 (daily mean discharges greater than 250 ft<sup>3</sup>/s), Oct. 1995 to Sept. 1999 (peak discharges greater than base discharge), Oct. 1999 to current year. Water-quality records: Chemical data: Nov. 1990 to Aug. 1997. Biochemical data: Nov. 1990 to Aug. 1997.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,209.59 ft above NGVD of 1929 (levels by Texas Department of Transportation). Prior to Nov. 22, 1960, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--Records good except those for discharges below 5.0 ft<sup>3</sup>/s, which are fair and those for estimated daily discharges, which are poor. No known regulation or diversions. Flow may be slightly affected by Nabors Lake 0.4 mi upstream on Spring Branch. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1890, 24 ft in May 1908, 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	e0.20	6.2	1.1	1.1	1.4	14	1.7	42	2.1	48	7.1	7.6
2	e0.03	4.9	1.2	1.1	1.1	10	48	33	1.7	18	6.3	3.7
3	e0.00	3.7	1.4	1.1	1.1	8.0	71	12	3.7	13	4.9	2.6
4	e0.00	4.9	1.2	1.1	1.1	20	19	6.7	6.1	11	3.5	2.5
5	e0.00	5.2	1.1	1.2	1.1	35	8.9	4.6	118	9.7	2.5	2.4
6	e0.15	2.5	1.2	1.1	1.1	35	20	3.6	32	9.5	1.8	279
7	0.57	3.5	1.1	1.1	1.1	19	23	2.8	13	9.3	1.5	43
8	0.62	4.6	1.1	1.1	1.1	11	11	2.4	7.8	9.0	1.8	10
9	13	3.9	1.5	1.1	1.1	6.0	6.9	2.0	1,120	8.5	15	3.1
10	31	0.80	1.7	1.1	1.1	3.8	5.6	1.8	559	8.4	9.3	2.6
11	10	0.79	1.5	1.1	1.2	2.7	4.9	1.7	61	8.0	8.6	2.4
12	39	2.0	1.1	1.1	1.6	2.5	4.7	1.7	24	8.2	8.8	2.4
13	23	3.1	1.3	1.1	1.9	3.2	3.5	2.0	18	7.8	8.5	2.5
14	8.3	3.5	1.1	1.1	2.7	3.6	3.0	1.7	15	7.5	7.9	2.8
15	3.6	3.1	1.1	1.1	3.7	3.0	2.6	1.5	13	7.0	7.1	2.4
16	3.0	1.3	1.2	1.1	3.2	2.6	2.3	1.8	12	6.4	6.0	2.4
17	2.2	2.1	1.2	1.4	3.3	2.4	2.3	1.9	11	5.1	4.9	2.5
18	1.9	7.4	1.1	1.1	4.2	2.0	2.1	1.8	10	4.0	4.0	2.5
19	1.2	5.8	1.1	1.8	3.0	1.9	2.0	1.6	9.6	3.3	505	2.5
20	0.75	2.7	1.1	1.8	1.6	1.9	2.4	1.5	9.4	2.6	1,140	2.6
21	0.72	2.3	1.1	1.1	1.8	6.6	2.0	1.5	8.9	2.0	648	2.6
22	1.1	1.4	1.1	1.1	1.8	4.6	1.7	1.5	9.1	1.7	65	2.7
23	1.0	1.9	1.1	1.1	3.2	4.3	1.7	1.5	8.7	1.5	29	2.9
24	1.7	1.3	1.1	1.2	9.9	4.4	9.2	1.4	9.2	1.3	15	2.8
25	2.1	1.1	1.1	1.3	61	3.9	26	1.5	44	0.98	7.3	2.3
26	1.7	1.1	1.1	1.3	25	3.6	20	1.5	32	0.98	3.6	2.4
27	1.3	1.3	1.1	1.3	12	3.4	10	1.9	16	0.98	2.7	2.4
28	2.3	1.1	1.1	1.4	7.8	2.8	6.2	5.1	18	7.4	5.6	2.4
29	2.4	1.1	1.0	1.7	11	2.3	5.8	24	19	9.8	63	2.5
30	3.7	1.1	1.1	1.3	---	1.9	5.3	13	15	8.6	30	2.7
31	5.3	---	1.1	1.2	---	1.8	---	4.8	---	7.5	14	---
TOTAL	161.84	85.69	36.4	37.8	171.2	227.2	332.8	185.8	2,226.3	247.04	2,637.7	407.2
MEAN	5.22	2.86	1.17	1.22	5.90	7.33	11.1	5.99	74.2	7.97	85.1	13.6
MAX	39	7.4	1.7	1.8	61	35	71	42	1,120	48	1,140	279
MIN	0.00	0.79	1.0	1.1	1.1	1.8	1.7	1.4	1.7	0.98	1.5	2.3
AC-FT	321	170	72	75	340	451	660	369	4,420	490	5,230	808

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

MEAN	24.0	14.1	7.98	30.3	15.2	30.9	26.0	73.8	53.9	19.3	6.99	28.2
MAX	141	199	98.2	589	76.6	267	251	447	562	259	85.1	401
(WY)	(2003)	(1965)	(1985)	(1968)	(2001)	(1968)	(1969)	(1963)	(1986)	(2002)	(2004)	(1962)
MIN	0.00	0.00	0.00	0.06	0.06	0.01	0.15	0.00	0.00	0.00	0.00	0.00
(WY)	(1978)	(1980)	(2000)	(1984)	(2000)	(2000)	(1981)	(2000)	(1978)	(1974)	(1970)	(1977)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1960 - 2004h

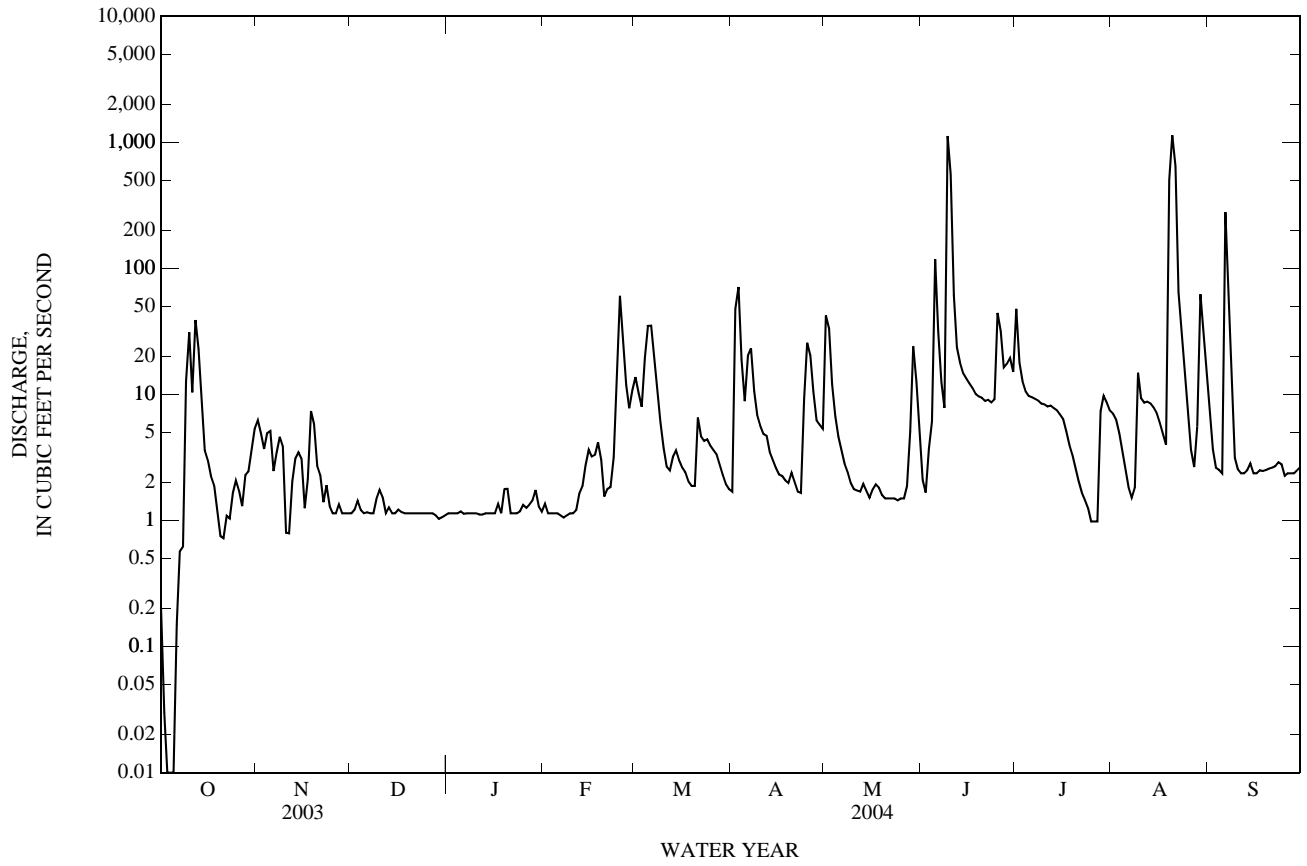
ANNUAL TOTAL	2,175.68	6,756.97	
ANNUAL MEAN	5.96	18.5	27.7
HIGHEST ANNUAL MEAN			105
LOWEST ANNUAL MEAN			1.63
HIGHEST DAILY MEAN	75	Aug 30	1,140
LOWEST DAILY MEAN	0.00	Jul 20	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 20	0.14
MAXIMUM PEAK FLOW			2,310
MAXIMUM PEAK STAGE			15.04
ANNUAL RUNOFF (AC-FT)	4,320	13,400	20,050
10 PERCENT EXCEEDS	12	19	19
50 PERCENT EXCEEDS	2.4	2.6	1.4
90 PERCENT EXCEEDS	0.00	1.1	0.00

h See PERIOD OF RECORD paragraph.

a From floodmark.

e Estimated

08099300 Sabana River near DeLeon, TX—Continued



## BRAZOS RIVER BASIN

08099400 Proctor Lake near Proctor, TX

LOCATION.--Lat 31°58'07", long 98°29'09", Comanche County, Hydrologic Unit 12070201, in intake structure at Proctor Lake on Leon River, 2.0 mi upstream from U.S. Highways 67 and 377, 3.5 mi west of Proctor, and 228.1 mi upstream from mouth.

DRAINAGE AREA.--1,259 mi<sup>2</sup>.

PERIOD OF RECORD.--Jan. 1963 to Sept. 2000 (contents furnished by U.S. Army Corps of Engineers), Oct. 2000 to Sept. 2002 (contents), Oct. 2002 to current year. Prior to Oct. 1970, published as "Proctor Reservoir". Water-quality records: Chemical data: Jan. 1964 to July 1982, Jan. 1990 to Aug. 1997. Biochemical data: Jan. 1964 to July 1982, Jan. 1990 to Aug. 1997.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to May 28, 1963, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by a reinforced concrete gated structure and rolled earthfill dam, total length 13,460 ft. The lake was operated as a detention basin from Jan. 30 to July 5, 1963. The gates were closed July 6, 1963, but the lake was operated as a detention basin to elevation 1,156.0 ft until construction was completed. Deliberate impoundment began Sept. 30, 1963. The spillway is a gated concrete gravity structure located on the left bank, with an ogee weir section and basin. The spillway is controlled by eleven 40.0- by 35.0-foot tainter gates. The spillway was designed to discharge 431,800 ft<sup>3</sup>/s at an elevation of 1,201.0 ft. The lake is operated for flood control and water conservation. Inflow is partly regulated by Leon Reservoir (station 08099000, conservation pool storage 26,420 acre-ft). Inflow is also affected at times by discharge from the flood-detention pools of 23 floodwater-retarding structures with a combined detention capacity of 43,690 acre-ft. These structures control runoff from 172 mi<sup>2</sup> in the Leon River and Rush Creek drainage basins. Borrow is not included in capacity totals. The dam is owned by the U.S. Army Corps of Engineers. Conservation pool storage is 55,590 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	1,206.0
Design flood	1,201.0
Top of gates	1,197.0
Crest of spillway (top of conservation pool)	1,162.0
Lowest gated outlet (invert)	1,128.0

COOPERATION.--Records of diversions may be obtained from the U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 383,100 acre-ft, May 2, 1990, elevation, 1,197.63 ft; minimum since first filling of lake, 6,090 acre-ft, Oct. 28, 2000, elevation, 1,142.36 ft.

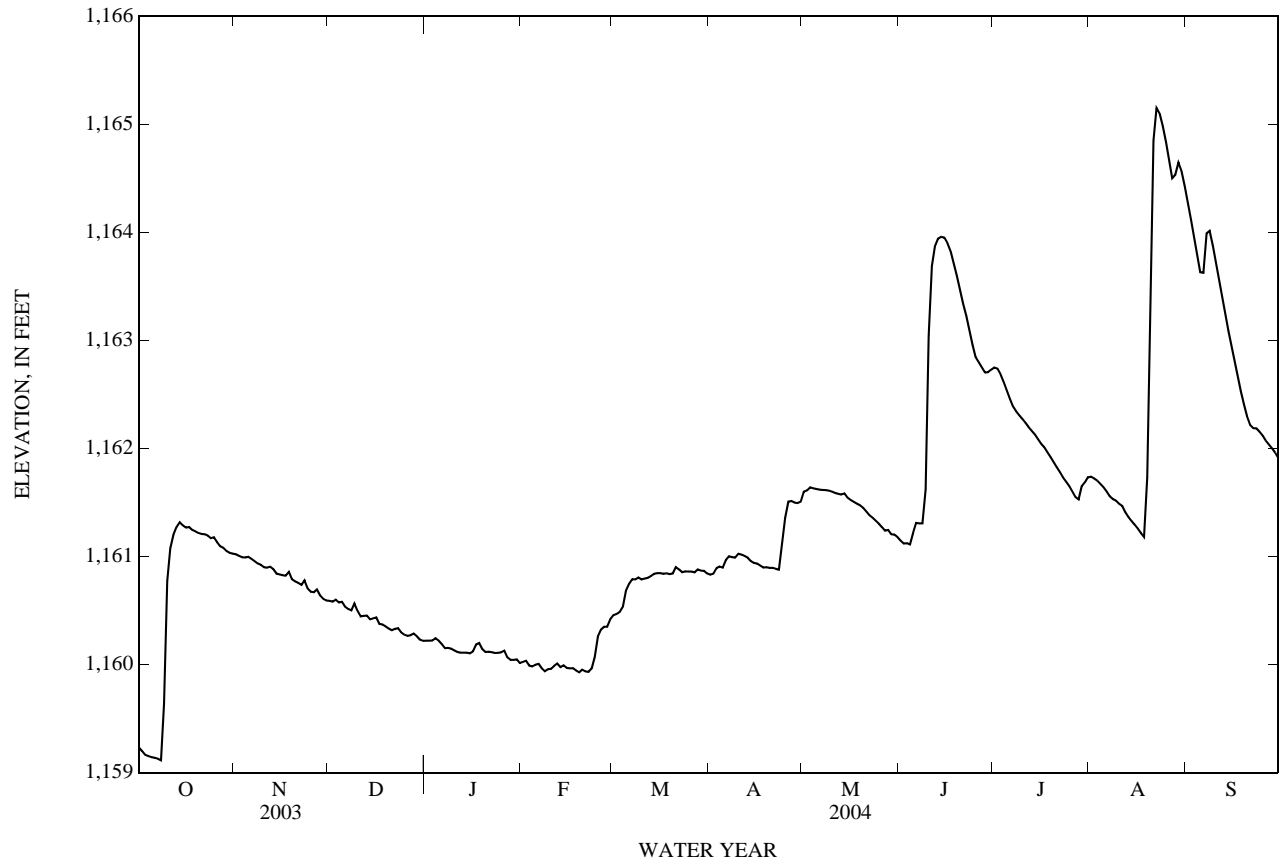
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,165.17 ft, Aug. 22; minimum elevation, 1,159.09 ft, Oct. 8.

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	1,159.23	1,161.02	1,160.59	1,160.22	1,160.03	1,160.46	1,160.83	1,161.60	1,161.15	1,162.75	1,161.74	1,164.28
2	1,159.20	1,161.01	1,160.58	1,160.22	1,160.04	1,160.47	1,160.84	1,161.61	1,161.12	1,162.74	1,161.72	1,164.12
3	1,159.16	1,160.99	1,160.60	1,160.22	1,159.99	1,160.49	1,160.89	1,161.64	1,161.12	1,162.69	1,161.70	1,163.96
4	1,159.15	1,160.99	1,160.58	1,160.24	1,159.98	1,160.54	1,160.91	1,161.63	1,161.11	1,162.62	1,161.67	1,163.79
5	1,159.14	1,161.00	1,160.58	1,160.22	1,160.00	1,160.68	1,160.90	1,161.62	1,161.22	1,162.54	1,161.64	1,163.63
6	1,159.14	1,160.98	1,160.54	1,160.19	1,160.01	1,160.75	1,160.97	1,161.62	1,161.31	1,162.46	1,161.60	1,163.63
7	1,159.13	1,160.96	1,160.52	1,160.15	1,159.97	1,160.79	1,161.00	1,161.62	1,161.31	1,162.39	1,161.56	1,163.99
8	1,159.11	1,160.93	1,160.50	1,160.15	1,159.94	1,160.79	1,160.99	1,161.62	1,161.31	1,162.34	1,161.53	1,164.02
9	1,159.64	1,160.92	1,160.57	1,160.15	1,159.96	1,160.81	1,160.99	1,161.61	1,161.62	1,162.31	1,161.52	1,163.88
10	1,160.77	1,160.90	1,160.49	1,160.13	1,159.96	1,160.79	1,161.03	1,161.60	1,163.04	1,162.27	1,161.49	1,163.72
11	1,161.08	1,160.90	1,160.45	1,160.12	1,159.99	1,160.80	1,161.02	1,161.59	1,163.69	1,162.24	1,161.47	1,163.57
12	1,161.20	1,160.91	1,160.45	1,160.11	1,160.01	1,160.80	1,161.01	1,161.58	1,163.87	1,162.20	1,161.41	1,163.41
13	1,161.27	1,160.88	1,160.45	1,160.11	1,159.98	1,160.82	1,160.99	1,161.57	1,163.94	1,162.16	1,161.37	1,163.25
14	1,161.32	1,160.84	1,160.42	1,160.11	1,159.99	1,160.84	1,160.96	1,161.58	1,163.96	1,162.13	1,161.33	1,163.09
15	1,161.29	1,160.84	1,160.43	1,160.10	1,159.97	1,160.85	1,160.94	1,161.55	1,163.95	1,162.09	1,161.30	1,162.95
16	1,161.27	1,160.83	1,160.44	1,160.12	1,159.96	1,160.85	1,160.93	1,161.52	1,163.90	1,162.05	1,161.26	1,162.81
17	1,161.27	1,160.82	1,160.38	1,160.19	1,159.97	1,160.84	1,160.92	1,161.51	1,163.83	1,162.01	1,161.22	1,162.66
18	1,161.25	1,160.86	1,160.37	1,160.20	1,159.95	1,160.85	1,160.90	1,161.49	1,163.71	1,161.97	1,161.18	1,162.53
19	1,161.23	1,160.79	1,160.35	1,160.14	1,159.93	1,160.84	1,160.90	1,161.47	1,163.60	1,161.92	1,161.73	1,162.41
20	1,161.22	1,160.77	1,160.33	1,160.12	1,159.95	1,160.84	1,160.89	1,161.45	1,163.47	1,161.88	1,163.60	1,162.30
21	1,161.21	1,160.76	1,160.32	1,160.12	1,159.94	1,160.90	1,160.89	1,161.42	1,163.34	1,161.83	1,164.85	1,162.22
22	1,161.21	1,160.74	1,160.33	1,160.12	1,159.93	1,160.88	1,160.89	1,161.38	1,163.23	1,161.78	1,165.15	1,162.19
23	1,161.19	1,160.78	1,160.34	1,160.11	1,159.97	1,160.86	1,160.88	1,161.36	1,163.09	1,161.73	1,165.10	1,162.19
24	1,161.17	1,160.70	1,160.30	1,160.11	1,160.07	1,160.86	1,161.11	1,161.33	1,162.96	1,161.69	1,164.99	1,162.16
25	1,161.18	1,160.67	1,160.28	1,160.11	1,160.26	1,160.86	1,161.36	1,161.31	1,162.85	1,161.65	1,164.84	1,162.12
26	1,161.13	1,160.67	1,160.27	1,160.13	1,160.32	1,160.86	1,161.51	1,161.27	1,162.80	1,161.60	1,164.67	1,162.07
27	1,161.10	1,160.70	1,160.27	1,160.07	1,160.35	1,160.85	1,161.52	1,161.24	1,162.75	1,161.55	1,164.50	1,162.04
28	1,161.08	1,160.64	1,160.29	1,160.04	1,160.35	1,160.88	1,161.50	1,161.25	1,162.70	1,161.53	1,164.53	1,162.00
29	1,161.05	1,160.61	1,160.26	1,160.04	1,160.42	1,160.87	1,161.50	1,161.21	1,162.71	1,161.65	1,164.65	1,161.96
30	1,161.04	1,160.59	1,160.23	1,160.05	---	1,160.87	1,161.51	1,161.20	1,162.73	1,161.69	1,164.57	1,161.91
31	1,161.03	---	1,160.22	1,160.02	---	1,160.84	---	1,161.18	---	1,161.73	1,164.43	---
MEAN	1,160.60	1,160.83	1,160.41	1,160.13	1,160.04	1,160.79	1,161.05	1,161.47	1,162.71	1,162.07	1,162.72	1,162.96
MAX	1,161.32	1,161.02	1,160.60	1,160.24	1,160.42	1,160.90	1,161.52	1,161.64	1,163.96	1,162.75	1,165.15	1,164.28
MIN	1,159.11	1,160.59	1,160.22	1,160.02	1,159.93	1,160.46	1,160.83	1,161.18	1,161.11	1,161.53	1,161.18	1,161.91
CAL YR	2003	MEAN	1,161.28	MAX	1,162.66	MIN	1,159.11					
WTR YR	2004	MEAN	1,161.32	MAX	1,165.15	MIN	1,159.11					



08099400 Proctor Lake near Proctor, TX—Continued



## BRAZOS RIVER BASIN

08100000 Leon River near Hamilton, TX

LOCATION.--Lat 31°47'19", long 98°07'16", Hamilton County, Hydrologic Unit 12070201, at downstream side of bridge on U.S. Highway 281, 2.2 mi upstream from Mesquite Creek, 3.6 mi downstream from Bear Creek, 5.9 mi north of Hamilton, and 172.9 mi upstream from mouth.

DRAINAGE AREA.--1,891 mi<sup>2</sup>.

PERIOD OF RECORD.--Jan. 1925 to Sept. 1931, Sept. 1960 to Sept. 1996 (daily mean discharge), Oct. 1996 to current year (peak discharges greater than base discharge).

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 955.38 ft above NGVD of 1929. Jan. 7, 1925, to Sept. 30, 1931, nonrecording gage 1.4 mi downstream at datum 1.87 ft higher. Sept. 1 to Nov. 22, 1960, nonrecording gage at same site and at 5.00 ft higher datum. Nov. 22, 1960, to Sept. 30, 1972, recording gage at same site and at 5.00 ft higher datum. Satellite telemeter at station.

REMARKS.--Records fair. Since water year 1954, at least 10% of contributing drainage area has been regulated. There are numerous diversions above station for irrigation, municipal supply, and industrial uses. At times flow is affected by discharge from floodwater-retarding structures controlling runoff from 43.9 mi<sup>2</sup>.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--6 years (water years 1926-31) prior to regulation by Lake Leon, 130 ft<sup>3</sup>/s (94,200 acre-ft/yr).

AVERAGE DISCHARGE FOR REGULATED PERIOD.--36 years (water years 1961-96), 210 ft<sup>3</sup>/s (152,100 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1858, 38.4 ft in May 1908 and Dec. 1913; flood in Sept. 1911 reached a stage of 37.0 ft, all at present site and datum, from information by local residents. The flood in Oct. 1959 reached a stage of 34.1 ft, present datum.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS 1925-1931: Maximum discharge, 5,680 ft<sup>3</sup>/s, May 22, 1931, gage height, 20.00 ft; no flow at times.

EXTREMES FOR REGULATED PERIOD.--Maximum discharge, 32,100 ft<sup>3</sup>/s Dec. 20, 1991, gage height, 35.02 ft; no flow at times.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,900 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 19	2315	*3,830	*22.33				

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## 08100500 Leon River at Gatesville, TX

LOCATION.--Lat 31°25'58", long 97°45'42", Coryell County, Hydrologic Unit 12070201, on right bank at upstream side of county road bridge, 800 ft downstream from U.S. Highway 84 bridge in Gatesville, 0.3 mi downstream from Dodds Creek, 5.2 mi upstream from Cottonwood Creek, and 99.0 mi upstream from mouth.

DRAINAGE AREA.--2,342 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1950 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 723.85 ft above NGVD of 1929. Oct. 1, 1950, to Feb. 8, 1951, nonrecording gage and Feb. 9, 1951, to Jan. 21, 1969, water-stage recorder at site 800 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--Records good except those estimated daily discharges, which are fair. Since 1954, at least 10% of contributing drainage area has been regulated. There are numerous diversions above station for irrigation, municipal supply, and oil field operation. The city of Hamilton, located about 70 mi upstream from this station, diverts flow from the river for municipal use and returns wastewater effluent to the stream. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--3 years, (water years, 1951-53), 84.3 ft<sup>3</sup>/s (61,060 acre-ft/yr)

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1854, about 35 ft in May 1908, from information by local residents.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS, 1951-1953: Maximum discharge, 7,230 ft<sup>3</sup>/s May 28, 1952 (gage height, 24.79 ft.) No flow at times in 1951-52.

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	12	59	49	43	64	330	133	852	103	984	253	710
2	11	61	47	44	64	308	263	1,050	86	856	153	644
3	11	63	45	50	66	260	218	1,230	79	554	106	616
4	11	59	44	52	67	410	560	818	73	435	81	598
5	11	59	47	50	78	545	240	586	84	371	66	579
6	15	56	44	48	74	656	716	476	70	331	56	617
7	91	53	43	48	68	409	690	413	84	305	49	779
8	56	52	41	49	66	343	680	374	140	290	42	976
9	7,150	53	42	48	67	284	418	346	1,880	276	41	822
10	6,840	54	42	47	66	245	323	324	2,450	237	40	642
11	3,210	56	42	48	72	222	332	303	2,460	163	37	592
12	1,070	64	51	49	75	207	351	281	1,210	125	33	567
13	600	64	56	50	75	219	291	263	581	111	31	534
14	443	61	55	51	81	248	266	252	403	104	38	500
15	300	61	55	52	82	297	225	239	322	96	41	481
16	201	63	53	142	77	614	204	225	446	89	38	481
17	157	93	53	477	76	426	186	213	282	81	34	460
18	130	101	52	172	77	304	170	196	221	76	33	441
19	113	99	51	144	76	252	158	178	274	69	1,060	420
20	103	118	51	113	76	221	150	164	310	64	4,180	385
21	93	86	50	97	75	203	145	151	355	62	4,900	352
22	87	70	49	88	75	185	141	134	349	55	3,780	320
23	82	61	47	82	76	168	135	121	344	49	2,270	269
24	e82	54	45	79	114	358	1,670	110	346	48	1,270	214
25	e71	53	46	78	859	268	4,900	98	346	49	896	158
26	e69	50	47	73	958	212	5,460	96	592	45	773	136
27	66	47	47	69	499	189	4,170	97	588	40	706	129
28	64	47	45	67	371	178	1,410	91	456	39	658	126
29	62	49	45	66	326	172	822	86	1,200	156	633	123
30	60	49	43	66	---	154	648	80	813	678	1,430	118
31	60	---	43	64	---	139	---	123	---	359	1,120	---
TOTAL	21,331	1,915	1,470	2,606	4,800	9,026	26,075	9,970	16,947	7,197	24,848	13,789
MEAN	688	63.8	47.4	84.1	166	291	869	322	565	232	802	460
MAX	7,150	118	56	477	958	656	5,460	1,230	2,460	984	4,900	976
MIN	11	47	41	43	64	139	133	80	70	39	31	118
AC-FT	42,310	3,800	2,920	5,170	9,520	17,900	51,720	19,780	33,610	14,280	49,290	27,350

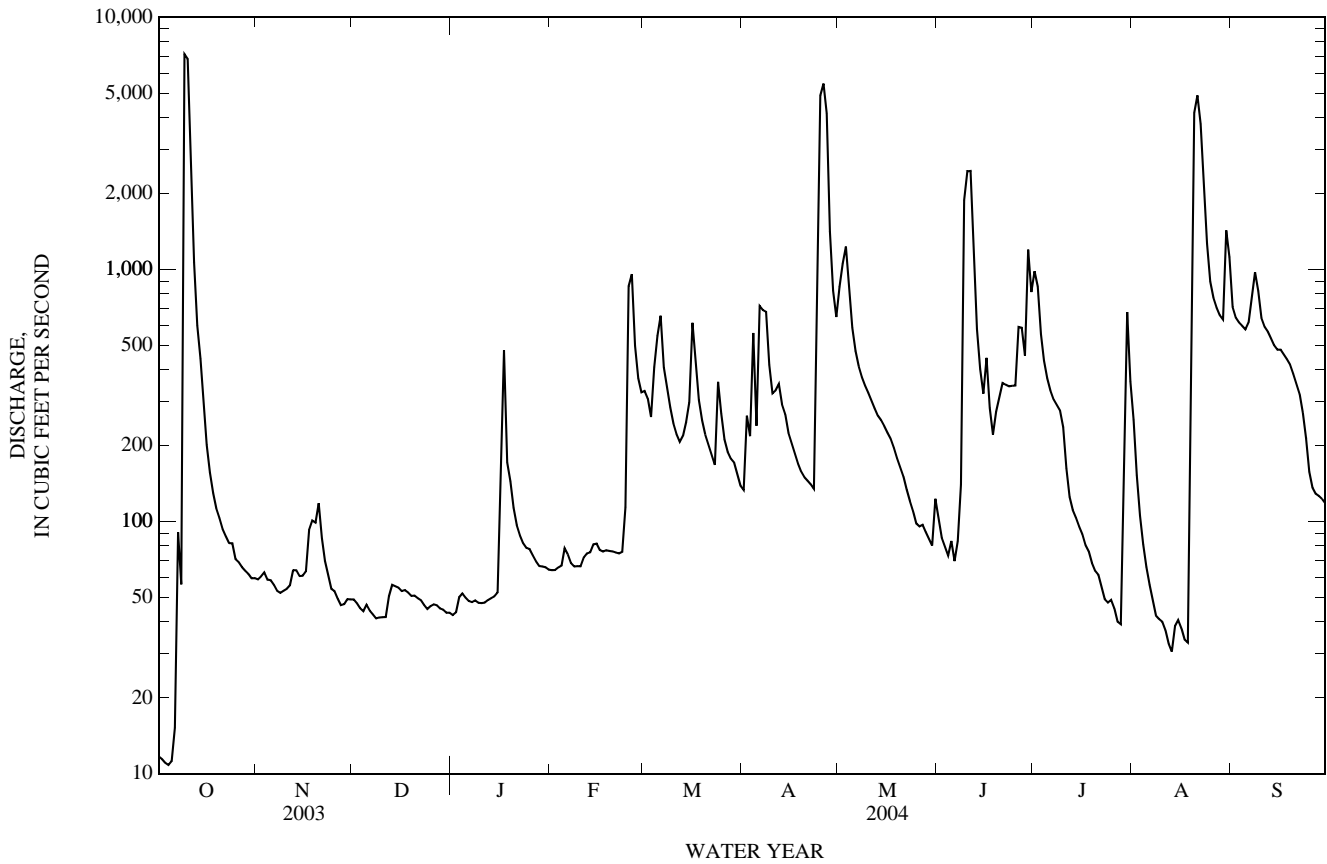
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2004z, BY WATER YEAR (WY)

	238	141	212	223	359	373	424	754	487	278	160	161
MEAN	238	141	212	223	359	373	424	754	487	278	160	161
MAX	4,054	907	4,580	2,517	3,752	3,014	2,134	6,224	2,191	1,482	1,497	1,097
(WY)	(1960)	(1992)	(1992)	(1992)	(1992)	(1997)	(1995)	(1957)	(1987)	(1997)	(1995)	(1962)
MIN	0.20	1.18	0.30	0.50	4.70	1.75	0.64	4.66	1.76	0.07	0.00	0.00
(WY)	(1957)	(1979)	(1955)	(1955)	(1957)	(1956)	(1984)	(1984)	(1954)	(1954)	(1954)	(1954)

08100500 Leon River at Gatesville, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1954 - 2004z	
ANNUAL TOTAL	50,013.1		139,974		317	
ANNUAL MEAN	137		382		1,758	
HIGHEST ANNUAL MEAN					1992	
LOWEST ANNUAL MEAN					6.22	
HIGHEST DAILY MEAN	7,150	Oct 9	7,150	Oct 9	49,100	Dec 21, 1991
LOWEST DAILY MEAN	3.1	Aug 30	11	Oct 2	0.00	Jul 15, 1954
ANNUAL SEVEN-DAY MINIMUM	3.6	Aug 4	23	Oct 1	0.00	Jul 15, 1954
MAXIMUM PEAK FLOW			14,800	Oct 9	68,000	Dec 21, 1991
MAXIMUM PEAK STAGE			a27.28	Oct 9	35.00	Dec 21, 1991
ANNUAL RUNOFF (AC-FT)	99,200		277,600		229,800	
10 PERCENT EXCEEDS	208		775		736	
50 PERCENT EXCEEDS	55		124		48	
90 PERCENT EXCEEDS	6.3		47		2.1	

a From floodmark.  
z Period of regulated streamflow  
e Estimated



BRAZOS RIVER BASIN

08101000 Cowhouse Creek at Pidcoke, TX

LOCATION.--Lat 31°17'05", long 97°53'05", Coryell County, Hydrologic Unit 12070202, on left bank on upstream side of bridge on Farm Road 116, 0.1 mi downstream from Bee House Creek, 0.6 mi northeast of Pidcoke, 4.9 mi upstream from Table Rock Creek, and 34.6 mi upstream from mouth.

DRAINAGE AREA.--455 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1950 to current year. Water-quality records: Chemical data: Dec. 1993 to Aug. 1998. Biochemical data: Dec. 1993 to Aug. 1998.

REVISED RECORDS.--WSP 1712: 1955. WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 736.71 ft above NGVD of 1929. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1882, occurred in 1900 and 1944 (stage about 37.5 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	1.3	24	16	11	19	145	45	298	30	389	45	47
2	1.1	24	16	11	20	122	43	285	204	201	33	44
3	0.98	24	17	11	20	105	51	199	66	149	25	43
4	0.95	24	16	11	20	130	46	150	37	124	19	41
5	1.2	25	16	11	24	323	44	122	288	107	15	39
6	1.8	24	16	10	21	129	249	107	86	97	12	405
7	2.3	23	16	10	21	98	373	101	40	90	10	201
8	2.8	24	16	11	20	86	141	96	44	89	9.2	105
9	4,610	24	16	11	19	79	95	94	2,250	82	9.0	56
10	1,200	25	15	11	18	75	80	93	3,690	75	10	45
11	218	27	15	11	19	70	98	87	367	65	8.8	40
12	182	28	15	11	21	66	111	82	219	59	7.4	38
13	142	27	16	11	24	71	91	80	172	55	6.2	40
14	92	26	16	11	25	94	79	77	151	51	5.9	36
15	68	25	16	11	24	89	72	76	197	45	5.3	34
16	56	24	16	19	24	114	69	73	336	42	4.2	36
17	50	27	15	160	23	101	66	69	182	38	3.7	35
18	46	38	14	88	22	81	62	64	159	33	3.2	32
19	43	47	13	54	21	70	58	60	148	31	4,530	30
20	40	32	13	39	20	64	e56	56	138	28	2,410	29
21	38	26	12	32	19	61	e54	52	128	26	381	27
22	35	23	13	29	18	58	50	49	128	23	274	26
23	33	22	12	26	18	54	48	47	124	22	303	26
24	31	20	12	26	20	53	878	46	119	20	192	25
25	29	19	11	25	378	56	2,500	45	113	21	140	24
26	27	18	11	24	280	58	565	44	178	21	112	24
27	27	18	11	22	151	55	256	41	187	18	92	24
28	25	17	11	21	117	54	189	39	367	16	76	23
29	25	17	11	19	113	53	181	36	2,070	18	67	23
30	26	17	11	19	---	49	155	34	1,280	110	59	23
31	25	---	11	19	---	47	---	31	---	69	51	---
TOTAL	7,080.43	739	435	785	1,539	2,710	6,805	2,733	13,498	2,214	8,918.9	1,621
MEAN	228	24.6	14.0	25.3	53.1	87.4	227	88.2	450	71.4	288	54.0
MAX	4,610	47	17	160	378	323	2,500	298	3,690	389	4,530	405
MIN	0.95	17	11	10	18	47	43	31	30	16	3.2	23
AC-FT	14,040	1,470	863	1,560	3,050	5,380	13,500	5,420	26,770	4,390	17,690	3,220
CFSM	0.50	0.05	0.03	0.06	0.12	0.19	0.50	0.19	0.99	0.16	0.63	0.12
IN.	0.58	0.06	0.04	0.06	0.13	0.22	0.56	0.22	1.10	0.18	0.73	0.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004, BY WATER YEAR (WY)

	76.8	38.3	80.8	74.5	155	143	140	210	119	36.8	24.4	33.0
MEAN	76.8	38.3	80.8	74.5	155	143	140	210	119	36.8	24.4	33.0
MAX	1,416	425	1,894	767	2,170	1,274	1,033	2,116	702	399	288	433
(WY)	(1960)	(1966)	(1992)	(1961)	(1997)	(1997)	(1957)	(1965)	(1987)	(1976)	(2004)	(1970)
MIN	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.76	0.07	0.00	0.00	0.00
(WY)	(1952)	(1952)	(1952)	(1952)	(1952)	(1952)	(1956)	(1978)	(1956)	(1954)	(1951)	(1952)

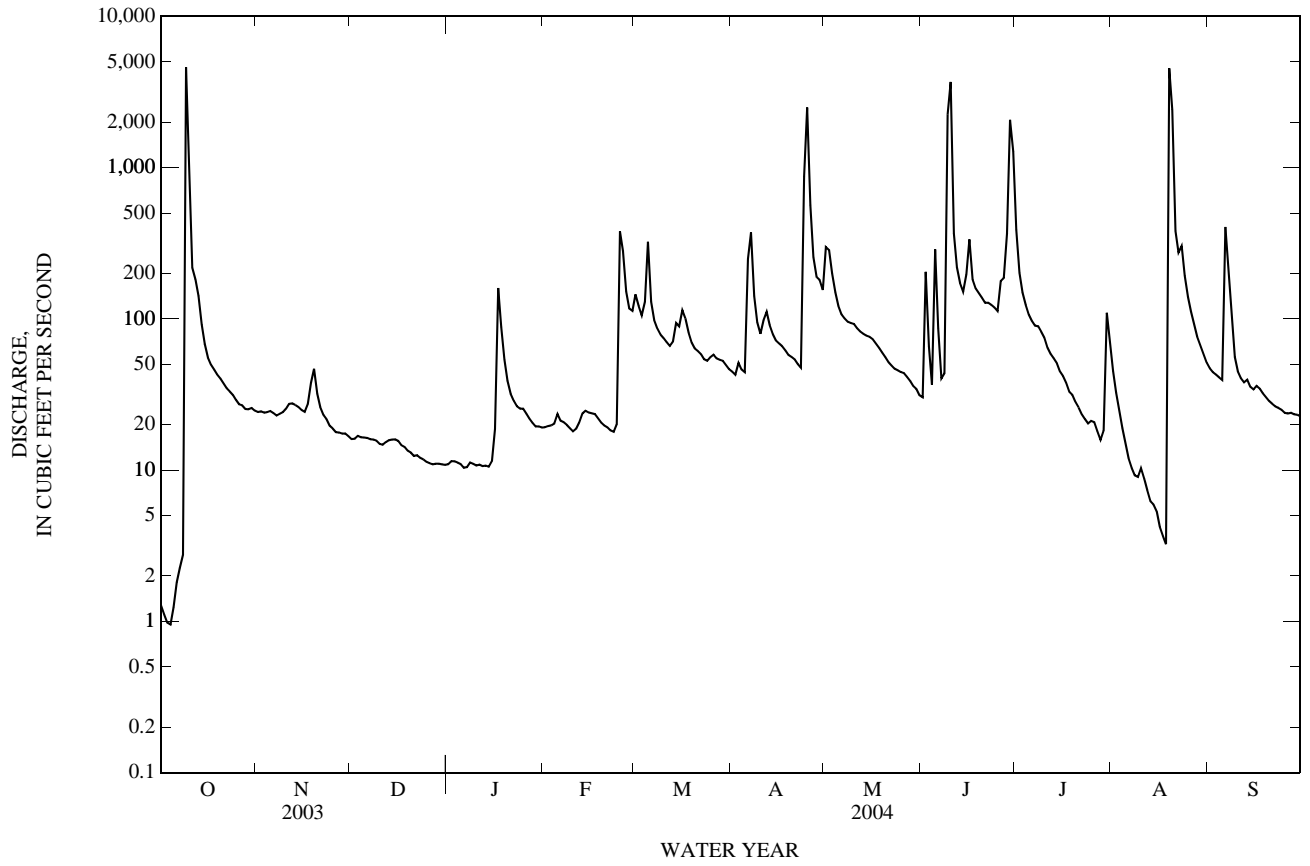
SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1951 - 2004	
ANNUAL TOTAL	20,083.21		49,078.33			
ANNUAL MEAN	55.0		134		94.0	
HIGHEST ANNUAL MEAN					482	
LOWEST ANNUAL MEAN					1.18	
HIGHEST DAILY MEAN	4,610	Oct 9	4,610	Oct 9	35,200	Oct 4, 1959
LOWEST DAILY MEAN	0.01	Aug 31	0.95	Oct 4	0.00	May 21, 1951
ANNUAL SEVEN-DAY MINIMUM	0.02	Aug 28	1.4	Oct 1	0.00	Jul 6, 1951
MAXIMUM PEAK FLOW			12,600	Aug 19	110,000	Dec 20, 1991
MAXIMUM PEAK STAGE			22.33	Aug 19	a44.30	Dec 20, 1991
ANNUAL RUNOFF (AC-FT)	39,840		97,350		68,080	
ANNUAL RUNOFF (CFSM)	0.121		0.295		0.207	
ANNUAL RUNOFF (INCHES)	1.64		4.01		2.81	
10 PERCENT EXCEEDS	78		190		149	
50 PERCENT EXCEEDS	20		38		6.9	
90 PERCENT EXCEEDS	0.10		11		0.00	

a From floodmark.

e Estimated

08101000 Cowhouse Creek at Pidcoke, TX—Continued



## BRAZOS RIVER BASIN

08102000 Belton Lake near Belton, TX

LOCATION.--Lat 31°06'22", long 97°28'28", Bell County, Hydrologic Unit 12070201, in intake structure at Belton Dam on Leon River, 1.6 mi upstream from bridge on State Highway 317, 3.5 mi north of Belton, 8.9 mi upstream from Nolan Creek, and 16.7 mi upstream from mouth.

DRAINAGE AREA.--3,531 mi<sup>2</sup>.

PERIOD OF RECORD.--Mar. 1954 to Sept. 2000 (contents furnished by U.S. Army Corps of Engineers). Oct. 2000 to Sept. 2002 (daily mean contents). Oct 2002 to current year. Prior to Oct. 1970, published as "Belton Reservoir".

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Feb. 20, 1955, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 5,524 ft long, including a 1,300-foot uncontrolled broad-crested spillway in a saddle near left end of dam and a 418-foot-long dike. Deliberate impoundment began Mar. 8, 1954, and the dam was completed in Dec. 1954. The dam is owned by the U.S. Army Corps of Engineers. The lake was built for flood control and conservation storage. The controlled outlet works consist of a 22.0-foot-diameter conduit that is controlled by three 7.0- by 22.0-foot broom-type gates. The service outlet consists of a 36- by 36-inch gated outlet that discharges into the flood-control conduit. There are many small diversions upstream for irrigation, municipal supply, and oil field operations. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	662.0
Design flood	656.9
Crest of spillway	631.0
Top of conservation pool	594.0
Service outlet (invert)	540.0
Lowest gated outlet (invert)	483.0

COOPERATION.--Prior to Oct. 1, 2000, record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey. A new capacity table, provided by the Texas Water Development Board, was put into use beginning Oct. 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Mar. 1954 to Sept. 2002: Maximum contents, 1,168,000 acre-ft, Mar. 6, 1992; minimum contents since initial filling, 113,400 acre-ft; Mar. 1954 to current year: Maximum elevation, 634.36 ft, Mar. 6, 1992; minimum elevation, 553.06 ft, Dec. 16, 1956.

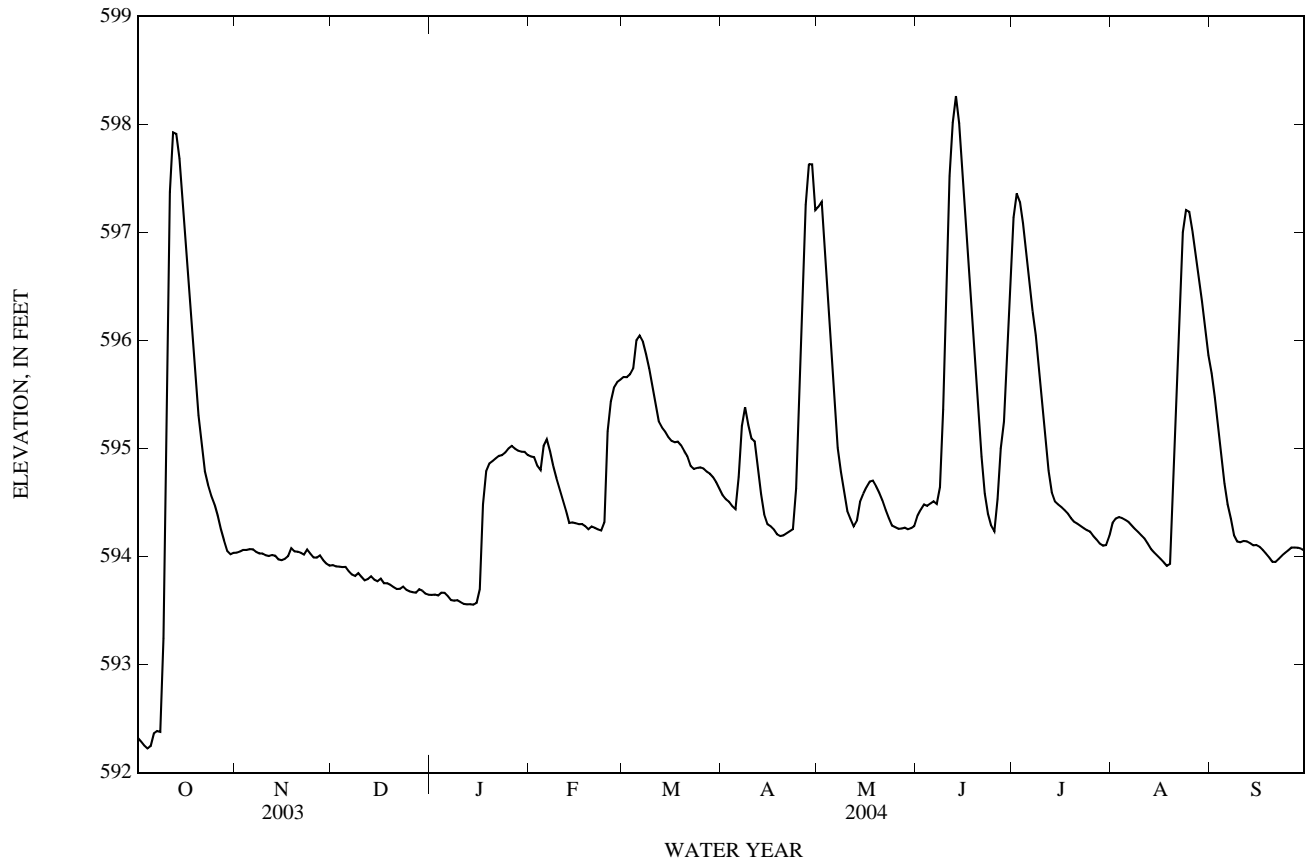
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 598.32 ft, Jun. 13; minimum elevation, 592.16 ft, Oct. 5.

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	592.32	594.04	593.92	593.65	594.93	595.66	594.57	597.24	594.38	597.14	594.31	595.70
2	592.29	594.05	593.91	593.65	594.92	595.66	594.53	597.28	594.44	597.36	594.35	595.47
3	592.25	594.06	593.91	593.64	594.84	595.69	594.51	596.89	594.48	597.28	594.36	595.21
4	592.22	594.06	593.90	593.67	594.80	595.74	594.47	596.45	594.47	597.09	594.36	594.94
5	592.25	594.07	593.90	593.66	595.02	596.00	594.44	595.97	594.49	596.84	594.34	594.68
6	592.36	594.07	593.87	593.64	595.08	596.05	594.74	595.45	594.51	596.56	594.32	594.48
7	592.39	594.04	593.83	593.60	594.97	595.99	595.21	595.00	594.49	596.27	594.29	594.35
8	592.38	594.03	593.82	593.59	594.84	595.87	595.38	594.78	594.64	596.05	594.25	594.20
9	593.24	594.03	593.85	593.60	594.73	595.74	595.22	594.60	595.36	595.76	594.23	594.14
10	596.15	594.01	593.81	593.58	594.62	595.56	595.09	594.42	596.66	595.44	594.20	594.13
11	597.37	594.01	593.78	593.56	594.52	595.40	595.07	594.35	597.52	595.11	594.17	594.14
12	597.93	594.01	593.79	593.56	594.43	595.25	594.83	594.28	598.01	594.79	594.12	594.14
13	597.91	594.01	593.82	593.56	594.31	595.19	594.58	594.33	598.26	594.59	594.07	594.12
14	597.68	593.97	593.79	593.56	594.32	595.16	594.39	594.51	598.01	594.51	594.04	594.10
15	597.26	593.97	593.77	593.57	594.31	595.11	594.30	594.58	597.62	594.48	594.01	594.11
16	596.82	593.98	593.79	593.70	594.30	595.07	594.28	594.64	597.21	594.46	593.98	594.09
17	596.39	594.00	593.75	594.48	594.30	595.06	594.25	594.69	596.79	594.43	593.95	594.06
18	596.01	594.08	593.75	594.79	594.28	595.06	594.21	594.70	596.36	594.40	593.91	594.03
19	595.65	594.05	593.74	594.86	594.25	595.03	594.19	594.65	595.89	594.36	593.93	593.99
20	595.31	594.04	593.72	594.88	594.28	594.98	594.20	594.59	595.41	594.32	594.86	593.95
21	595.04	594.04	593.70	594.91	594.27	594.93	594.22	594.52	594.92	594.30	595.64	593.95
22	594.79	594.02	593.70	594.93	594.25	594.84	594.24	594.43	594.58	594.28	596.35	593.98
23	594.66	594.07	593.72	594.94	594.24	594.81	594.25	594.36	594.40	594.26	597.00	594.01
24	594.56	594.03	593.69	594.96	594.32	594.82	594.63	594.29	594.29	594.24	597.21	594.03
25	594.49	593.99	593.68	595.00	595.16	594.83	595.57	594.27	594.23	594.23	597.19	594.06
26	594.38	593.99	593.67	595.02	595.44	594.82	596.59	594.26	594.53	594.19	597.01	594.08
27	594.25	594.01	593.67	595.00	595.57	594.79	597.26	594.26	595.00	594.16	596.79	594.08
28	594.15	593.97	593.70	594.98	595.61	594.77	597.63	594.27	595.25	594.12	596.57	594.08
29	594.05	593.94	593.69	594.97	595.64	594.73	597.63	594.25	595.85	594.10	596.36	594.07
30	594.02	593.92	593.66	594.97	---	594.69	597.21	594.26	596.52	594.11	596.10	594.06
31	594.03	---	593.65	594.94	---	594.63	---	594.28	---	594.19	595.86	---
MEAN	594.66	594.02	593.77	594.24	594.71	595.22	595.06	594.87	595.62	595.08	595.04	594.28
MAX	597.93	594.08	593.92	595.02	595.64	596.05	597.63	597.28	598.26	597.36	597.21	595.70
MIN	592.22	593.92	593.65	593.56	594.24	594.63	594.19	594.25	594.23	594.10	593.91	593.95
CAL YR	2003	MEAN	594.05	MAX	597.93	MIN	592.16					
WTR YR	2004	MEAN	594.71	MAX	598.26	MIN	592.22					



08102000 Belton Lake near Belton, TX—Continued

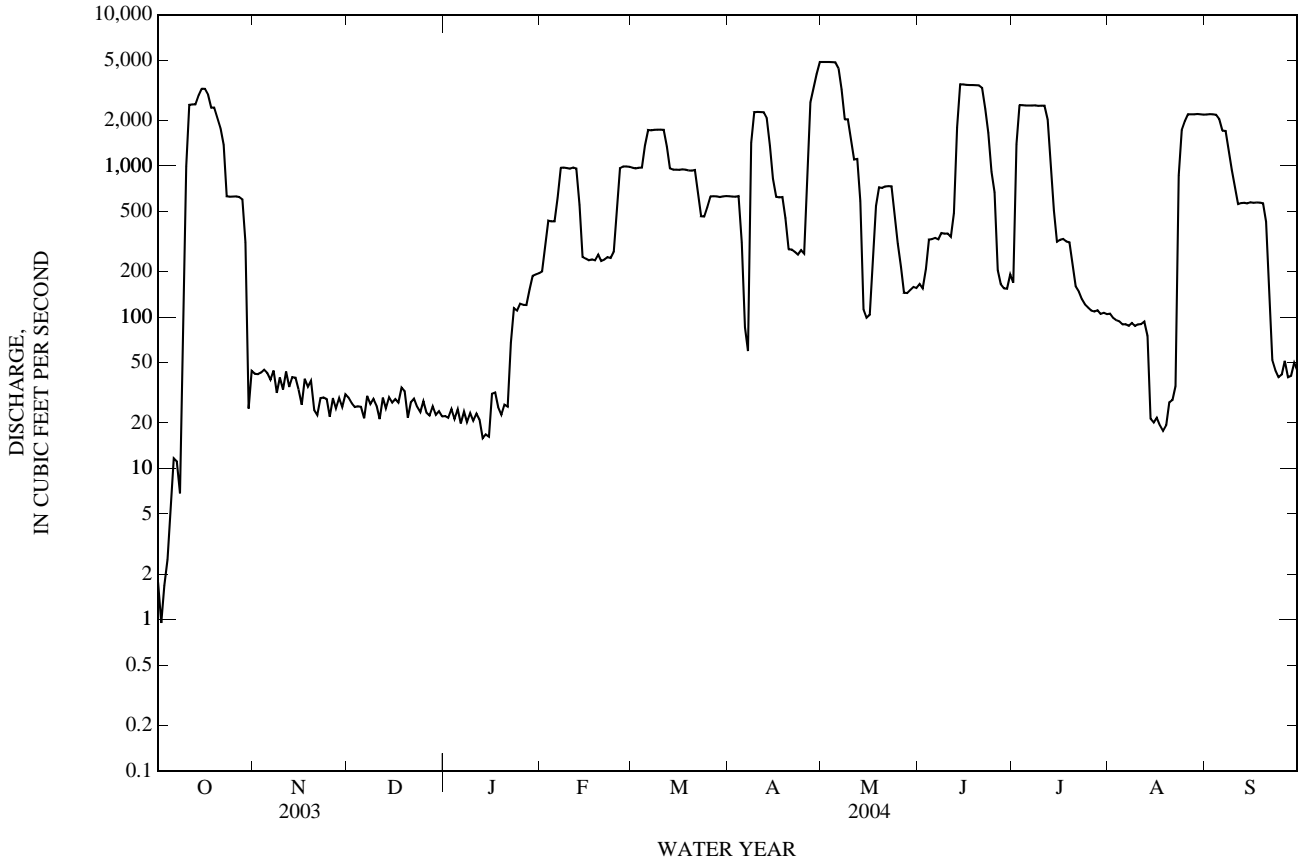




08102500 Leon River near Belton, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1954 - 2004z	
ANNUAL TOTAL	108,108.45		283,243.55			
ANNUAL MEAN	296		774		573	
HIGHEST ANNUAL MEAN					3,067	1992
LOWEST ANNUAL MEAN					4.71	1955
HIGHEST DAILY MEAN	3,240	Oct 15	4,870	Apr 30	10,200	Mar 6, 1992
LOWEST DAILY MEAN	0.00	Jul 29	0.95	Oct 2	0.00	Oct 1, 1953
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 21	5.0	Oct 1	0.00	Oct 1, 1953
MAXIMUM PEAK FLOW			4,890	Apr 30	10,200	Mar 6, 1992
MAXIMUM PEAK STAGE			7.69	Apr 30	9.74	Mar 6, 1992
ANNUAL RUNOFF (AC-FT)	214,400		561,800		414,900	
10 PERCENT EXCEEDS	1,090		2,430		2,050	
50 PERCENT EXCEEDS	39		274		45	
90 PERCENT EXCEEDS	0.88		24		5.0	

z Period of regulated streamflow



## BRAZOS RIVER BASIN

08103800 Lampasas River near Kempner, TX

LOCATION.--Lat 31°04'54", long 98°00'59", Lampasas County, Hydrologic Unit 12070203, on left bank 800 ft upstream from centerline of U.S. Highway 190, 0.6 mi upstream from Mesquite Creek, 0.8 mi west of Kempner, 0.9 mi downstream from Sulphur Creek, and 72.3 mi upstream from mouth.

DRAINAGE AREA.--818 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1962 to current year. Water-quality records: Chemical data: Mar. to June 1964, Oct. 1980 to Sept. 1982, Oct. 1987 to Aug. 1990. Biochemical data: Oct. 1980 to Sept. 1982, Oct. 1987 to Aug. 1990.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 828.38 ft above NGVD of 1929. Prior to Aug. 4, 1967, at site 800 ft downstream at present datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1974, at least 10% of contributing drainage area has been regulated. There are many small diversions above station for irrigation and for municipal supply. The city of Lampasas diverts water upstream from this station and returns wastewater effluent to Sulphur Creek upstream from station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--11 years (water years 1963-73) prior to regulation, 151 ft<sup>3</sup>/s (109,400 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1871, occurred in Sept. 1873 (stage about 45 ft). Flood of May 13, 1957, reached a stage of 37 ft, and flood of Oct. 4, 1959, reached a stage of 34 ft, from information by local residents.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS 1963-1973: Maximum discharge, 71,000 ft<sup>3</sup>/s, May 16, 1965 (gage height, 32.98 ft), minimum daily, 1.4 ft<sup>3</sup>/s, July 17, 1971.

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	23	32	32	23	22	91	51	162	45	665	46	82
2	23	32	30	23	21	92	45	210	113	385	37	77
3	23	32	28	24	20	85	49	172	77	275	33	74
4	25	32	28	24	22	92	48	143	54	222	31	71
5	28	33	27	21	32	142	50	131	1,080	185	27	69
6	38	32	26	19	24	131	245	128	201	161	24	75
7	44	32	26	19	21	104	346	129	99	144	21	89
8	35	32	27	20	21	89	178	131	83	134	20	74
9	52	36	27	20	22	80	128	133	2,560	125	53	63
10	407	35	23	19	22	74	166	131	7,960	114	45	57
11	100	32	23	19	23	70	175	119	1,500	106	29	54
12	66	32	29	19	21	69	154	109	1,030	99	22	51
13	66	31	34	20	20	76	130	99	714	89	19	48
14	55	30	28	22	25	89	114	94	447	81	17	46
15	45	32	28	32	23	99	105	89	332	71	16	50
16	41	33	27	53	25	101	101	86	304	63	15	50
17	37	37	25	114	25	111	93	80	202	56	13	43
18	35	47	25	63	25	92	90	74	168	53	12	40
19	34	42	25	45	25	82	87	66	148	48	2,140	39
20	33	42	25	35	24	76	90	63	133	43	2,580	36
21	32	35	26	29	23	72	84	58	119	42	3,440	33
22	32	33	27	26	22	66	90	54	130	39	1,120	30
23	32	32	25	25	23	64	92	50	169	36	376	29
24	31	29	23	25	36	66	169	50	133	34	235	28
25	31	28	21	26	105	71	967	46	117	36	172	25
26	31	29	23	22	144	70	505	44	330	32	140	28
27	30	28	24	20	106	73	246	44	353	31	119	27
28	31	28	26	20	85	67	177	43	211	29	107	26
29	30	28	23	21	91	65	161	44	2,010	31	98	25
30	29	29	21	21	---	58	151	42	1,330	37	96	23
31	30	---	21	21	---	53	---	44	---	47	92	---
TOTAL	1,549	985	803	890	1,098	2,570	5,087	2,868	22,152	3,513	11,195	1,462
MEAN	50.0	32.8	25.9	28.7	37.9	82.9	170	92.5	738	113	361	48.7
MAX	407	47	34	114	144	142	967	210	7,960	665	3,440	89
MIN	23	28	21	19	20	53	45	42	45	29	12	23
AC-FT	3,070	1,950	1,590	1,770	2,180	5,100	10,090	5,690	43,940	6,970	22,210	2,900

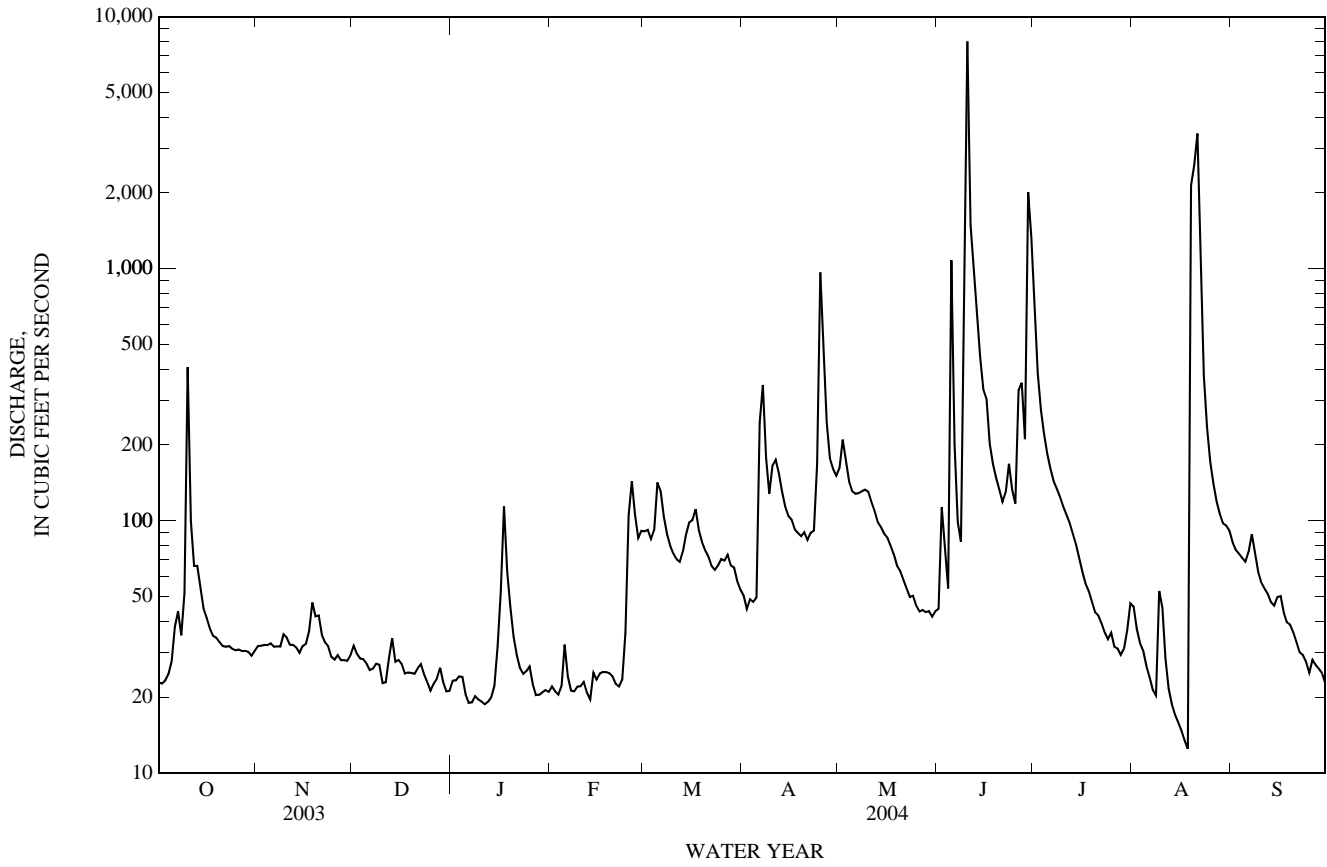
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2004z, BY WATER YEAR (WY)

MEAN	68.7	64.2	172	108	315	271	211	219	305	85.9	50.4	40.2
MAX	453	398	3,193	1,107	3,526	1,559	1,106	783	1,716	765	361	171
(WY)	(1986)	(1987)	(1992)	(1992)	(1992)	(1997)	(1977)	(1997)	(1987)	(2002)	(2004)	(1974)
MIN	10.7	11.0	14.9	10.3	10.9	13.5	8.86	6.57	5.98	6.28	7.65	8.12
(WY)	(1996)	(1990)	(1984)	(1984)	(1984)	(1984)	(1984)	(1984)	(1984)	(1978)	(1984)	(1984)

08103800 Lampasas River near Kempner, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1974 - 2004z	
ANNUAL TOTAL	27,397		54,172			
ANNUAL MEAN	75.1		148		158	
HIGHEST ANNUAL MEAN					949	1992
LOWEST ANNUAL MEAN					10.7	1984
HIGHEST DAILY MEAN	1,120	Jun 6	7,960	Jun 10	42,500	Dec 21, 1991
LOWEST DAILY MEAN	18	Aug 8	12	Aug 18	2.0	Jul 10, 1984
ANNUAL SEVEN-DAY MINIMUM	19	Aug 24	16	Aug 12	2.9	Jul 9, 1984
MAXIMUM PEAK FLOW			19,100	Jun 10	78,000	Dec 20, 1991
MAXIMUM PEAK STAGE			17.01	Jun 10	35.00	Dec 20, 1991
ANNUAL RUNOFF (AC-FT)	54,340		107,500		114,500	
10 PERCENT EXCEEDS	164		176		284	
50 PERCENT EXCEEDS	36		45		33	
90 PERCENT EXCEEDS	21		22		12	

z Period of regulated streamflow.



## BRAZOS RIVER BASIN

08103900 South Fork Rocky Creek near Briggs, TX

LOCATION.--Lat 30°54'41", long 98°02'12", Burnet County, Hydrologic Unit 12070203, on right bank at upstream side of bridge on Ranch Road 963, 6.0 mi above confluence with North Fork Rocky Creek, 7.0 mi west of Briggs, and 12.9 mi above mouth of Rocky Creek.

DRAINAGE AREA.--33.3 mi<sup>2</sup>.

PERIOD OF RECORD.--Apr. 1963 to current year. Water-quality records: Chemical data: Oct. 1961 to Jan. 1964, Jan. 1968 to Aug. 1996. Biochemical data: Jan. 1968 to Aug. 1996. Radiochemical data: Jan. 1968 to Aug. 1996. Pesticide data: July 1971 to July 1982. Sediment data: May to June 1963.

REVISED RECORDS.--WRD TX-74-1: 1972-73(P). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder, concrete control, and crest-stage gages. Datum of gage is 955.8 ft above NGVD of 1929. Satellite telemeter at station.

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

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	0.32	1.5	25	1.5	8.9	0.81	0.00
2	0.00	0.00	0.00	0.00	0.00	0.37	1.5	21	1.4	5.7	0.40	0.00
3	0.00	0.00	0.00	0.00	0.00	0.57	3.3	16	1.4	4.5	0.25	0.00
4	0.00	0.00	0.00	0.00	0.01	4.5	2.0	14	1.3	3.6	0.17	0.00
5	0.00	0.00	0.00	0.00	0.66	5.5	1.8	12	1.7	3.1	0.12	0.00
6	0.00	0.00	0.00	0.00	0.31	2.6	57	12	1.4	2.8	0.10	0.00
7	0.00	0.00	0.00	0.00	0.35	1.8	15	12	1.2	2.5	0.10	0.00
8	0.00	0.00	0.00	0.00	0.27	1.5	9.6	11	2.2	2.2	0.12	0.00
9	0.00	0.00	0.00	0.00	0.26	1.4	8.1	9.9	5.3	1.8	0.10	0.00
10	0.00	0.00	0.00	0.00	0.30	1.2	91	9.4	7.2	1.6	0.06	0.00
11	0.00	0.00	0.00	0.00	0.46	1.2	38	8.6	3.2	1.4	0.00	0.00
12	0.00	0.00	0.00	0.00	0.33	1.5	21	8.4	2.2	1.2	0.00	0.00
13	0.00	0.00	0.00	0.00	0.26	2.7	16	8.1	1.8	1.2	0.00	0.00
14	0.00	0.00	0.00	0.00	0.41	2.7	14	15	1.5	1.1	0.00	0.00
15	0.00	0.00	0.00	0.00	0.29	2.8	13	9.7	1.3	0.94	0.00	0.00
16	0.00	0.00	0.00	0.55	0.25	7.0	12	7.9	6.4	0.84	0.00	0.00
17	0.00	0.00	0.00	1.8	0.23	4.4	12	6.7	2.1	0.81	0.00	0.00
18	0.00	0.00	0.00	0.24	0.21	3.2	11	5.9	1.5	0.76	0.00	0.00
19	0.00	0.00	0.00	0.05	0.23	2.8	10	5.0	1.3	0.69	0.00	0.00
20	0.00	0.00	0.00	0.00	0.19	2.8	11	4.4	1.1	0.61	0.00	0.00
21	0.00	0.00	0.00	0.00	0.10	2.7	10	3.9	2.1	0.54	0.00	0.00
22	0.00	0.00	0.00	0.00	0.10	2.5	9.3	3.4	5.2	0.48	0.00	0.00
23	0.00	0.00	0.00	0.00	0.13	2.2	8.9	3.2	1.2	0.40	2.0	0.00
24	0.00	0.00	0.00	0.00	0.27	2.6	75	3.1	1.0	0.33	0.36	0.00
25	0.00	0.00	0.00	0.00	0.48	2.8	32	3.0	1.1	0.24	0.12	0.00
26	0.00	0.00	0.00	0.00	0.29	2.6	22	2.7	11	0.25	0.03	0.00
27	0.00	0.00	0.00	0.00	0.27	2.2	17	2.3	8.0	0.24	0.00	0.00
28	0.00	0.00	0.00	0.00	0.24	2.0	16	2.1	3.7	0.22	0.00	0.00
29	0.00	0.00	0.00	0.00	0.40	1.9	24	2.0	4.8	0.39	0.00	0.00
30	0.00	0.00	0.00	0.00	---	1.7	17	2.0	12	0.57	0.00	0.00
31	0.00	---	0.00	0.00	---	1.6	---	1.8	---	0.38	0.00	---
TOTAL	0.00	0.00	0.00	2.64	7.30	75.66	580.0	251.5	97.1	50.29	4.74	0.00
MEAN	0.00	0.00	0.00	0.09	0.25	2.44	19.3	8.11	3.24	1.62	0.15	0.00
MAX	0.00	0.00	0.00	1.8	0.66	7.0	91	25	12	8.9	2.0	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.32	1.5	1.8	1.0	0.22	0.00	0.00
AC-FT	0.00	0.00	0.00	5.2	14	150	1,150	499	193	100	9.4	0.00
CFSM	0.00	0.00	0.00	0.00	0.01	0.07	0.58	0.24	0.10	0.05	0.00	0.00
IN.	0.00	0.00	0.00	0.00	0.01	0.08	0.65	0.28	0.11	0.06	0.01	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2004, BY WATER YEAR (WY)

	3.65	5.23	9.74	10.7	18.3	18.9	13.4	19.9	17.5	5.89	1.93	2.94
MAX	34.0	55.3	103	81.9	189	93.1	78.4	118	106	75.6	51.2	69.6
(WY)	(1975)	(1975)	(1992)	(1968)	(1992)	(1992)	(1977)	(1965)	(1981)	(2002)	(1974)	(1974)
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)	(1968)	(1968)	(1971)	(1971)	(1971)	(1971)	(1971)	(1978)	(1967)	(1963)	(1963)	(1965)

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

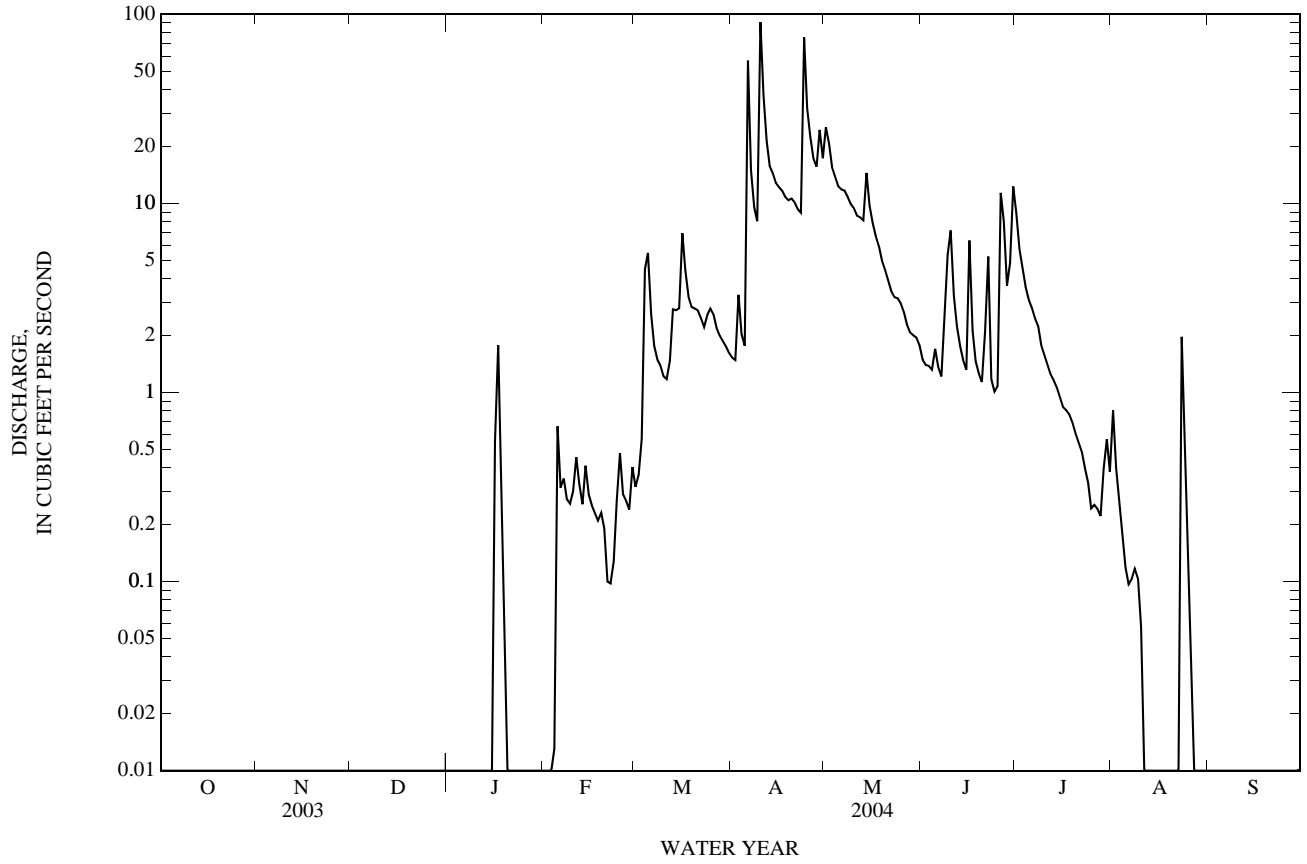
## FOR 2004 WATER YEAR

## WATER YEARS 1963 - 2004

ANNUAL TOTAL	2,146.17		1,069.23		
ANNUAL MEAN	5.88		2.92		10.7
HIGHEST ANNUAL MEAN					49.2
LOWEST ANNUAL MEAN					0.04
HIGHEST DAILY MEAN	201	Feb 21	91	Apr 10	1,510
LOWEST DAILY MEAN	0.00	Jul 2	0.00	Oct 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 2	0.00	Oct 1	0.00
MAXIMUM PEAK FLOW			787	Apr 10	31,200
MAXIMUM PEAK STAGE			a4.73	Apr 10	a22.70
ANNUAL RUNOFF (AC-FT)	4,260		2,120		7,760
ANNUAL RUNOFF (CFSM)	0.177		0.088		0.321
ANNUAL RUNOFF (INCHES)	2.40		1.19		4.37
10 PERCENT EXCEEDS	16		9.3		25
50 PERCENT EXCEEDS	0.06		0.18		0.71
90 PERCENT EXCEEDS	0.00		0.00		0.00

a From floodmark

08103900 South Fork Rocky Creek near Briggs, TX—Continued



08104050 Stillhouse Hollow Lake near Belton, TX

LOCATION.--Lat 31°01'20", long 97°31'57", Bell County, Hydrologic Unit 12070203, in intake structure at Stillhouse Hollow Dam on Lampasas River, 5 mi southwest of Belton, and 16.0 mi upstream from mouth.

DRAINAGE AREA.--1,313 mi<sup>2</sup>.

PERIOD OF RECORD.--Sept. 1966 to Sept. 2000 (contents furnished by U.S. Army Corps of Engineers), Oct. 2000 to Sept. 2002 (daily mean contents). Oct. 2002 to current year. Prior to Oct. 1970, published as "Stillhouse Hollow Reservoir".

REVISED RECORDS.--WDR TX-76-2: Drainage area.

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 15,624 ft long, including a 1,650-foot spillway and 5,894-foot dike. The lake was operated as a temporary detention basin from Sept. 2, 1966, to Feb. 19, 1968. Deliberate impoundment began Feb. 19, 1968. The dam is owned by the U.S. Army Corps of Engineers. The lake was built for flood control and water conservation. The spillway is an uncontrolled broad-crested weir 1,650 ft long located near right end of dam. The flood-control outlet consists of a 12.0-foot-diameter conduit controlled by two 5.67- by 12.0-foot slide gates at an invert elevation of 515.0 ft. There are many small diversions upstream for irrigation, municipal supply and for oil field operations. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	698.0
Design flood	693.2
Crest of spillway	666.0
Top of conservation pool	622.0
Lowest gated outlet (invert)	515.0

COOPERATION.--Prior to Oct. 1, 2000, record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey. A new capacity table, provided by Texas Water Development Board, was put into use beginning Oct. 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Sept. 1966 to Sept. 2002: Maximum contents, 654,000 acre-ft, Mar. 4, 1992; minimum contents since conservation storage was reached on Apr. 12, 1969, 172,700 acre-ft, Aug. 23, 1996; Sept. 1996 to current year: maximum elevation, 667.97 ft, Mar. 4, 1992; minimum elevation, 612.80 ft, Aug. 23, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 626.36 ft, Jun. 13; minimum elevation, 620.31 ft, Mar. 13.

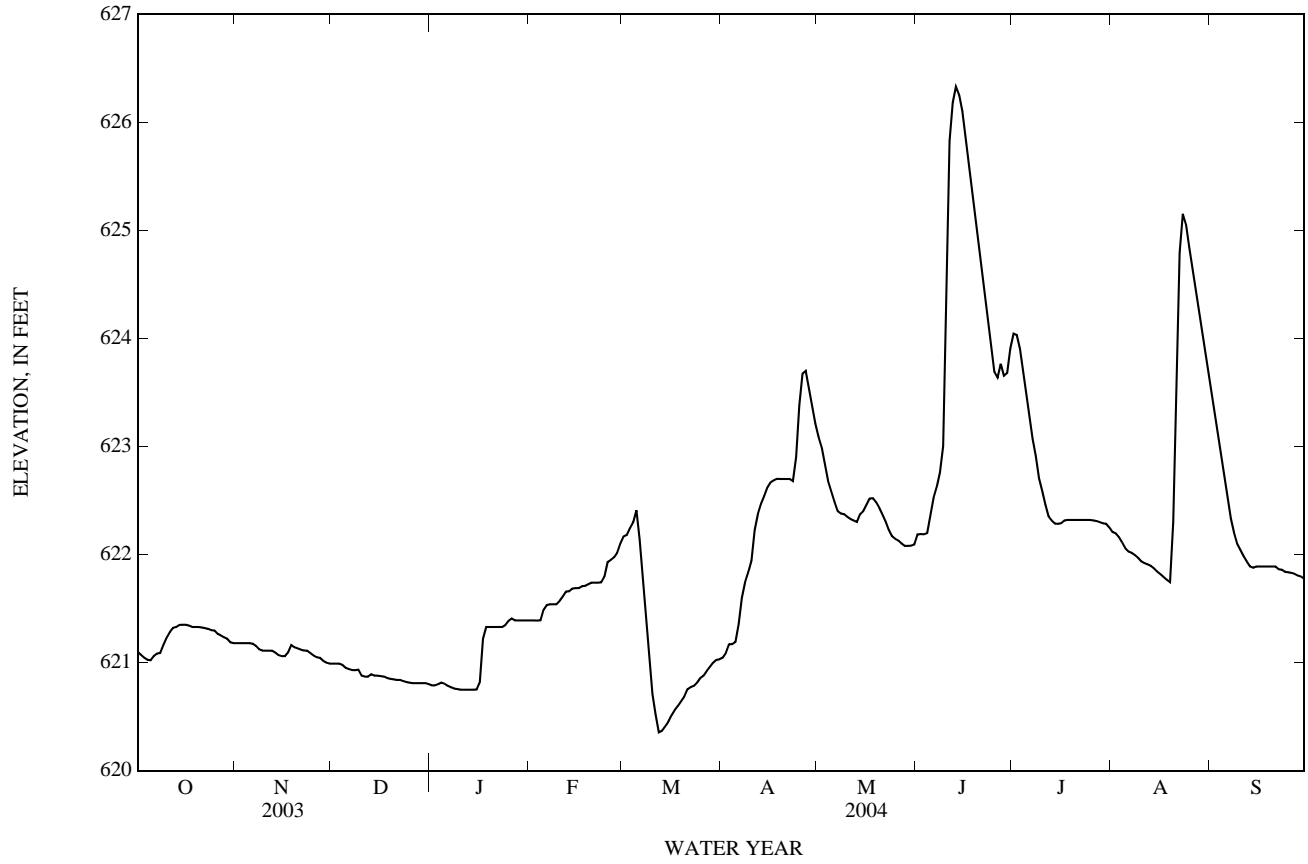
ELEVATION ABOVE NGVD 1929, FEET  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	621.10	621.18	620.99	620.79	621.39	622.17	621.05	623.09	622.19	624.04	622.21	623.54
2	621.07	621.18	620.99	620.79	621.39	622.18	621.09	622.99	622.19	624.03	622.20	623.34
3	621.05	621.18	620.99	620.80	621.39	622.25	621.17	622.84	622.19	623.90	622.16	623.13
4	621.03	621.18	620.98	620.81	621.39	622.30	621.17	622.68	622.20	623.72	622.11	622.93
5	621.02	621.18	620.95	620.80	621.49	622.41	621.19	622.59	622.36	623.52	622.06	622.73
6	621.06	621.17	620.94	620.78	621.53	622.14	621.36	622.49	622.52	623.30	622.03	622.53
7	621.08	621.15	620.93	620.77	621.54	621.78	621.60	622.40	622.63	623.07	622.01	622.34
8	621.09	621.12	620.93	620.76	621.54	621.43	621.74	622.38	622.76	622.91	621.99	622.20
9	621.16	621.11	620.93	620.76	621.54	621.06	621.84	622.37	623.00	622.71	621.97	622.10
10	621.23	621.11	620.88	620.75	621.57	620.71	621.94	622.35	624.36	622.59	621.94	622.04
11	621.28	621.11	620.87	620.75	621.61	620.52	622.23	622.33	625.83	622.46	621.92	621.99
12	621.32	621.11	620.87	620.75	621.66	620.35	622.37	622.31	626.18	622.35	621.91	621.94
13	621.33	621.09	620.89	620.75	621.66	620.37	622.47	622.30	626.33	622.31	621.90	621.89
14	621.35	621.07	620.88	620.75	621.69	620.41	622.54	622.37	626.25	622.29	621.87	621.88
15	621.35	621.06	620.88	620.75	621.69	620.45	622.62	622.40	626.10	622.28	621.84	621.89
16	621.35	621.06	620.87	620.82	621.69	620.51	622.67	622.46	625.92	622.29	621.82	621.89
17	621.34	621.09	620.87	621.22	621.71	620.56	622.69	622.52	625.71	622.32	621.79	621.89
18	621.33	621.16	620.86	621.33	621.71	620.60	622.70	622.52	625.49	622.32	621.77	621.89
19	621.33	621.14	620.85	621.33	621.72	620.64	622.70	622.48	625.24	622.32	621.74	621.89
20	621.33	621.13	620.85	621.33	621.74	620.68	622.70	622.43	624.98	622.32	622.30	621.89
21	621.33	621.12	620.84	621.33	621.74	620.75	622.70	622.37	624.72	622.32	623.49	621.89
22	621.32	621.11	620.84	621.33	621.74	620.77	622.70	622.31	624.46	622.32	624.79	621.86
23	621.31	621.11	620.83	621.33	621.74	620.78	622.68	622.23	624.21	622.32	625.15	621.86
24	621.30	621.09	620.82	621.35	621.80	620.81	622.90	622.17	623.95	622.32	625.05	621.84
25	621.30	621.07	620.81	621.39	621.93	620.86	623.38	622.15	623.69	622.32	624.84	621.84
26	621.27	621.05	620.81	621.41	621.95	620.88	623.67	622.13	623.64	622.32	624.67	621.83
27	621.25	621.04	620.81	621.39	621.97	620.92	623.70	622.10	623.77	622.31	624.50	621.82
28	621.23	621.02	620.81	621.39	622.02	620.96	623.54	622.08	623.65	622.30	624.32	621.80
29	621.22	621.00	620.81	621.39	622.10	621.00	623.38	622.08	623.68	622.29	624.14	621.80
30	621.19	620.99	620.81	621.39	---	621.02	623.21	622.08	623.91	622.29	623.95	621.78
31	621.18	---	620.80	621.39	---	621.03	---	622.09	---	622.25	623.74	---
MEAN	621.23	621.11	620.88	621.05	621.68	621.07	622.39	622.39	624.14	622.66	622.84	622.14
MAX	621.35	621.18	620.99	621.41	622.10	622.41	623.70	623.09	626.33	624.04	625.15	623.54
MIN	621.02	620.99	620.80	620.75	621.39	620.35	621.05	622.08	622.19	622.25	621.74	621.78

WTR YR 2004 MEAN 621.96 MAX 626.33 MIN 620.35



08104050 Stillhouse Hollow Lake near Belton, TX—Continued



## 08104100 Lampasas River near Belton, TX

LOCATION.--Lat 31°00'06", long 97°29'32", Bell County, Hydrologic Unit 12070203, on left bank 22 ft upstream from upstream bridge of two bridges on Interstate Highway 35 and U.S. Highway 81, 3.5 mi downstream from Stillhouse Hollow Dam, 4.1 mi southwest of Belton, and 12.7 mi upstream from mouth.

DRAINAGE AREA.--1,321 mi<sup>2</sup>.

PERIOD OF RECORD.--Feb. 1963 to Sept. 1989, Apr. 1999 to current year. Water-quality records: Chemical data: Oct. 1980 to Sept. 1982.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 476.58 ft above NGVD of 1929. (From Texas Department of Highways and Public Transportation levels to a Santa Fe Railroad bench mark.) Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1967, at least 10% of contributing drainage area has been regulated. Many small diversions above station for irrigation and municipal supply. No flow several days in Aug. and Sept. 1967.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--3 years (water years 1964-66), 368 ft<sup>3</sup>/s (266,600 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1877, 45 ft Sept. 1921, from information by local residents. Flood of May 1957 reached a stage of 44.4 ft (discharge, 83,500 ft<sup>3</sup>/s).

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS 1963-1966: Maximum discharge, 77,600 ft<sup>3</sup>/s, May 17, 1965, gage height, 43.58 ft; minimum discharge, 0.2 ft<sup>3</sup>/s, Oct. 14, 15, 16, 1963.

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	9.7	9.5	7.4	9.4	13	8.0	1,130	14	1,170	178	774
2	9.5	9.1	9.7	7.7	9.2	14	9.0	1,120	12	1,170	178	774
3	9.5	9.5	8.9	8.3	9.0	15	8.4	1,110	12	1,170	180	770
4	8.7	9.3	7.9	8.0	11	17	8.3	845	12	1,170	179	768
5	12	9.1	8.0	7.9	13	655	8.0	699	16	1,170	100	766
6	14	9.1	8.3	9.2	9.6	1,450	12	699	12	1,170	21	766
7	12	9.7	8.5	9.2	9.2	1,440	9.1	503	13	1,190	20	629
8	11	11	8.7	9.6	9.4	1,430	9.0	341	29	1,200	19	395
9	18	11	8.9	9.3	10	1,430	9.4	342	24	877	19	298
10	13	10	8.6	8.6	11	1,070	12	342	27	683	18	207
11	11	9.6	8.7	7.8	12	711	11	345	19	684	18	207
12	11	9.1	9.8	8.1	12	379	11	344	163	480	16	206
13	10	8.6	9.3	8.1	11	17	11	185	776	265	16	102
14	10	8.8	8.6	8.1	12	13	12	17	1,140	150	15	18
15	9.9	9.2	8.9	8.1	11	11	13	13	1,150	29	15	16
16	10	9.4	8.7	11	11	10	113	13	1,140	26	15	14
17	10	12	8.4	12	9.8	9.6	211	166	1,140	25	14	14
18	10	9.9	8.4	9.3	9.3	9.2	212	327	1,140	25	14	14
19	10	9.5	8.2	8.7	9.7	9.2	214	328	1,140	24	15	14
20	9.7	9.5	8.1	8.4	10	8.9	215	330	1,150	24	15	14
21	9.7	10	8.3	8.4	9.9	8.9	215	332	1,150	24	18	14
22	9.8	10	8.6	8.5	10	8.3	215	332	1,160	23	17	14
23	9.8	11	8.4	8.5	10	8.3	216	329	1,150	23	487	13
24	9.7	10	8.4	9.4	14	8.8	227	216	1,150	22	1,130	14
25	9.9	10	8.4	9.3	14	8.2	221	122	1,160	22	942	14
26	9.8	11	8.6	8.9	12	8.0	501	122	1,370	23	778	14
27	9.8	10	8.7	8.8	12	8.0	1,120	122	1,170	22	780	13
28	9.5	9.2	8.9	8.9	12	8.1	1,120	67	1,200	22	778	13
29	9.5	9.2	8.4	9.4	13	7.7	1,120	13	1,170	23	779	13
30	9.6	8.9	8.0	9.6	---	7.6	1,120	12	1,190	81	777	13
31	9.5	---	7.8	9.5	---	7.8	---	11	---	176	776	---
TOTAL	325.1	292.4	266.6	274.0	315.5	8,801.6	7,191.2	10,877	20,999	13,163	8,327	6,901
MEAN	10.5	9.75	8.60	8.84	10.9	284	240	351	700	425	269	230
MAX	18	12	9.8	12	14	1,450	1,120	1,130	1,370	1,200	1,130	774
MIN	8.7	8.6	7.8	7.4	9.0	7.6	8.0	11	12	22	14	13
AC-FT	645	580	529	543	626	17,460	14,260	21,570	41,650	26,110	16,520	13,690

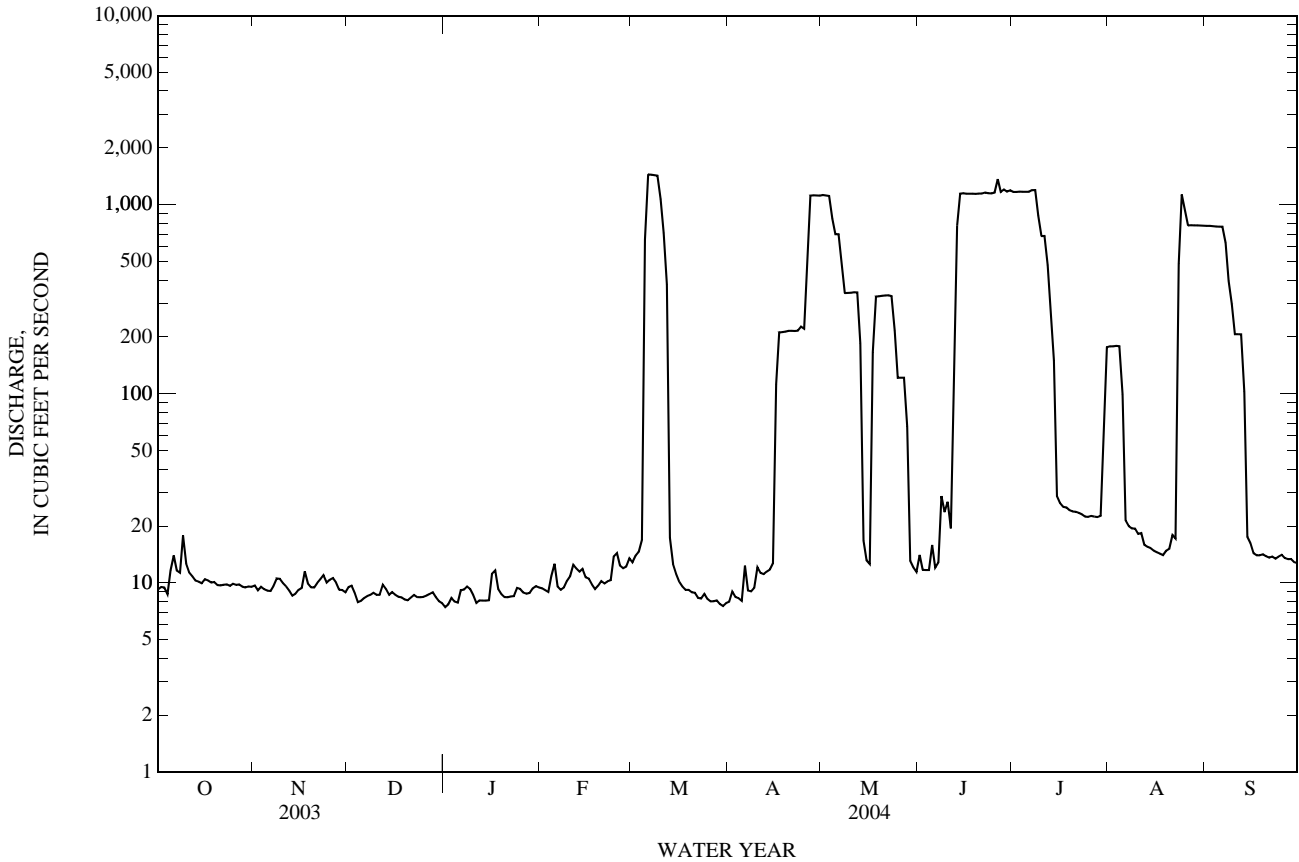
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2004hz, BY WATER YEAR (WY)

MEAN	96.5	124	132	264	224	265	275	386	332	299	68.5	88.7
MAX	797	756	828	1,565	1,258	965	1,630	1,672	1,102	2,023	269	741
(WY)	(1975)	(1987)	(1975)	(1975)	(1975)	(2001)	(1970)	(1977)	(1977)	(1987)	(2004)	(1974)
MIN	2.58	2.46	3.32	3.72	4.41	2.26	4.62	1.53	2.20	1.42	2.82	3.31
(WY)	(1985)	(1989)	(1989)	(1989)	(1984)	(2000)	(1989)	(2000)	(2000)	(2000)	(1971)	(1988)

08104100 Lampasas River near Belton, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1967 - 2004 <sup>h</sup>	
ANNUAL TOTAL	58,332.4		77,733.4		215	
ANNUAL MEAN	160		212		713	
HIGHEST ANNUAL MEAN					1975	
LOWEST ANNUAL MEAN					1989	
HIGHEST DAILY MEAN	1,450	Feb 25	1,450	Mar 6	5,370	Jul 1, 1987
LOWEST DAILY MEAN	7.8	Dec 31	7.4	Jan 1	0.00	Aug 9, 1967
ANNUAL SEVEN-DAY MINIMUM	8.3	Dec 17	7.9	Dec 30	0.00	Aug 9, 1967
MAXIMUM PEAK FLOW			2,800	Jun 26	6,240	Jul 1, 1987
MAXIMUM PEAK STAGE			13.20	Jun 26	py19.23	Jul 1, 1987
ANNUAL RUNOFF (AC-FT)	115,700		154,200		155,600	
10 PERCENT EXCEEDS	476		1,110		782	
50 PERCENT EXCEEDS	17		13		14	
90 PERCENT EXCEEDS	9.2		8.4		4.4	

h See PERIOD OF RECORD paragraph.  
 z Period of regulated streamflow.  
 y Also occurred July 1, 1999.  
 p Observed on July 1, 1987.



## BRAZOS RIVER BASIN

08104500 Little River near Little River, TX

LOCATION.--Lat 30°57'59", long 97°20'45", Bell County, Hydrologic Unit 12070204, on right bank 25 ft downstream from State Highway 95, 2.4 mi southeast of Little River, 5.0 mi downstream from confluence of Leon and Lampasas Rivers, and 95.8 mi upstream from mouth.

DRAINAGE AREA.--5,228 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1923 to May 1929, Aug. 1962 to current year. Water-quality records: Chemical data: Oct. 1964 to Sept. 1982.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 400.11 ft above NGVD of 1929. From Oct. 5, 1923, to May 27, 1929, nonrecording gage at railroad bridge 0.5 mi upstream at same datum. Satellite telemeter at station.

REMARKS.--Records poor. Since Mar. 1954, at least 10% of contributing drainage area has been regulated. Wastewater effluent is returned upstream of station from Fort Hood military installation and by the cities of Killeen, Nolanville, and Harker Heights. Many small diversions upstream for irrigation and municipal supply affect very low flow.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--5 years (water years 1924-28), 709 ft<sup>3</sup>/s (513,700 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900, 46.8 ft in Sept. 1921, from information by local residents.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS 1924-1929: Maximum discharge, 28,400 ft<sup>3</sup>/s Oct. 2, 1927, (gage height 43.3 ft); minimum, 8.9 ft<sup>3</sup>/s Aug. 12, 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	48	103	95	87	397	1,310	761	6,740	426	2,060	401	2,950
2	47	99	95	91	418	1,240	814	6,590	273	2,280	379	2,930
3	48	102	92	87	e611	1,320	876	6,410	226	4,040	364	2,920
4	48	99	88	89	e714	1,370	793	6,270	370	4,010	358	2,980
5	124	104	89	84	e1,600	1,870	650	6,000	704	3,980	347	2,920
6	374	101	84	84	e1,330	3,310	980	5,800	423	3,950	218	2,440
7	192	100	89	84	e1,350	3,160	613	4,760	387	3,920	200	2,430
8	83	103	92	86	e1,310	3,140	1,090	2,610	1,010	4,410	198	2,190
9	1,460	110	92	88	e1,230	3,120	2,520	2,540	2,220	3,800	194	2,190
10	1,050	111	90	85	1,220	2,990	2,700	2,210	3,700	3,450	193	1,500
11	2,880	101	89	84	1,320	2,520	3,600	1,590	867	3,420	191	772
12	2,900	104	95	85	1,330	2,160	2,720	1,570	676	3,090	187	722
13	2,850	97	171	84	1,020	1,210	2,570	1,820	1,730	1,720	185	706
14	3,090	96	105	80	466	1,170	1,820	696	4,900	963	149	584
15	3,700	96	98	86	467	1,140	1,190	358	4,990	494	124	583
16	3,690	104	93	187	424	1,140	910	301	4,910	469	121	570
17	3,640	132	91	849	404	1,160	1,060	328	4,830	452	116	570
18	2,760	254	90	561	385	1,130	1,060	859	4,840	442	115	561
19	2,720	117	97	398	379	1,120	979	1,130	4,830	435	129	553
20	2,510	102	92	316	371	1,120	670	1,120	4,790	390	744	524
21	1,960	93	87	303	361	1,120	665	1,110	4,740	262	601	244
22	1,840	97	93	282	352	950	657	1,110	3,850	254	346	113
23	726	97	91	335	358	587	646	1,100	3,000	245	629	101
24	700	97	90	327	426	591	1,860	943	1,890	238	2,790	101
25	691	92	90	420	1,630	674	1,230	507	1,870	236	2,880	96
26	689	89	92	333	1,470	796	1,040	461	5,080	231	3,000	104
27	681	96	92	299	1,340	787	3,540	333	2,680	225	2,980	104
28	661	89	92	302	1,290	782	4,770	322	1,890	228	2,990	95
29	565	90	93	396	1,350	790	5,100	223	2,300	223	3,070	94
30	120	88	86	400	---	779	6,380	208	3,200	250	3,000	95
31	102	---	88	399	---	772	---	209	---	453	2,970	---
TOTAL	42,949	3,163	2,921	7,391	25,323	45,328	54,264	66,228	77,602	50,620	30,169	32,742
MEAN	1,385	105	94.2	238	873	1,462	1,809	2,136	2,587	1,633	973	1,091
MAX	3,700	254	171	849	1,630	3,310	6,380	6,740	5,080	4,410	3,070	2,980
MIN	47	88	84	80	352	587	613	208	226	223	115	94
AC-FT	85,190	6,270	5,790	14,660	50,230	89,910	107,600	131,400	153,900	100,400	59,840	64,940

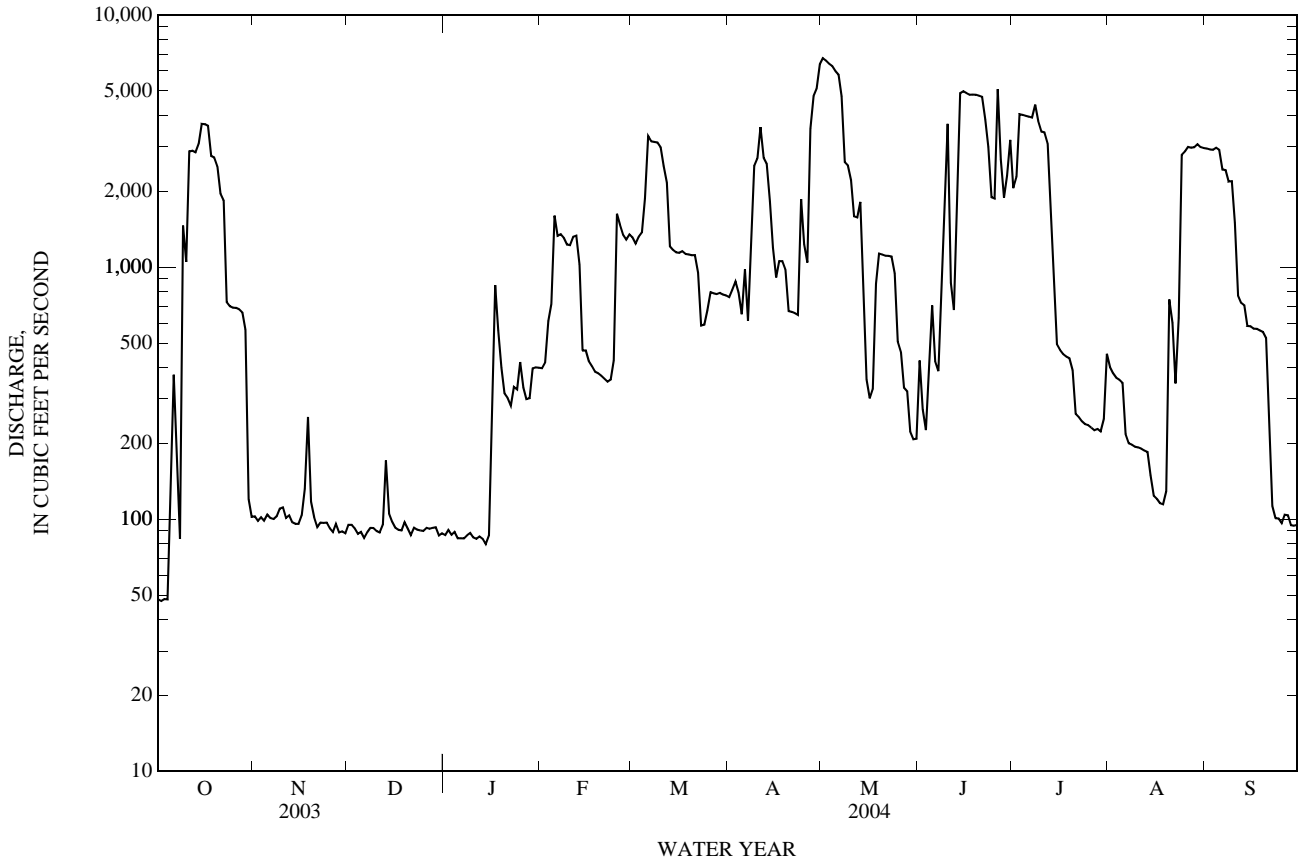
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004z, BY WATER YEAR (WY)

	443	465	617	932	1,061	1,467	1,528	1,896	1,737	1,176	491	406
MEAN	443	465	617	932	1,061	1,467	1,528	1,896	1,737	1,176	491	406
MAX	2,760	2,136	2,697	7,252	6,123	10,200	9,237	6,833	7,264	6,205	3,818	2,009
(WY)	(1975)	(1975)	(1992)	(1992)	(1992)	(1992)	(1992)	(1992)	(1965)	(1992)	(1992)	(1986)
MIN	43.0	57.8	47.7	59.3	60.7	63.2	59.4	102	116	54.1	12.1	41.3
(WY)	(1979)	(1990)	(1964)	(1971)	(1984)	(1996)	(1984)	(2000)	(2000)	(2000)	(1963)	(1972)

08104500 Little River near Little River, TX—Continued

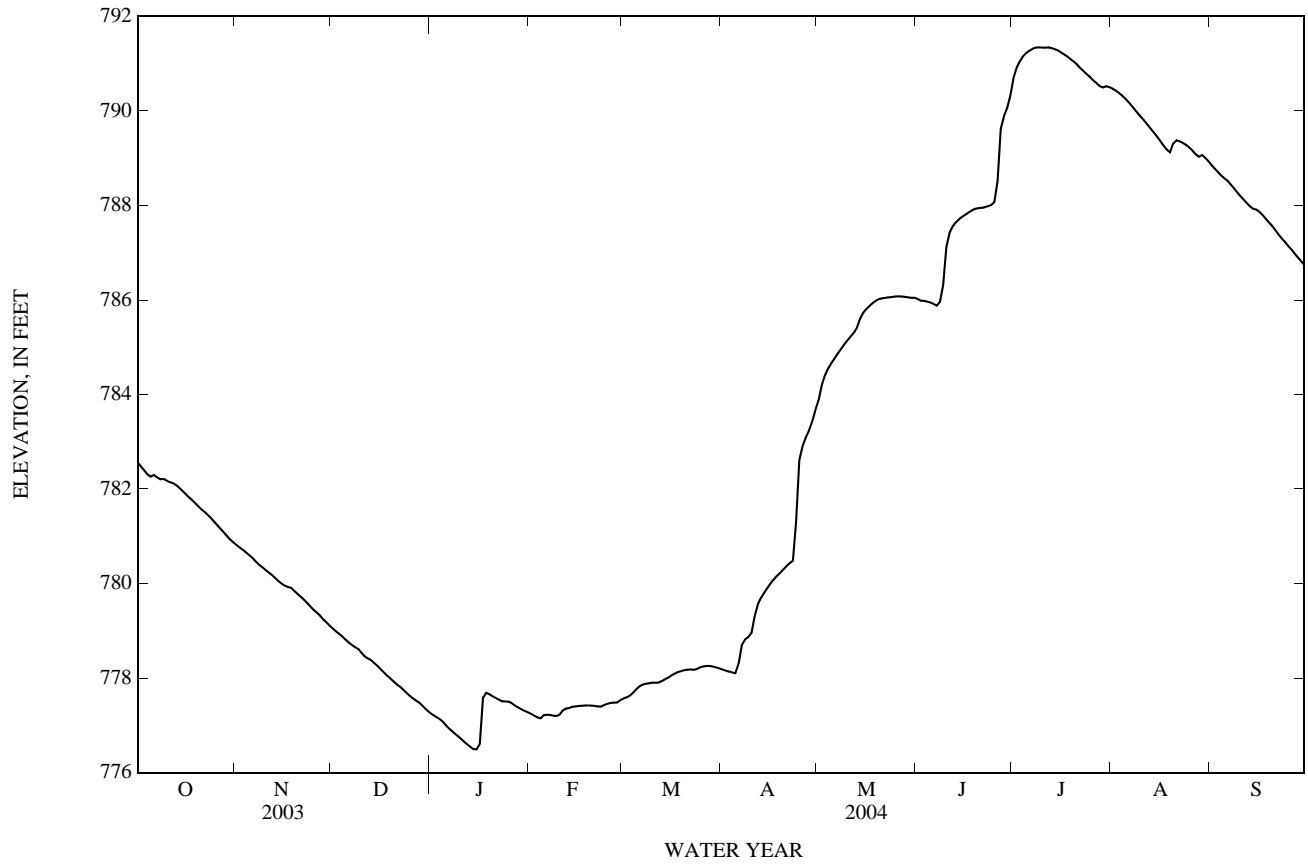
SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004z	
ANNUAL TOTAL	216,387		438,700			
ANNUAL MEAN	593		1,199		1,017	
HIGHEST ANNUAL MEAN					5,054	1992
LOWEST ANNUAL MEAN					118	2000
HIGHEST DAILY MEAN	4,640	Feb 21	6,740	May 1	62,000	May 17, 1965
LOWEST DAILY MEAN	47	Oct 2	47	Oct 2	8.2	Aug 6, 1963
ANNUAL SEVEN-DAY MINIMUM	49	Sep 28	85	Jan 8	9.5	Aug 3, 1963
MAXIMUM PEAK FLOW			7,630	Jun 26	79,600	May 17, 1965
MAXIMUM PEAK STAGE			18.57	Jun 26	42.85	May 17, 1965
ANNUAL RUNOFF (AC-FT)	429,200		870,200		737,100	
10 PERCENT EXCEEDS	1,870		3,230		3,180	
50 PERCENT EXCEEDS	161		576		268	
90 PERCENT EXCEEDS	61		91		65	

z Period of regulated streamflow  
 e Estimated





08104650 Lake Georgetown near Georgetown, TX—Continued



08104700 North Fork San Gabriel River near Georgetown, TX

LOCATION.--Lat 30°39'42", long 97°42'40", Williamson County, Hydrologic Unit 12070205, on left bank 5,000 ft downstream from North Fork dam, 1.5 mi upstream from Middle Fork San Gabriel River, 2.7 mi upstream from Interstate Highway 35, 2.7 mi northwest of Georgetown, and 3.4 mi upstream from mouth.

DRAINAGE AREA.--248 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1968 to current year. Water-quality records: Chemical data: Oct. 1980 to Aug. 1989. Biochemical data: Oct. 1980 to Aug. 1989.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 689.06 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since water year 1980, at least 10% of contributing drainage area has been regulated. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--11 years (water years 1969-79), 88.1 ft<sup>3</sup>/s (63,830 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, 39.5 ft in Sept. 1921. Flood in Apr. 1957 reached a stage of 34.5 ft, from information by local residents.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS, 1968-1979: Maximum discharge, 35,000 ft<sup>3</sup>/s Sept. 17, 1974 (gage height, 26.20 ft); no flow July 23, 24, 25, 1971.

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	2.5	7.6	1.1	5.3	2.3	3.5	1.7	2.7	0.96	3.9	1.7	1.5
2	1.6	7.3	1.1	5.2	2.4	3.4	1.8	2.5	0.91	3.2	1.8	1.5
3	2.2	7.1	1.2	5.1	3.2	3.2	1.7	1.9	1.1	3.0	1.8	1.4
4	3.0	5.7	1.3	5.0	3.0	4.6	1.9	2.6	0.89	2.7	1.7	1.5
5	4.2	5.6	0.83	4.9	3.4	4.0	1.7	1.9	0.91	2.6	1.7	1.6
6	2.8	5.2	0.84	4.9	2.5	3.5	13	1.8	0.88	2.5	1.7	1.7
7	3.2	4.6	0.84	4.9	2.5	3.5	4.2	1.8	0.90	6.9	1.8	1.6
8	3.7	4.1	0.84	5.1	2.5	3.5	3.5	1.8	2.7	11	1.8	1.6
9	4.4	4.0	3.0	5.0	2.6	3.3	3.1	1.8	19	11	1.7	1.6
10	3.8	3.5	8.8	5.0	3.4	3.3	4.4	1.8	7.4	11	1.7	1.5
11	4.3	3.6	8.4	4.9	4.5	3.4	3.9	1.9	3.3	11	1.7	1.4
12	4.2	3.6	8.6	4.9	3.3	3.4	3.3	1.8	2.6	11	1.7	1.5
13	3.2	3.3	7.7	4.9	3.1	3.4	3.3	2.1	2.2	11	1.8	1.5
14	4.1	2.8	7.5	4.9	3.2	3.3	3.2	2.9	2.1	11	1.8	1.8
15	4.3	2.5	7.2	5.1	3.1	3.1	3.1	1.3	2.0	11	1.7	1.6
16	4.1	2.2	6.9	7.8	3.1	2.7	2.9	1.2	2.0	9.4	1.6	1.5
17	4.8	2.3	6.8	6.1	3.1	2.6	2.8	1.2	1.9	6.5	1.6	1.5
18	4.8	2.3	6.2	4.6	3.0	2.7	2.9	1.1	1.8	6.5	1.6	1.5
19	4.6	2.3	6.1	4.4	2.9	2.8	2.9	1.1	1.8	6.5	5.5	1.5
20	4.2	2.0	6.0	4.3	2.9	2.8	2.9	1.1	1.7	6.5	4.1	1.4
21	4.6	1.7	5.7	3.4	3.0	2.6	2.8	1.1	1.7	6.5	3.9	1.4
22	4.9	1.7	5.5	2.2	2.9	2.4	2.8	1.1	1.9	6.3	1.6	1.5
23	5.3	1.8	5.2	2.2	2.7	2.3	2.8	1.0	1.7	4.0	1.4	1.6
24	5.3	1.6	5.2	2.3	3.3	2.1	3.2	1.1	1.8	1.7	1.2	1.5
25	5.9	1.5	5.3	2.2	3.3	2.1	2.8	0.99	3.8	1.6	1.3	1.5
26	7.0	1.4	5.2	2.1	3.3	1.9	2.8	0.98	13	1.6	1.3	1.6
27	7.1	1.4	5.2	2.2	3.3	2.0	2.6	0.98	4.4	1.6	1.4	1.5
28	7.3	1.4	5.3	2.2	3.2	2.0	2.6	0.92	3.2	1.7	1.5	1.5
29	7.3	1.3	5.1	2.2	4.0	1.9	2.5	0.92	3.0	3.1	1.6	1.5
30	7.4	1.1	5.1	2.1	---	1.9	2.5	0.98	7.2	2.1	1.5	1.5
31	7.8	---	5.1	2.1	---	1.8	---	0.98	---	1.8	1.5	---
TOTAL	143.9	96.5	149.15	127.5	89.0	89.0	95.6	47.35	98.75	180.2	58.7	45.8
MEAN	4.64	3.22	4.81	4.11	3.07	2.87	3.19	1.53	3.29	5.81	1.89	1.53
MAX	7.8	7.6	8.8	7.8	4.5	4.6	13	2.9	19	11	5.5	1.8
MIN	1.6	1.1	0.83	2.1	2.3	1.8	1.7	0.92	0.88	1.6	1.2	1.4
AC-FT	285	191	296	253	177	177	190	94	196	357	116	91

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2004z, BY WATER YEAR (WY)

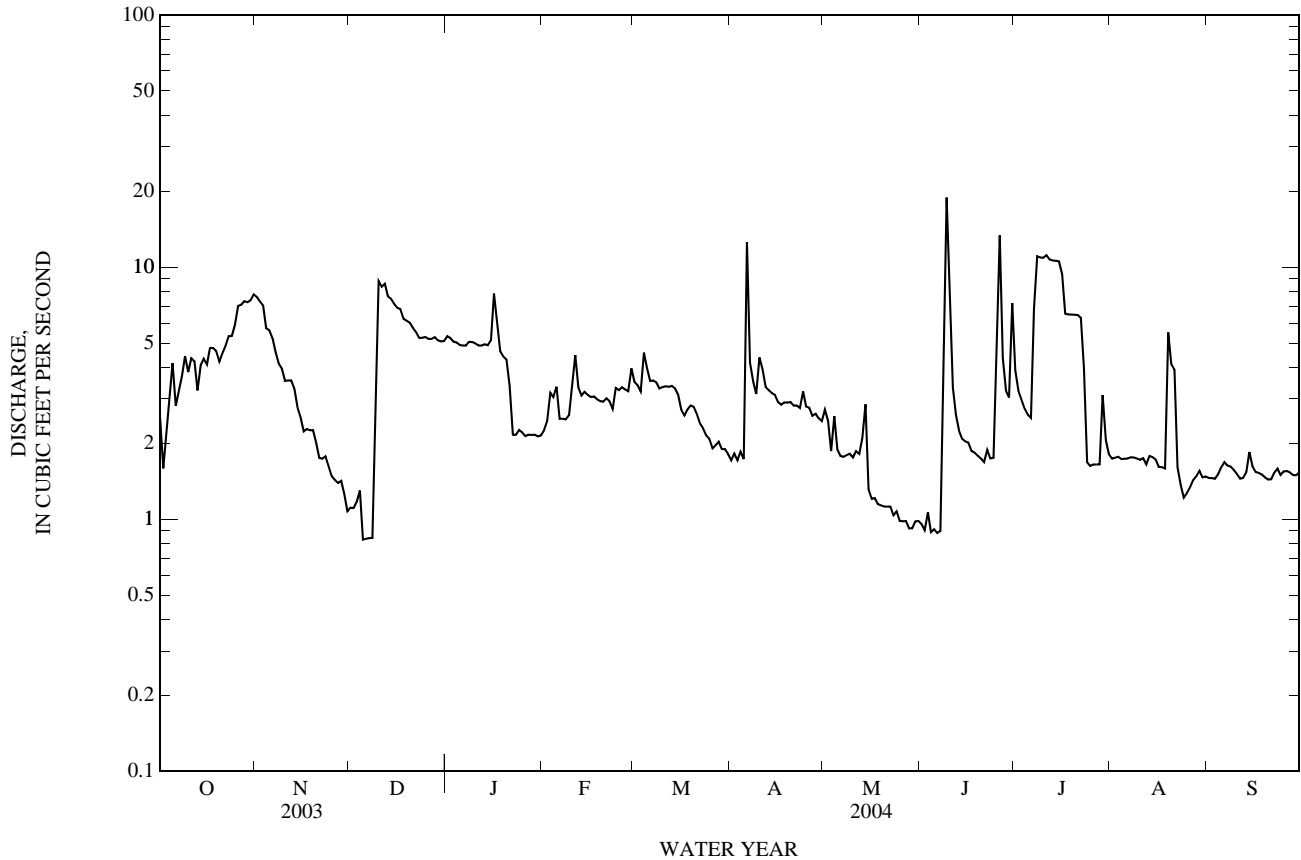
MEAN	14.7	26.9	51.3	54.5	86.2	126	74.8	83.3	132	141	7.98	25.6
MAX	153	171	254	343	485	832	574	544	938	962	27.2	461
(WY)	(1982)	(1982)	(1986)	(1992)	(1986)	(1992)	(1992)	(1997)	(1992)	(1987)	(1992)	(1981)
MIN	1.18	1.72	1.97	1.39	3.00	1.30	0.44	0.71	0.60	1.76	1.30	1.37
(WY)	(1983)	(1986)	(1984)	(1986)	(2000)	(1980)	(1980)	(1980)	(1980)	(2000)	(1982)	(1982)



08104700 North Fork San Gabriel River near Georgetown, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1980 - 2004z	
ANNUAL TOTAL	17,410.05		1,221.45		68.6	
ANNUAL MEAN	47.7		3.34		358	
HIGHEST ANNUAL MEAN					1992	
LOWEST ANNUAL MEAN					2004	
HIGHEST DAILY MEAN	1,130	Feb 25	19	Jun 9	4,500	Jun 9, 1981
LOWEST DAILY MEAN	0.83	Dec 5	0.83	Dec 5	0.00	Sep 27, 1981
ANNUAL SEVEN-DAY MINIMUM	0.99	Dec 2	0.94	Jun 1	0.01	Oct 2, 1981
MAXIMUM PEAK FLOW			121	Jun 9	6,070	Mar 4, 1992
MAXIMUM PEAK STAGE			5.80	Jun 9	13.05	Mar 4, 1992
INSTANTANEOUS LOW FLOW					0.00	Sep 27, 1981
ANNUAL RUNOFF (AC-FT)	34,530		2,420		49,680	
10 PERCENT EXCEEDS	77		6.5		165	
50 PERCENT EXCEEDS	5.6		2.7		6.5	
90 PERCENT EXCEEDS	2.9		1.3		2.0	

z Period of regulated streamflow.



## 08104900 South Fork San Gabriel River at Georgetown, TX

LOCATION.--Lat 30°37'32", long 97°41'27", Williamson County, Hydrologic Unit 12070205, on right bank at downstream side of downstream bridge of two bridges on Interstate Highway 35, 1.1 mi southwest of the courthouse at Georgetown, and 2.4 mi upstream from mouth.

DRAINAGE AREA.--133 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1947 to Sept. 1948 and Sept. 1962 to Oct. 1967 (occasional low-flow measurements). Dec. 1967 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 687.72 ft above NGVD of 1929. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1887, about 41 ft Apr. 24, 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	0.30	0.79	1.5	1.2	9.0	22	21	74	19	202	23	5.1
2	0.19	0.82	1.3	1.5	8.6	22	21	112	16	107	22	4.6
3	0.17	0.89	1.1	0.96	7.4	23	21	68	19	84	20	3.1
4	0.21	0.97	0.90	0.87	9.3	29	21	57	22	74	18	6.7
5	0.41	0.86	0.91	0.73	22	27	21	52	21	67	16	6.7
6	0.34	0.74	0.86	0.58	22	24	476	51	17	63	16	10
7	0.64	0.67	0.69	0.56	17	24	187	51	16	60	16	8.3
8	0.76	0.64	0.85	0.56	15	23	85	48	32	57	16	3.7
9	0.93	0.67	0.80	0.60	14	24	68	46	212	52	15	6.2
10	1.0	0.68	0.68	0.56	18	22	69	45	351	46	14	5.0
11	0.96	0.73	0.64	0.72	38	22	210	45	111	48	13	4.0
12	1.4	0.73	1.0	1.0	38	22	113	41	74	43	13	2.8
13	1.7	0.63	1.5	1.00	29	24	85	55	61	40	12	3.9
14	1.0	0.62	0.63	0.68	27	25	74	60	55	38	10	3.3
15	0.64	0.62	0.95	1.2	25	23	70	51	51	37	8.6	8.6
16	0.77	0.66	1.1	27	23	28	66	43	55	35	7.9	6.0
17	0.69	0.93	0.61	341	22	26	63	40	50	33	5.6	4.9
18	0.59	0.96	0.56	34	20	27	61	38	44	32	6.7	4.6
19	0.68	0.96	0.55	19	20	25	58	33	42	30	8.6	3.8
20	0.99	1.7	0.54	14	20	25	54	32	39	26	24	3.1
21	1.0	1.0	0.56	11	19	25	47	32	36	24	27	2.5
22	0.86	0.98	0.62	10	19	24	48	31	37	23	15	1.3
23	0.71	1.5	0.75	7.7	20	23	47	30	37	22	14	1.2
24	0.61	1.3	0.67	9.2	22	25	174	28	36	21	11	1.3
25	0.59	1.3	0.63	11	23	26	116	27	36	21	9.6	1.7
26	0.67	0.93	1.1	9.8	21	25	69	26	498	117	8.6	1.4
27	0.84	0.94	1.2	8.9	19	24	57	25	206	45	6.7	1.9
28	0.91	0.90	1.4	7.8	19	24	52	22	87	25	6.7	1.3
29	0.78	1.5	0.66	8.4	22	23	70	23	73	22	11	1.0
30	0.80	1.5	0.58	9.0	---	22	73	22	152	54	11	1.0
31	0.77	---	0.69	9.0	---	21	---	22	---	27	6.3	---
TOTAL	22.91	28.12	26.53	549.52	588.3	749	2,597	1,330	2,505	1,575	412.3	119.0
MEAN	0.74	0.94	0.86	17.7	20.3	24.2	86.6	42.9	83.5	50.8	13.3	3.97
MAX	1.7	1.7	1.5	341	38	29	476	112	498	202	27	10
MIN	0.17	0.62	0.54	0.56	7.4	21	21	22	16	21	5.6	1.0
AC-FT	45	56	53	1,090	1,170	1,490	5,150	2,640	4,970	3,120	818	236

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

MEAN	35.5	34.9	46.8	50.3	74.1	65.6	70.6	90.3	109	33.6	12.8	20.0
MAX	221	423	489	441	711	367	445	329	851	355	131	306
(WY)	(1974)	(2002)	(1992)	(1968)	(1992)	(1992)	(1997)	(1997)	(1981)	(2002)	(1974)	(1981)
MIN	0.07	0.16	0.22	0.31	0.81	1.10	0.89	0.24	0.37	0.13	0.04	0.02
(WY)	(1979)	(1989)	(1989)	(1996)	(1990)	(1996)	(1996)	(1984)	(1971)	(1978)	(1980)	(1984)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

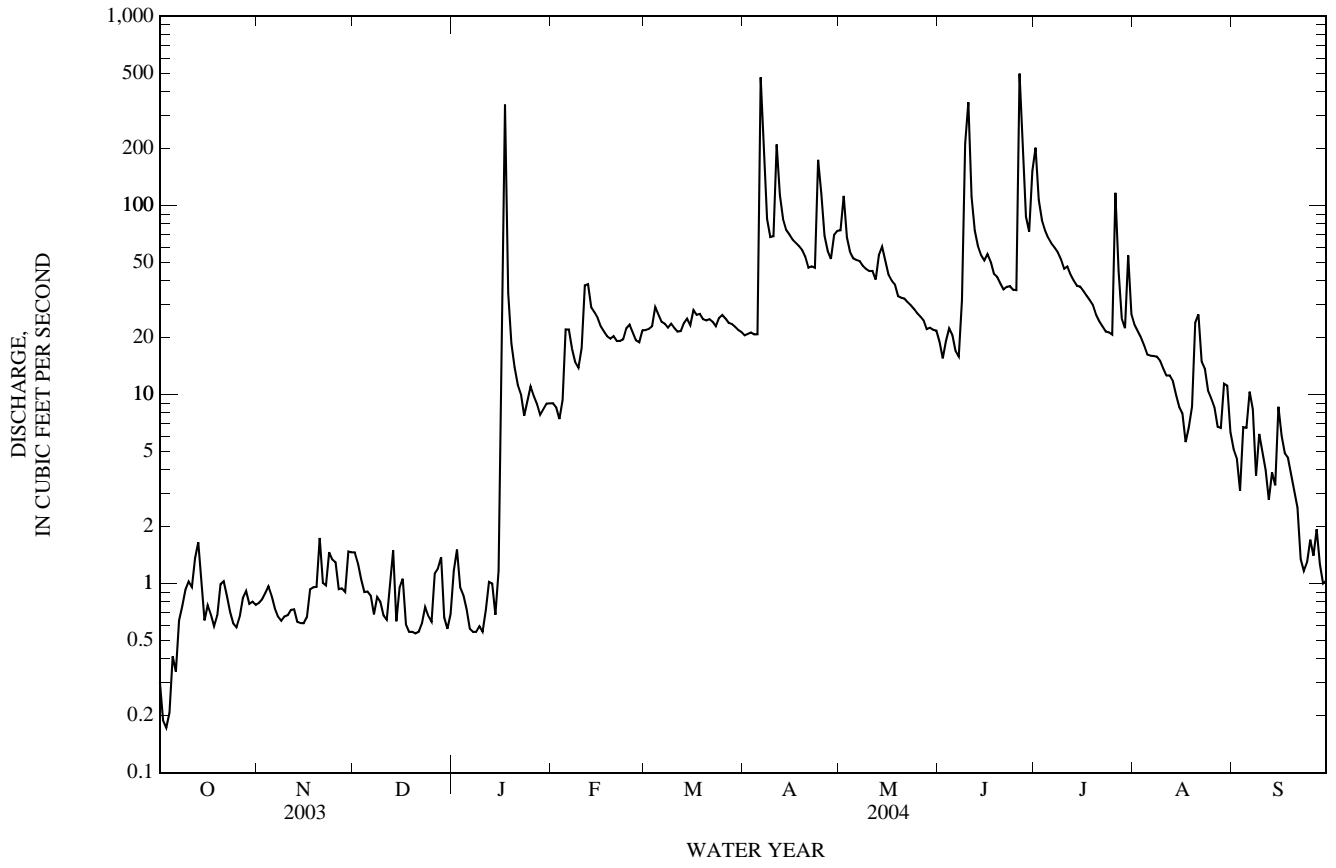
WATER YEARS 1968 - 2004

ANNUAL TOTAL	11,098.54	10,502.68		
ANNUAL MEAN	30.4	28.7	51.5	
HIGHEST ANNUAL MEAN			203	1992
LOWEST ANNUAL MEAN			2.00	2000
HIGHEST DAILY MEAN	633	Feb 21	498	Jun 26
LOWEST DAILY MEAN	0.17	Oct 3	0.17	Oct 3
ANNUAL SEVEN-DAY MINIMUM	0.25	Sep 28	0.32	Oct 1
MAXIMUM PEAK FLOW			2,610	Jun 26
MAXIMUM PEAK STAGE			8.26	Jun 26
ANNUAL RUNOFF (AC-FT)	22,010	20,830	37,280	
10 PERCENT EXCEEDS	81	63	95	
50 PERCENT EXCEEDS	4.3	17	12	
90 PERCENT EXCEEDS	0.42	0.68	0.33	

a From floodmark.

i From indirect measurement of peak flow.

08104900 South Fork San Gabriel River at Georgetown, TX—Continued



08105095 Berry Creek at Airport Road near Georgetown, TX

LOCATION.--Lat 30°42'11", long 97°39'58", Williamson County, Hydrologic Unit 12070203, located 1.4 miles upstream from IH-35.

DRAINAGE AREA.--71.4 mi<sup>2</sup>.

PERIOD OF RECORD.--Jul. 31, 1984 to Sept. 30, 2003 (miscellaneous discharge measurements). Oct. 1, 2003 to Sept. 30, 2004.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 655 ft above NGVD of 1929. Elevation from topographic map. Satellite telemeter at station.

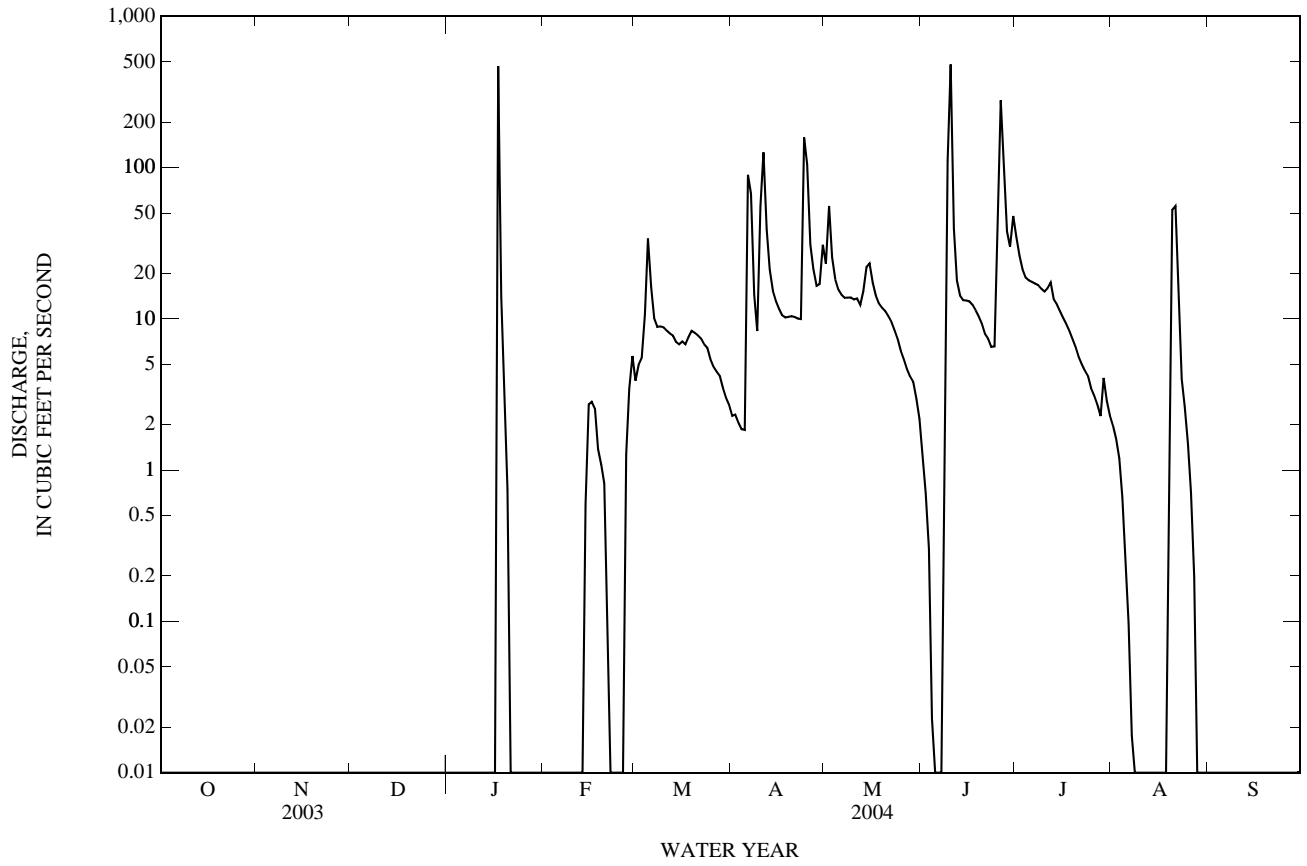
EXTREMES FOR CURRENT YEAR.--Maximum discharge, Jan. 17, 1,970 ft<sup>3</sup>/s (gage-height 15.18 ft, as determined by floodmark); minimum, no flow many days.

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	e0.00	0.00	0.00	0.00	0.00	3.9	2.3	23	1.3	35	2.0	0.00
2	e0.00	0.00	0.00	0.00	0.00	5.0	2.3	56	0.70	26	1.6	0.00
3	e0.00	0.00	0.00	0.00	0.00	5.5	2.1	25	0.30	21	1.2	0.00
4	e0.00	0.00	0.00	0.00	0.00	11	1.9	18	0.02	19	0.66	0.00
5	e0.00	0.00	0.00	0.00	0.00	34	1.8	16	0.00	18	0.23	0.00
6	e0.00	0.00	0.00	0.00	0.00	16	89	14	0.00	18	0.10	0.00
7	e0.00	0.00	0.00	0.00	0.00	10	67	14	0.00	17	0.02	0.00
8	e0.00	0.00	0.00	0.00	0.00	8.9	14	14	0.08	17	0.00	0.00
9	e0.00	0.00	0.00	0.00	0.00	8.9	8.3	14	112	16	0.00	0.00
10	e0.00	0.00	0.00	0.00	0.00	8.8	56	13	480	15	0.00	0.00
11	e0.00	0.00	0.00	0.00	0.00	8.4	126	14	40	16	0.00	0.00
12	e0.00	0.00	0.00	0.00	0.00	8.0	39	12	18	17	0.00	0.00
13	e0.00	0.00	0.00	0.00	0.00	7.8	21	15	14	13	0.00	0.00
14	e0.00	0.00	0.00	0.00	0.60	7.0	15	22	13	12	0.00	0.00
15	e0.00	0.00	0.00	0.00	2.7	6.8	13	23	13	11	0.00	0.00
16	0.00	0.00	0.00	0.00	2.8	7.1	12	17	13	10	0.00	0.00
17	0.00	0.00	0.00	468	2.5	6.8	11	14	12	9.3	0.00	0.00
18	0.00	0.00	0.00	14	1.4	7.6	10	13	11	8.4	0.00	0.00
19	0.00	0.00	0.00	3.6	1.1	8.3	10	12	10	7.4	2.1	0.00
20	0.00	0.00	0.00	0.75	0.81	8.1	10	11	9.3	6.5	52	0.00
21	0.00	0.00	0.00	0.00	0.18	7.8	10	10	8.0	5.6	56	0.00
22	0.00	0.00	0.00	0.00	0.00	7.4	10	9.6	7.4	5.0	12	0.00
23	0.00	0.00	0.00	0.00	0.00	6.8	10	8.5	6.5	4.5	4.0	0.00
24	0.00	0.00	0.00	0.00	0.00	6.5	158	7.4	6.6	4.2	2.6	0.00
25	0.00	0.00	0.00	0.00	0.00	5.4	105	6.2	25	3.5	1.5	0.00
26	0.00	0.00	0.00	0.00	0.00	4.8	31	5.4	279	3.1	0.71	0.00
27	0.00	0.00	0.00	0.00	1.3	4.5	21	4.7	111	2.7	0.20	0.00
28	0.00	0.00	0.00	0.00	3.4	4.2	17	4.1	38	2.3	0.00	0.00
29	0.00	0.00	0.00	0.00	5.7	3.5	17	3.8	30	4.1	0.00	0.00
30	0.00	0.00	0.00	0.00	---	3.0	31	2.9	48	2.9	0.00	0.00
31	0.00	---	0.00	0.00	---	2.7	---	2.2	---	2.3	0.00	---
TOTAL	0.00	0.00	0.00	486.35	22.49	244.5	921.7	424.8	1,307.20	352.8	136.92	0.00
MEAN	0.00	0.00	0.00	15.7	0.78	7.89	30.7	13.7	43.6	11.4	4.42	0.00
MAX	0.00	0.00	0.00	468	5.7	34	158	56	480	35	56	0.00
MIN	0.00	0.00	0.00	0.00	0.00	2.7	1.8	2.2	0.00	2.3	0.00	0.00
AC-FT	0.00	0.00	0.00	965	45	485	1,830	843	2,590	700	272	0.00

e Estimated

08105095 Berry Creek at Airport Road near Georgetown, TX—Continued



## BRAZOS RIVER BASIN

08105600 Granger Lake near Granger, TX

LOCATION.--Lat 30°41'34", long 97°19'34", Williamson County, Hydrologic Unit 12070205, at Granger Dam on San Gabriel River, 1.5 mi south of Friendship, 2.2 mi upstream from Willis Creek, 7.1 mi east of Granger, and at mile 31.9.

DRAINAGE AREA.--730 mi<sup>2</sup>.

PERIOD OF RECORD.--Jan. 1980 to Sept. 2000 (contents furnished by U.S. Army Corps of Engineers), Oct. 2000 to Sept. 2002 (daily mean contents). Oct 2002 to current year. Water-quality records: Chemical data: Oct. 1980 to Aug. 1989. Biochemical data: Oct. 1980 to Aug. 1989.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Mar. 27, 1980, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by a rolled earthfill dam, 16,320 ft long, including the spillway. The dam is owned by the U.S. Army Corps of Engineers. The lake was built for water conservation and flood control. Deliberate impoundment began on Jan. 21, 1980. The spillway is an ungated 950-foot long ogee weir, located near right end of dam. The spillway for normal flood releases is a gated 18-foot-diameter conduit, controlled by two 8- by 18-foot slide gates, located near the center of dam. The invert for the floodgate is 457.0 ft. A low-flow outlet consists of three 3- by 4-foot gated openings, with invert elevations of 486.0, 494.0, and 502.0 ft. Data regarding dam are given in the following table:

	Elevation (feet)
Top of dam	555.0
Designed flood	550.3
Crest of spillway	528.0
Top of conservation pool	503.8
Lowest gated outlet (invert of 18-foot conduit)	457.0

COOPERATION.--Prior to Oct. 1, 2000, record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey. A new capacity table, provided by the Texas Water Development Board, was put into use beginning Oct. 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Jan. 1980 to Sept. 2002: Maximum contents, 268,200 acre-ft, Mar. 5, 1992; minimum contents after initial filling, 44,860 acre-ft, Sept. 23, 2000; Jan. 1980 to current year: maximum elevation, 530.11 ft, Mar. 5, 1992, minimum elevation, 501.43 ft, Sept. 23, 2000.

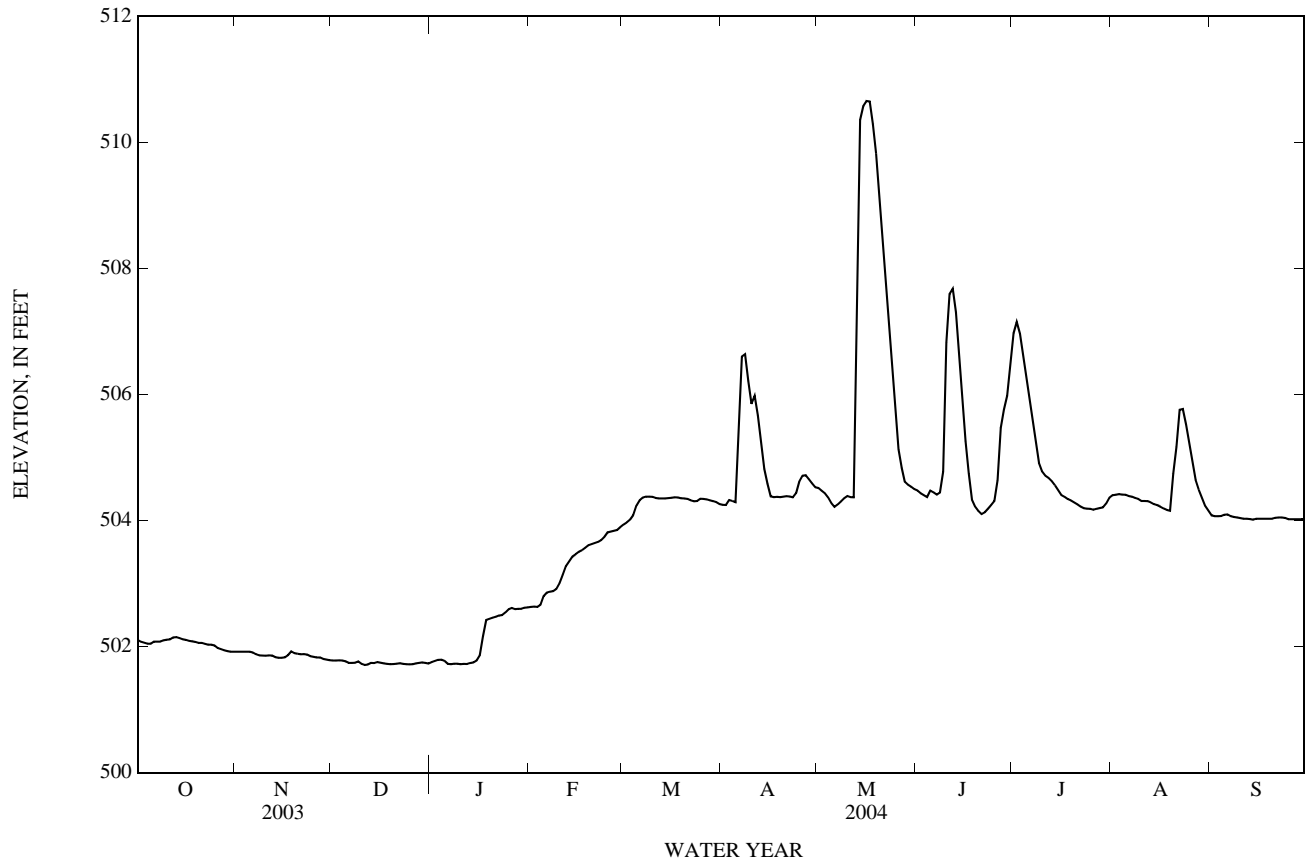
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 510.72 ft, May 17; minimum elevation, 501.68 ft, Dec. 12.

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	502.10	501.92	501.78	501.75	502.63	503.94	504.25	504.52	504.48	506.97	504.40	504.08
2	502.08	501.92	501.78	501.77	502.64	503.97	504.25	504.47	504.43	507.15	504.41	504.07
3	502.06	501.92	501.78	501.79	502.63	504.01	504.32	504.43	504.40	506.97	504.42	504.07
4	502.05	501.92	501.78	501.79	502.67	504.08	504.31	504.37	504.37	506.63	504.41	504.07
5	502.05	501.92	501.77	501.77	502.80	504.24	504.29	504.28	504.48	506.30	504.41	504.09
6	502.08	501.91	501.74	501.73	502.86	504.32	505.33	504.22	504.45	505.97	504.39	504.10
7	502.08	501.88	501.74	501.72	502.87	504.37	506.60	504.25	504.41	505.64	504.38	504.07
8	502.08	501.86	501.74	501.73	502.88	504.38	506.64	504.30	504.45	505.27	504.36	504.06
9	502.10	501.86	501.76	501.73	502.92	504.38	506.21	504.35	504.78	504.91	504.34	504.05
10	502.11	501.86	501.73	501.72	503.01	504.38	505.85	504.39	506.83	504.78	504.31	504.04
11	502.12	501.86	501.71	501.73	503.14	504.36	505.98	504.37	507.59	504.71	504.31	504.03
12	502.15	501.86	501.72	501.72	503.28	504.35	505.67	504.37	507.68	504.68	504.31	504.03
13	502.15	501.83	501.74	501.74	503.36	504.35	505.23	506.98	507.30	504.63	504.29	504.02
14	502.14	501.82	501.74	501.75	503.43	504.35	504.82	510.36	506.65	504.56	504.26	504.01
15	502.12	501.82	501.75	501.78	503.47	504.36	504.59	510.58	505.95	504.48	504.24	504.03
16	502.11	501.83	501.74	501.86	503.50	504.36	504.38	510.66	505.26	504.40	504.22	504.03
17	502.09	501.87	501.73	502.16	503.53	504.37	504.37	510.65	504.75	504.38	504.19	504.03
18	502.08	501.92	501.73	502.42	503.57	504.37	504.38	510.29	504.33	504.34	504.17	504.03
19	502.07	501.90	501.72	502.44	503.61	504.35	504.37	509.82	504.22	504.32	504.16	504.03
20	502.06	501.89	501.72	502.46	503.63	504.35	504.38	509.17	504.15	504.29	504.74	504.03
21	502.06	501.88	501.73	502.47	503.64	504.34	504.39	508.52	504.10	504.26	505.17	504.04
22	502.04	501.88	501.74	502.49	503.66	504.32	504.38	507.85	504.13	504.22	505.76	504.05
23	502.03	501.87	501.73	502.50	503.69	504.31	504.37	507.14	504.19	504.20	505.77	504.05
24	502.03	501.85	501.72	502.54	503.74	504.31	504.43	506.46	504.24	504.19	505.53	504.04
25	502.02	501.84	501.72	502.59	503.81	504.35	504.62	505.76	504.31	504.19	505.24	504.02
26	501.98	501.83	501.72	502.61	503.83	504.34	504.71	505.13	504.64	504.17	504.93	504.02
27	501.96	501.83	501.73	502.59	503.84	504.34	504.72	504.84	505.47	504.19	504.65	504.02
28	501.94	501.81	501.74	502.60	503.85	504.32	504.66	504.62	505.76	504.20	504.49	504.02
29	501.93	501.80	501.75	502.60	503.90	504.31	504.59	504.57	505.98	504.21	504.36	504.02
30	501.92	501.79	501.74	502.62	---	504.29	504.53	504.54	506.45	504.27	504.23	504.02
31	501.92	---	501.73	502.62	---	504.26	---	504.50	---	504.36	504.16	---
MEAN	502.06	501.87	501.74	502.12	503.32	504.29	504.85	506.28	505.14	504.90	504.55	504.04
MAX	502.15	501.92	501.78	502.62	503.90	504.38	506.64	510.66	507.68	507.15	505.77	504.10
MIN	501.92	501.79	501.71	501.72	502.63	503.94	504.25	504.22	504.10	504.17	504.16	504.01

WTR YR 2004 MEAN 503.76 MAX 510.66 MIN 501.71

08105600 Granger Lake near Granger, TX—Continued



## BRAZOS RIVER BASIN

08105700 San Gabriel River at Laneport, TX

LOCATION.--Lat 30°41'39", long 97°16'43", Williamson County, Hydrologic Unit 12070205, on right bank at upstream side of county bridge, 0.2 mi north of Laneport, 3.4 mi downstream from Willis Creek, 7.5 mi northwest of Thrall, and 26.2 mi upstream from mouth.

DRAINAGE AREA.--738 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1965 to current year. Water-quality records: Chemical data: July 1972 to Aug. 1989. Biochemical data: July 1972 to Aug. 1989. Water temperature: Dec. 1976 to Mar. 1982.

REVISED RECORDS.--WRD TX-74-1: 1965(M), 1966(P), 1967(M), 1968, 1969(P), 1973(P). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 412.60 ft above NGVD of 1929. 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. No known diversions.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--14 years (water years 1966-79), 289 ft<sup>3</sup>/s (209,400 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1910, 39.6 ft, occurred Sept. 1921. Other significant floods occurred Apr. 1957, 34.6 ft; and Oct. 1959, 33.8 ft; from floodmarks at present site and datum (discharges not determined).

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS, 1965-1979: Maximum discharge, 31,200 ft<sup>3</sup>/s Oct. 31, 1974 (gage height, 30.80 ft); minimum daily, 0.28 ft<sup>3</sup>/s Aug. 25-28, 1978.

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	6.0	6.1	5.8	5.2	5.7	81	344	157	15	56	146
2	5.7	6.0	6.2	5.8	5.2	5.7	87	344	156	465	56	28
3	5.7	6.2	6.3	5.4	5.1	5.7	85	343	154	1,100	56	28
4	5.8	6.3	6.4	5.4	6.8	5.8	83	342	153	1,100	56	28
5	6.3	6.2	6.4	5.2	8.4	5.8	83	341	173	1,090	55	28
6	7.0	6.2	6.6	5.1	6.1	5.6	251	173	152	1,090	56	28
7	6.4	6.4	6.6	5.0	5.6	5.7	99	4.1	153	1,080	56	27
8	6.3	6.5	6.6	5.2	5.3	41	645	3.8	209	1,080	55	27
9	6.9	6.5	7.4	5.0	5.9	91	1,390	3.7	307	710	56	27
10	6.5	6.5	7.5	4.8	7.1	88	1,380	58	248	321	56	27
11	6.3	6.5	7.5	4.7	13	89	1,370	127	133	319	57	27
12	6.4	6.6	7.4	4.8	7.7	88	1,350	128	596	318	56	27
13	6.2	6.0	5.1	5.0	5.5	88	1,340	658	1,630	318	56	26
14	6.2	5.9	5.7	5.1	5.6	88	1,040	58	1,920	317	56	27
15	6.1	6.1	5.9	5.8	5.3	86	779	14	1,880	316	56	27
16	6.3	6.2	6.2	8.6	5.1	85	447	10	1,710	267	56	27
17	6.3	6.7	6.3	6.6	5.0	85	147	685	1,330	151	55	23
18	6.1	6.5	6.4	4.6	5.4	84	145	1,480	863	157	56	6.5
19	6.2	6.4	6.1	4.6	5.2	84	139	1,820	317	157	59	6.2
20	6.3	6.3	6.6	4.6	5.4	85	139	2,080	317	156	62	6.2
21	6.3	6.2	6.8	4.6	5.3	86	138	2,030	169	156	104	6.2
22	6.0	6.2	6.9	4.6	5.4	85	137	1,980	10	155	75	6.3
23	6.0	6.5	6.7	4.7	5.4	85	137	1,930	9.5	110	423	6.3
24	6.0	6.4	6.4	5.4	5.9	86	141	1,870	9.1	55	859	6.3
25	6.3	6.3	6.5	4.9	5.7	86	138	1,830	9.0	55	855	6.4
26	6.2	6.4	6.5	4.8	5.4	85	138	1,370	11	55	850	6.3
27	6.2	6.4	6.5	4.9	5.6	84	232	736	12	55	649	6.1
28	5.2	6.2	6.6	5.0	5.7	84	344	471	32	55	408	6.1
29	4.7	6.0	6.0	5.1	6.0	83	344	158	52	57	407	6.0
30	6.1	6.0	5.7	5.4	---	83	343	158	34	56	308	5.8
31	7.8	---	5.7	5.2	---	82	---	157	---	56	220	---
TOTAL	191.5	188.6	199.6	161.7	174.3	2,051.0	13,172	21,706.6	12,905.6	11,392	6,285	658.7
MEAN	6.18	6.29	6.44	5.22	6.01	66.2	439	700	430	367	203	22.0
MAX	7.8	6.7	7.5	8.6	13	91	1,390	2,080	1,920	1,100	859	146
MIN	4.7	5.9	5.1	4.6	5.0	5.6	81	3.7	9.0	15	55	5.8
AC-FT	380	374	396	321	346	4,070	26,130	43,060	25,600	22,600	12,470	1,310

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2004z, BY WATER YEAR (WY)

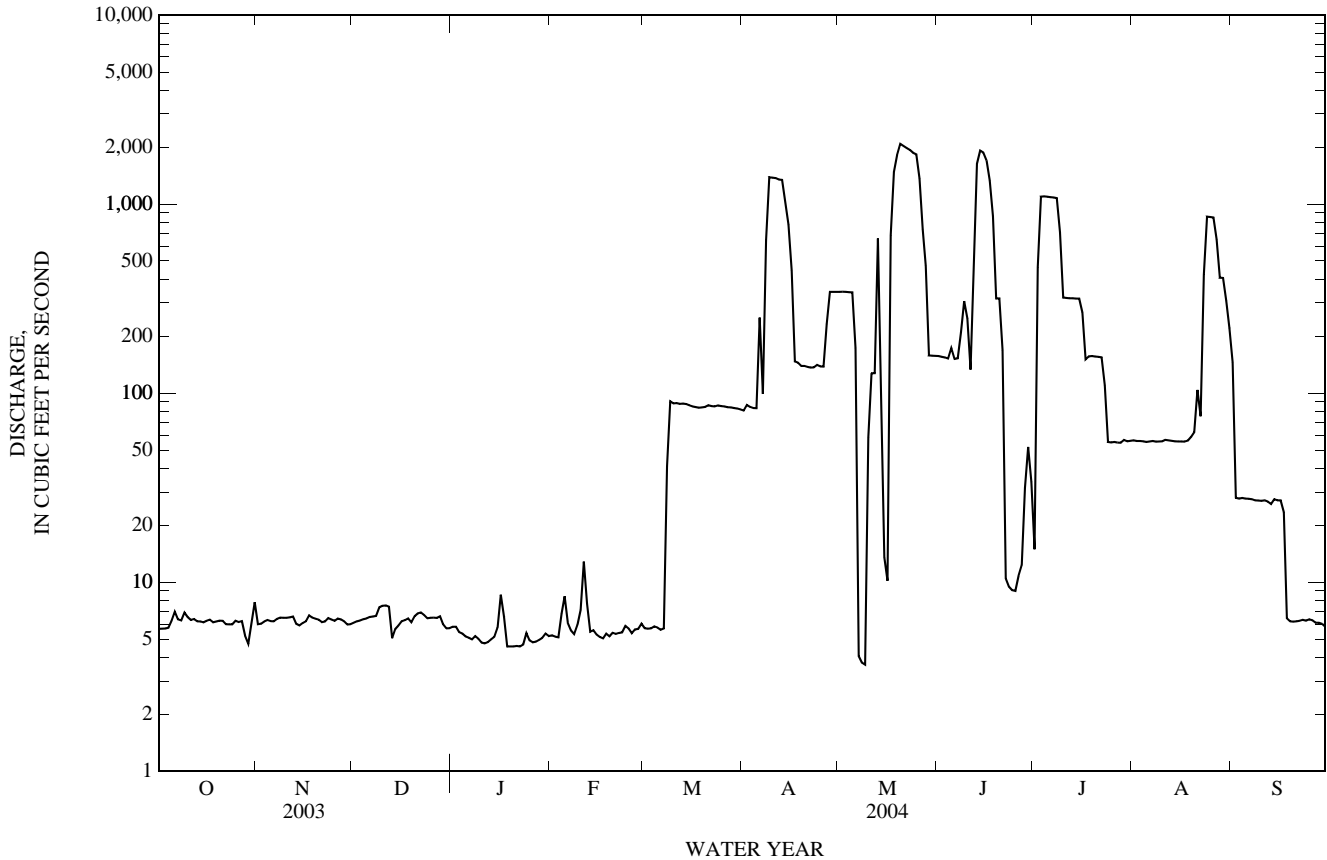
MEAN	82.7	166	240	264	286	390	315	391	418	388	43.2	72.5
MAX	545	899	953	1,233	1,334	2,210	1,685	2,103	1,732	2,196	203	922
(WY)	(1999)	(1999)	(1986)	(1987)	(1992)	(1992)	(1992)	(1997)	(1981)	(1992)	(2004)	(1981)
MIN	3.21	3.99	3.06	5.22	2.62	3.24	3.53	2.87	4.21	0.19	0.02	0.00
(WY)	(1983)	(1983)	(1983)	(2004)	(1980)	(1980)	(1984)	(1984)	(1996)	(1984)	(1984)	(1984)



08105700 San Gabriel River at Laneport, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1980 - 2004z	
ANNUAL TOTAL	68,706.3		69,086.6			
ANNUAL MEAN	188		189		255	
HIGHEST ANNUAL MEAN					1,015	1992
LOWEST ANNUAL MEAN					18.4	2000
HIGHEST DAILY MEAN	1,630	Feb 25	2,080	May 20	6,870	Mar 5, 1992
LOWEST DAILY MEAN	4.7	Oct 29	3.7	May 9	0.00	Aug 21, 1984
ANNUAL SEVEN-DAY MINIMUM	5.5	Sep 14	4.7	Jan 18	0.00	Aug 21, 1984
MAXIMUM PEAK FLOW			3,580	May 13	7,540	Mar 5, 1992
MAXIMUM PEAK STAGE			a15.16	May 13	21.86	Mar 5, 1992
ANNUAL RUNOFF (AC-FT)	136,300		137,000		184,500	
10 PERCENT EXCEEDS	525		646		833	
50 PERCENT EXCEEDS	34		14		36	
90 PERCENT EXCEEDS	5.9		5.3		4.1	

a From floodmark.  
z Period of regulated streamflow.



## BRAZOS RIVER BASIN

08106350 Little River near Rockdale, TX

LOCATION.--Lat 30°45'38", long 97°00'49", Milam County, Hydrologic Unit 12070204, on right bank downstream from Alcoa pumping station, 200 ft downstream from mouth of San Gabriel River, and 6.8 mi north of Rockdale.

DRAINAGE AREA.--6,959 mi<sup>2</sup>.

PERIOD OF RECORD.--Feb. 1981 to current year (daily mean discharges less than 1,000 ft<sup>3</sup>/s).

GAGE.--Water-stage recorder. Datum of gage is 299.12 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in 1981, at least 10% of contributing drainage area has been regulated. There are numerous diversions for irrigation and municipal supply above station. The Aluminum Company of America diverts water from Little River to their plant reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 38.34 ft, Dec. 21, 1991 (maximum discharge not determined); minimum daily discharge 13.0 ft<sup>3</sup>/s May 9, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 33.76 ft, May 14 (maximum discharge not determined); minimum discharge, 58 ft<sup>3</sup>/s, Oct. 02, gage height, 3.81 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	65	137	131	133	259	---	868	---	504	---	591	---
2	61	136	122	136	257	---	857	---	702	---	542	---
3	78	127	107	135	259	---	---	---	640	---	505	---
4	86	127	104	137	444	---	---	---	535	---	477	---
5	96	131	101	111	---	---	925	---	---	---	458	---
6	127	126	101	96	---	---	---	---	---	---	445	---
7	445	116	100	95	---	---	---	---	832	---	354	---
8	356	111	97	94	---	---	---	---	---	---	316	---
9	---	114	107	97	---	---	---	---	---	---	305	---
10	---	114	109	95	---	---	---	---	---	---	298	---
11	---	132	102	95	---	---	---	---	---	---	299	---
12	---	149	105	91	---	---	---	---	---	---	295	850
13	---	144	115	93	---	---	---	---	---	---	279	833
14	---	138	170	96	---	---	---	---	---	---	274	805
15	---	137	165	109	774	---	---	---	---	---	258	685
16	---	145	130	133	665	---	---	---	---	---	226	875
17	---	152	117	---	533	---	---	---	---	829	214	847
18	---	174	109	---	471	---	---	---	---	744	208	780
19	---	296	106	---	458	---	---	---	---	707	213	695
20	---	183	106	562	433	---	---	---	---	682	---	656
21	---	137	110	382	417	---	911	---	---	643	---	588
22	---	124	105	304	396	---	880	---	---	532	---	361
23	---	122	114	268	388	---	866	---	---	510	---	241
24	758	116	137	280	394	702	---	---	---	439	---	219
25	685	109	135	288	---	714	---	---	---	427	---	208
26	683	112	135	361	---	946	---	---	---	437	---	200
27	698	106	136	306	---	956	---	---	---	482	---	182
28	682	112	141	259	---	934	---	---	---	421	---	169
29	641	135	131	241	---	922	---	639	---	410	---	158
30	572	131	110	275	---	911	---	505	---	399	---	150
31	222	---	122	265	---	884	---	458	---	426	---	---

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## 08106500 Little River near Cameron, TX

LOCATION.--Lat 30°50'06", long 96°56'47", Milam County, Hydrologic Unit 12070204, on right bank at bridge on U.S. Highway 77, 2,020 ft downstream from old McCowan bridge, 0.7 mi upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 2 mi southeast of Cameron, and 33.2 mi upstream from mouth.

DRAINAGE AREA.--7,065 mi<sup>2</sup>.

PERIOD OF RECORD.--Nov. 1916 to current year. Water-quality records: Chemical data: Jan. 1968 to Aug. 1997. Biochemical data: Jan. 1968 to Aug. 1997. Sediment data: Feb. 1978 to July 1993.

REVISED RECORDS.--WSP 718: 1918-20, 1922. WSP 1512: 1918-20(M), 1921, 1922(M), 1924(M), 1926, 1929-30, 1934, 1935(M), 1936, 1940(M), 1941, 1944-45(M). WDR TX-76-2: Drainage area. WDR TX-92-2: Location.

GAGE.--Water-stage recorder. Datum of gage is 281.89 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Nov. 1916 to Sept. 1922, nonrecording gage at site 2.2 mi upstream at different datum. Oct. 1922, to Apr. 1926, nonrecording gage at McCowan bridge 1,990 ft upstream at same datum. Apr. 1926 to Oct. 1933, non-recording gage at same location but at 1.58 ft lower datum. Oct. 1933 to Aug. 1992, recording gage at site 2,020 ft upstream at same datum. Aug. to Oct. 1992, non-recording gage at site. Satellite telemeter at station.

REMARKS.--Records good except those estimated daily discharges, which are fair. Since water year 1954, at least 10% of contributing drainage area has been regulated. Many small diversions for irrigation and municipal supply affect low flow. The Aluminum Company of America diverts water 10.9 mi upstream from the gage for use at their Rockdale plant reservoir. The city of Cameron diverts water for municipal use 2.1 mi upstream from gage. Wastewater effluent is returned to the river upstream from gage. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--36 years (water years 1917-53), prior to regulation by Belton Lake, 1,807 ft<sup>3</sup>/s (1,309,000 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1852 reached about the same stage as that of Sept. 10, 1921. Flood in Dec. 1913, reached a stage of 49.0 ft. Stages based on information furnished by local resident.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS, 1917-1953: Maximum discharge since 1852, 647,000 ft<sup>3</sup>/s, Sept. 10, 1921 (gage height, 53.2 ft, present datum, from floodmark), from rating curve extended above 110,000 ft<sup>3</sup>/s, on basis of slope-area measurement of 647,000 ft<sup>3</sup>/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	76	178	150	151	301	1,440	953	6,370	308	8,450	644	3,420
2	74	166	149	152	320	1,460	939	6,980	410	5,110	636	3,300
3	82	155	123	151	319	1,390	1,080	6,880	393	4,450	e600	3,240
4	101	152	120	153	502	1,510	1,160	6,540	292	5,790	e580	3,250
5	115	153	115	136	714	1,710	1,030	6,340	1,610	5,680	557	3,230
6	156	154	114	120	1,640	2,440	1,990	6,040	1,280	5,560	535	3,150
7	408	139	110	106	1,160	3,370	6,750	5,620	580	5,490	434	2,730
8	480	133	108	105	1,360	3,340	4,950	4,530	653	5,470	353	2,660
9	e1,030	134	114	112	1,310	3,350	3,210	2,750	9,110	5,770	337	2,140
10	e3,440	133	122	108	1,430	3,430	4,700	2,610	22,800	4,640	331	1,610
11	e1,900	144	113	109	2,470	3,270	7,180	2,410	23,000	4,130	327	1,340
12	2,620	172	116	e106	4,470	2,820	6,730	1,940	8,960	4,080	335	1,010
13	2,750	166	124	e107	2,460	2,480	4,950	15,000	3,550	3,640	305	969
14	2,700	161	157	e108	1,610	1,540	4,350	25,000	4,840	2,410	300	974
15	2,850	160	207	114	963	1,460	3,000	10,300	7,330	1,710	286	852
16	3,440	176	149	152	836	1,430	2,250	1,930	7,420	1,140	243	994
17	3,400	200	132	441	665	1,410	1,480	907	6,900	964	225	1,010
18	3,300	213	121	2,970	574	1,420	1,450	1,560	6,580	852	217	929
19	2,680	306	116	1,080	563	1,380	1,420	2,090	5,710	815	222	842
20	2,580	260	114	745	520	1,350	1,340	2,870	5,470	786	413	793
21	2,420	168	120	503	529	1,330	1,030	2,900	5,410	753	2,500	728
22	2,000	146	118	373	483	1,310	984	2,800	5,140	634	6,110	483
23	1,860	144	117	320	462	1,240	961	2,720	4,310	597	4,020	301
24	945	137	149	316	474	801	1,200	2,660	3,400	529	2,350	252
25	798	127	149	333	588	775	3,280	2,510	2,580	487	3,950	238
26	786	129	149	401	1,830	997	2,210	2,050	4,970	504	4,080	223
27	808	124	151	383	1,610	1,050	1,690	1,190	17,400	545	4,100	208
28	798	120	165	308	1,450	1,020	3,760	831	11,400	483	3,730	183
29	748	151	163	281	1,400	1,010	4,880	446	8,030	460	3,630	172
30	719	149	124	308	---	998	5,280	284	5,950	450	3,690	161
31	348	---	128	307	---	972	---	232	---	452	3,470	---
TOTAL	46,412	4,850	4,107	11,059	33,013	53,503	86,187	137,290	185,786	82,831	49,510	41,392
MEAN	1,497	162	132	357	1,138	1,726	2,873	4,429	6,193	2,672	1,597	1,380
MAX	3,440	306	207	2,970	4,470	3,430	7,180	25,000	23,000	8,450	6,110	3,420
MIN	74	120	108	105	301	775	939	232	292	450	217	161
AC-FT	92,060	9,620	8,150	21,940	65,480	106,100	171,000	272,300	368,500	164,300	98,200	82,100

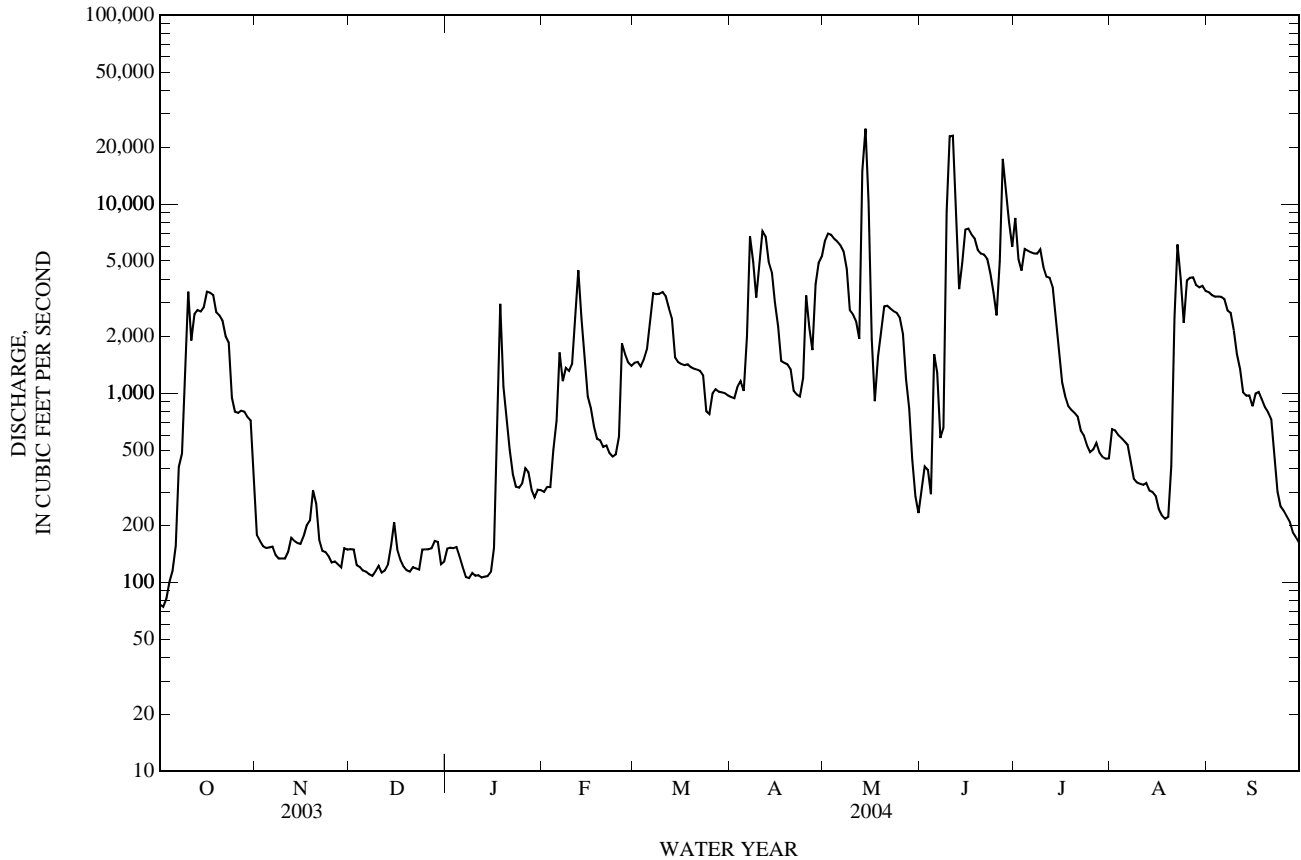
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2004z, BY WATER YEAR (WY)

MEAN	1,228	1,096	1,449	1,665	2,070	2,181	2,314	3,104	2,610	1,641	611	612
MAX	10,140	5,063	8,579	9,662	13,030	14,420	10,750	12,970	11,330	9,426	5,106	3,141
(WY)	(1960)	(1975)	(1992)	(1992)	(1992)	(1992)	(1997)	(1965)	(1957)	(1992)	(1992)	(1974)
MIN	17.2	18.4	23.0	34.5	50.2	22.8	16.5	132	15.1	1.58	6.24	4.40
(WY)	(1955)	(1956)	(1955)	(1956)	(1957)	(1956)	(1956)	(1984)	(1954)	(1956)	(1954)	(1956)

08106500 Little River near Cameron, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1954 - 2004z	
ANNUAL TOTAL	409,807		735,940			
ANNUAL MEAN	1,123		2,011		1,713	
HIGHEST ANNUAL MEAN					7,759	1992
LOWEST ANNUAL MEAN					174	1956
HIGHEST DAILY MEAN	21,800	Feb 22	25,000	May 14	84,200	May 18, 1965
LOWEST DAILY MEAN	74	Oct 2	74	Oct 2	0.00	Jul 12, 1956
ANNUAL SEVEN-DAY MINIMUM	85	Sep 28	108	Jan 7	0.00	Jul 12, 1956
MAXIMUM PEAK FLOW			27,400	May 13	116,000	Apr 5, 1957
MAXIMUM PEAK STAGE			31.62	May 13	39.56	Apr 5, 1957
ANNUAL RUNOFF (AC-FT)	812,900		1,460,000		1,241,000	
10 PERCENT EXCEEDS	2,910		5,320		4,940	
50 PERCENT EXCEEDS	336		949		500	
90 PERCENT EXCEEDS	110		128		71	

z Period of regulated streamflow  
 e Estimated



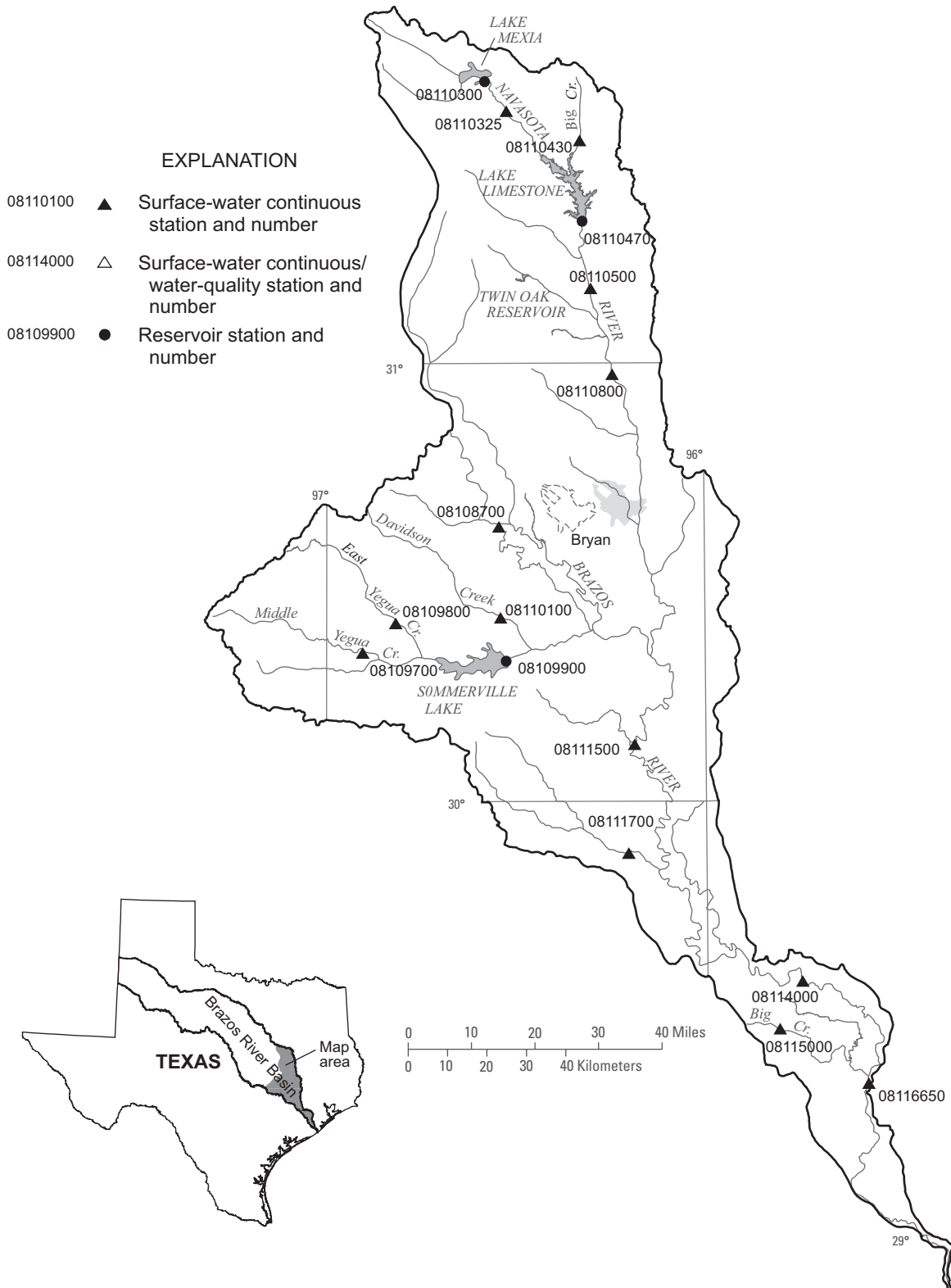


Figure 9.--Map showing location of gaging stations in the fourth section of the Brazos River Basin

08108700	Brazos River at State Highway 21 near Bryan, TX . . . . .	492
08109700	Middle Yegua River near Dime Box, TX . . . . .	494
08109800	East Yegua Creek near Dime Box, TX . . . . .	496
08109900	Somerville Lake near Somerville, TX . . . . .	498
08110100	Davidson Creek near Lyons, TX . . . . .	500
08110300	Lake Mexia near Mexia, TX . . . . .	502
08110325	Navasota River above Groesbeck, TX . . . . .	504
08110430	Big Creek near Freestone, TX . . . . .	506
08110470	Lake Limestone near Marquez, TX . . . . .	508
08110500	Navasota River near Easterly, TX . . . . .	510
08110800	Navosota River at OSR near Bryan, TX . . . . .	512
08111500	Brazos River near Hempstead, TX . . . . .	514
08111700	Mill Creek near Bellville, TX . . . . .	516
08114000	Brazos River at Richmond, TX . . . . .	518
08115000	Big Creek near Needville, TX . . . . .	520
08116650	Brazos River at Rosharon, TX . . . . .	522

## 08108700 Brazos River at State Highway 21 near Bryan, TX

LOCATION.--Lat 30°37'36", long 96°32'38", Burleson County, Hydrologic Unit 12070101, on right bank, 8.0 ft downstream from bridge on State Highway 21, 2.1 mi upstream from Little Brazos River, and 10.5 mi west of Bryan.

DRAINAGE AREA.--39,049 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--July 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 188.65 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those estimated daily discharges, which are fair. Since installation of gage in 1993, at least 10% of contributing drainage area has been regulated. Many small diversions above station for irrigation, municipal, industrial, and oil field operation.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 5, 1913, reached a stage of 61 ft, present site and datum, from information by Texas and New Orleans Railroad Co. at their bridge 200 ft upstream. Flood in 1854 reached about the same stage as flood of Dec. 5, 1913.

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	360	801	856	527	1,030	6,360	1,950	13,400	2,460	43,000	3,040	5,740
2	299	587	796	467	905	6,560	1,710	19,300	2,700	37,100	3,030	4,850
3	245	508	801	444	845	6,480	1,790	23,900	2,590	21,100	3,100	4,530
4	210	963	786	457	848	6,380	1,720	20,700	2,280	16,100	3,040	4,490
5	226	733	949	445	871	8,590	1,700	18,600	2,250	15,100	3,260	4,610
6	1,160	582	726	404	3,050	10,600	1,600	16,300	3,760	13,800	3,020	4,600
7	2,130	657	643	378	5,890	11,300	3,600	13,500	3,160	13,400	2,720	4,590
8	2,170	769	723	428	5,760	9,600	8,870	11,800	5,400	13,300	2,530	4,740
9	3,770	1,240	542	461	4,110	8,830	5,590	9,950	12,400	11,600	2,320	4,320
10	25,100	929	480	373	4,130	7,650	4,430	7,620	42,400	11,000	1,960	3,780
11	28,200	688	449	335	6,820	6,420	6,940	7,160	58,900	9,610	1,610	5,400
12	11,800	583	450	494	11,700	5,480	9,690	6,490	53,800	8,920	1,620	5,820
13	8,300	582	625	1,110	10,700	4,730	7,750	e30,500	29,700	8,110	1,990	4,950
14	5,930	763	584	1,210	7,610	3,990	5,730	e51,200	19,300	7,470	2,360	4,620
15	4,270	658	706	766	6,030	3,150	4,920	e44,700	19,900	6,330	2,240	4,660
16	4,030	1,290	654	638	4,170	3,230	3,690	e27,500	22,600	5,110	1,450	4,470
17	4,250	2,550	566	1,360	3,290	3,190	2,980	11,100	20,300	4,460	1,030	5,360
18	4,140	3,230	589	2,470	2,680	3,340	2,230	7,150	18,600	4,010	1,110	5,510
19	3,920	3,020	512	5,620	2,190	3,430	2,070	7,110	17,700	3,220	1,450	5,450
20	3,320	2,450	455	3,920	2,120	3,560	2,060	5,660	15,500	2,530	1,770	5,380
21	3,150	1,610	417	2,380	2,030	3,170	2,230	5,570	12,600	2,280	2,890	5,330
22	2,880	1,390	421	1,510	1,730	3,060	1,970	5,590	11,400	2,200	7,760	4,720
23	2,380	1,140	468	1,040	1,200	2,990	1,690	5,020	10,200	2,230	11,900	2,600
24	2,160	1,110	483	1,090	1,020	2,720	2,060	5,050	10,800	1,900	6,140	1,650
25	1,440	1,110	456	1,880	1,070	2,050	8,560	4,950	11,000	1,910	5,580	1,330
26	1,170	1,010	472	1,220	3,140	1,560	19,900	4,680	13,300	2,120	8,080	1,130
27	1,090	1,460	450	1,010	8,500	1,610	16,000	3,920	33,800	1,880	8,840	968
28	1,100	1,350	463	1,090	6,120	1,720	11,900	2,930	58,900	1,680	8,400	928
29	1,070	1,120	571	1,040	5,360	2,260	12,900	2,430	54,800	1,450	7,210	919
30	1,000	999	675	999	---	2,240	12,900	1,990	45,200	1,490	6,700	959
31	967	---	613	1,120	---	2,160	---	1,640	---	2,500	5,850	---
TOTAL	132,237	35,882	18,381	36,686	114,919	148,410	171,130	397,410	617,700	276,910	124,000	118,404
MEAN	4,266	1,196	593	1,183	3,963	4,787	5,704	12,820	20,590	8,933	4,000	3,947
MAX	28,200	3,230	949	5,620	11,700	11,300	19,900	51,200	58,900	43,000	11,900	5,820
MIN	210	508	417	335	845	1,560	1,600	1,640	2,250	1,450	1,030	919
AC-FT	262,300	71,170	36,460	72,770	227,900	294,400	339,400	788,300	1,225,000	549,300	246,000	234,900

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2004, BY WATER YEAR (WY)

MEAN	2,609	3,418	5,754	4,654	5,876	9,322	6,537	6,428	5,745	2,981	2,181	1,923
MAX	11,490	8,769	13,880	16,460	21,210	31,650	26,320	20,120	20,590	9,389	11,420	5,125
(WY)	(1999)	(1999)	(2002)	(1998)	(1997)	(1997)	(1997)	(1997)	(2004)	(1997)	(1995)	(2001)
MIN	170	192	314	619	396	696	673	448	1,113	565	396	213
(WY)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)	(1996)	(1996)	(1999)	(2000)	(2003)	(1999)

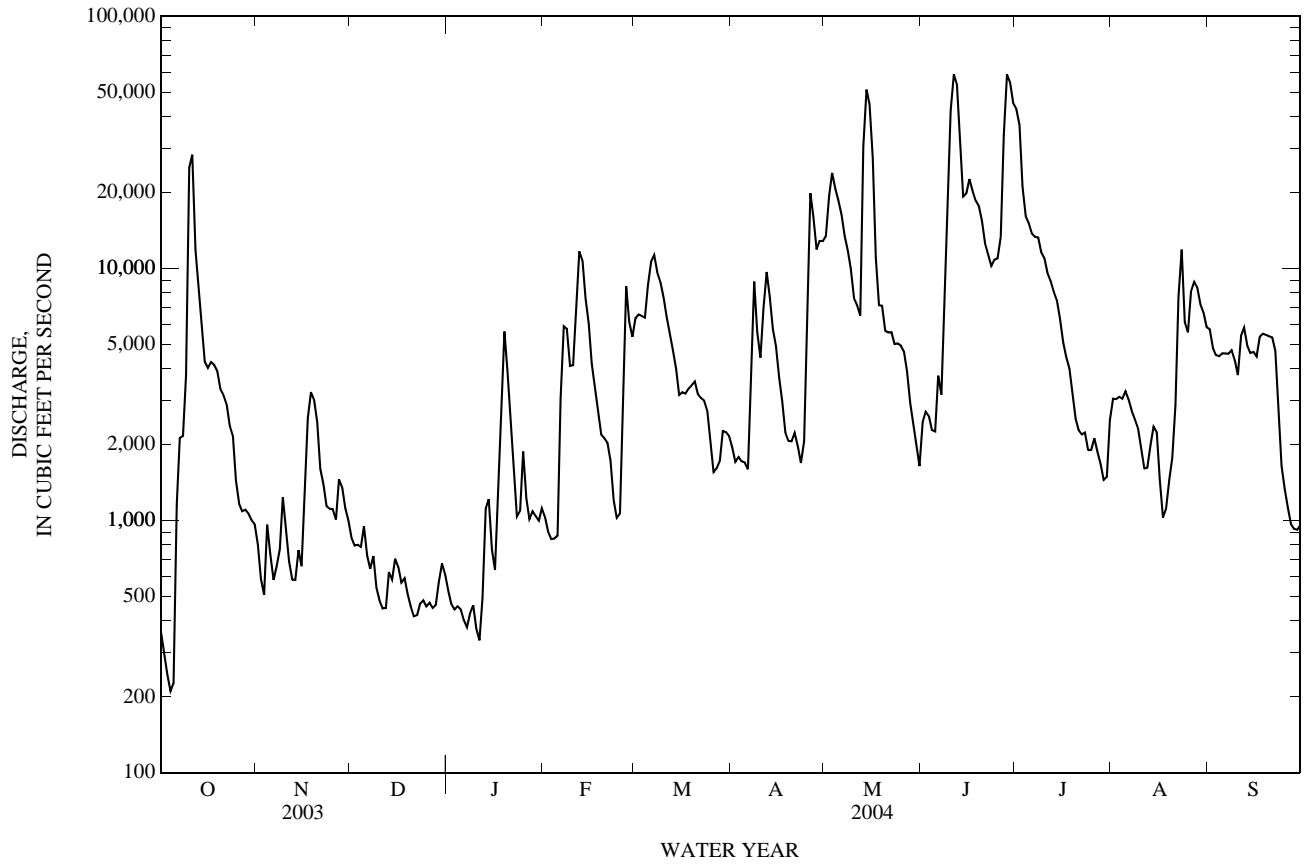
## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1993 - 2004
ANNUAL TOTAL	1,016,909	2,192,069	
ANNUAL MEAN	2,786	5,989	4,797
HIGHEST ANNUAL MEAN			11,920
LOWEST ANNUAL MEAN			827
HIGHEST DAILY MEAN	47,300	Feb 23	58,900
LOWEST DAILY MEAN	210	Oct 4	210
ANNUAL SEVEN-DAY MINIMUM	293	Sep 4	403
MAXIMUM PEAK FLOW			61,200
MAXIMUM PEAK STAGE			41.74
ANNUAL RUNOFF (AC-FT)	2,017,000	4,348,000	3,475,000
10 PERCENT EXCEEDS	5,670	13,400	12,600
50 PERCENT EXCEEDS	1,170	2,910	1,690
90 PERCENT EXCEEDS	392	583	488

e Estimated



08108700 Brazos River at State Highway 21 near Bryan, TX—Continued



08109700 Middle Yegua Creek near Dime Box, TX

LOCATION.--Lat 30°20'21", long 96°54'16", Lee County, Hydrologic Unit 12070102, on right bank 25 ft upstream from centerline of State Highway 21, 4.5 mi upstream from West Yegua Creek, 5.0 mi southwest of Dime Box, and 17.5 mi upstream from mouth.

DRAINAGE AREA.--236 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Datum of gage is 295.40 ft above NGVD of 1929 (furnished by Texas Department of Transportation). June 30 to July 21, 1970, nonrecording gage at same site and datum. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1851, 16 ft in Dec. 1913, 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	11	5.4	16	22	16	27	14	22	10	568	51	9.2
2	11	3.4	14	19	15	24	21	27	9.8	772	47	8.9
3	11	6.7	10	17	13	23	27	26	10	407	33	10
4	9.4	15	8.5	18	9.3	24	28	24	13	89	22	16
5	13	14	7.3	18	20	29	24	22	12	51	19	13
6	46	12	7.0	19	24	30	54	22	11	38	16	10
7	12	9.1	7.0	18	26	28	81	20	11	32	13	9.5
8	11	7.1	7.0	18	24	26	125	16	13	31	12	13
9	11	6.3	14	17	22	23	67	14	43	27	12	15
10	10	7.0	20	15	90	19	39	13	426	22	11	12
11	12	9.7	e19	14	281	19	39	13	565	20	11	11
12	14	13	20	14	417	18	53	13	401	19	13	8.1
13	12	13	20	16	270	17	54	14	372	19	13	12
14	10	14	17	18	223	23	37	17	318	19	13	12
15	8.3	14	16	18	119	23	33	25	74	20	12	18
16	6.7	16	15	22	75	23	27	26	66	19	12	25
17	6.1	19	14	47	51	22	27	23	44	16	11	17
18	8.9	24	14	48	37	22	22	17	39	14	12	12
19	7.8	17	13	32	33	21	18	14	34	13	17	12
20	8.4	17	11	24	31	18	17	13	26	18	17	12
21	9.9	17	13	19	31	15	15	12	21	18	14	11
22	9.9	16	15	18	25	13	15	14	19	15	16	14
23	9.5	15	16	17	23	12	18	13	19	13	24	16
24	8.2	e15	17	21	23	12	24	11	24	14	21	13
25	7.2	e15	19	43	31	15	35	11	38	20	18	12
26	9.3	13	29	37	40	18	49	12	109	37	18	13
27	8.1	14	27	29	37	22	41	14	174	20	15	18
28	6.4	13	26	21	34	20	32	14	432	19	11	22
29	6.9	14	28	18	31	17	28	13	380	22	11	16
30	7.6	15	30	17	---	15	24	12	397	47	10	14
31	6.7	---	26	16	---	13	---	11	---	43	9.6	---
TOTAL	329.3	389.7	515.8	690	2,071.3	631	1,088	518	4,110.8	2,482	534.6	404.7
MEAN	10.6	13.0	16.6	22.3	71.4	20.4	36.3	16.7	137	80.1	17.2	13.5
MAX	46	24	30	48	417	30	125	27	565	772	51	25
MIN	6.1	3.4	7.0	14	9.3	12	14	11	9.8	13	9.6	8.1
AC-FT	653	773	1,020	1,370	4,110	1,250	2,160	1,030	8,150	4,920	1,060	803

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

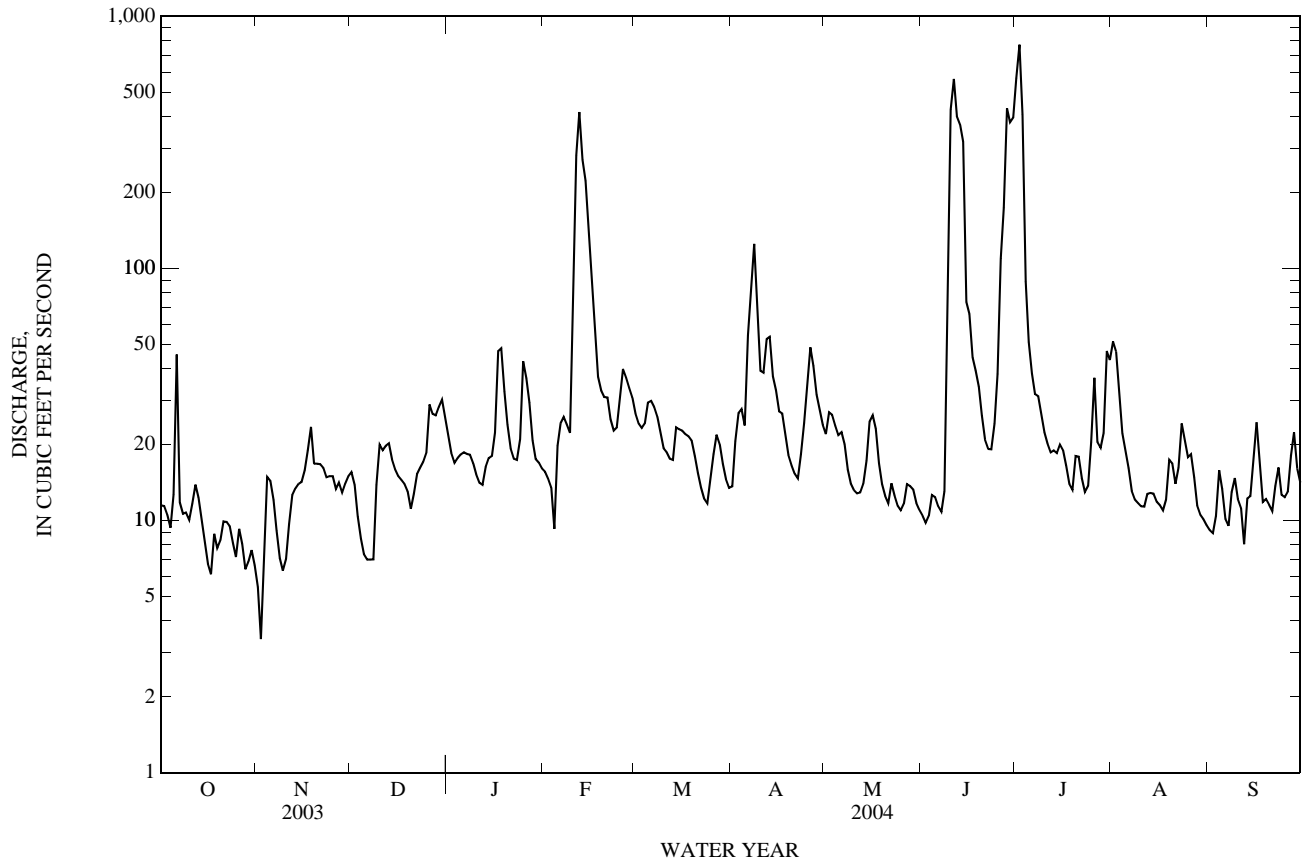
MEAN	33.6	77.0	101	66.0	98.4	67.1	54.6	105	93.0	9.98	3.40	17.6
MAX	385	588	694	481	891	280	355	662	1,052	80.1	18.2	368
(WY)	(1995)	(2003)	(1992)	(1991)	(1992)	(1970)	(1969)	(1975)	(1987)	(2004)	(1974)	(1974)
MIN	0.00	0.00	0.00	0.01	0.01	0.65	0.72	0.00	0.00	0.00	0.00	0.00
(WY)	(1964)	(1964)	(1964)	(1964)	(1964)	(1971)	(1971)	(1984)	(1984)	(1963)	(1962)	(1963)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004	
ANNUAL TOTAL	29,612.2		13,765.2			
ANNUAL MEAN	81.1		37.6		60.3	
HIGHEST ANNUAL MEAN					256	
LOWEST ANNUAL MEAN					0.55	
HIGHEST DAILY MEAN	6,150	Feb 21	772	Jul 2	9,470	Dec 22, 1991
LOWEST DAILY MEAN	3.4	Nov 2	3.4	Nov 2	0.00	Aug 1, 1962
ANNUAL SEVEN-DAY MINIMUM	6.2	Oct 28	6.2	Oct 28	0.00	Aug 1, 1962
MAXIMUM PEAK FLOW			834	Jul 2	12,500	Dec 22, 1991
MAXIMUM PEAK STAGE			9.05	Jul 2	15.39	Dec 22, 1991
ANNUAL RUNOFF (AC-FT)	58,740		27,300		43,660	
10 PERCENT EXCEEDS	67		47		89	
50 PERCENT EXCEEDS	16		17		7.9	
90 PERCENT EXCEEDS	8.3		9.9		0.00	

e Estimated

08109700 Middle Yegua Creek near Dime Box, TX—Continued



08109800 East Yegua Creek near Dime Box, TX

LOCATION.--Lat 30°24'26", long 96°49'02", Burleson County, Hydrologic Unit 12070102, on left bank 49 ft upstream from centerline of State Highway 21, 0.8 mi downstream from Buffalo Creek, 3.5 mi north of Dime Box, and 12.2 mi upstream from mouth.

DRAINAGE AREA.--244 mi<sup>2</sup>.

PERIOD OF RECORD.--Aug. 1962 to current year. Water-quality records: Chemical data: Nov. 1980 to Aug. 1987. Biochemical data: Nov. 1980 to Aug. 1987. Sediment data: June 1966 to Sept. 1975.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 284.00 ft above NGVD of 1929 (State Department of Highways and Public Transportation datum). Nov. 6 to Dec. 10, 1970, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--Records fair except those estimated daily discharges, which are poor. No known regulation. Diversions above station for irrigation. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1886, 17 ft in 1899 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	19	23	23	33	23	32	23	44	24	1,000	34	22
2	19	23	23	32	24	e32	24	60	27	883	33	22
3	20	23	24	33	23	e32	45	47	27	605	33	22
4	20	23	24	31	22	37	62	35	27	295	30	22
5	21	23	24	28	28	51	36	32	30	109	31	22
6	36	23	24	26	32	52	57	32	31	62	31	22
7	30	23	24	24	30	38	118	31	28	49	29	22
8	29	23	25	22	26	31	123	31	83	43	23	22
9	27	23	25	22	27	27	61	32	165	38	22	21
10	28	23	25	23	134	25	44	31	1,040	35	22	21
11	29	24	28	24	371	24	49	32	1,140	35	25	21
12	26	24	30	24	470	24	63	32	1,530	42	28	21
13	24	24	33	25	291	25	59	108	785	35	32	22
14	22	24	34	25	184	28	45	326	331	32	25	24
15	22	24	33	26	112	29	38	217	123	30	23	25
16	22	35	31	30	84	28	34	143	88	29	22	27
17	22	39	27	61	61	27	32	59	123	27	21	26
18	21	74	26	74	46	26	31	42	76	26	21	24
19	21	29	25	52	39	24	29	35	56	26	21	24
20	21	25	24	41	36	24	28	32	45	25	26	24
21	21	23	24	34	33	23	30	31	40	24	45	23
22	21	22	25	30	32	23	29	28	37	24	42	23
23	22	21	26	28	32	22	27	27	33	23	37	22
24	22	21	26	42	34	23	33	26	50	24	33	22
25	22	21	25	92	45	27	57	25	117	25	28	23
26	23	22	25	55	48	33	65	25	196	26	26	25
27	22	22	26	35	40	29	55	25	490	27	24	23
28	22	22	30	29	33	26	40	24	2,500	24	23	24
29	21	22	35	26	31	26	35	24	1,890	23	22	23
30	22	22	41	25	---	26	34	24	1,230	27	23	23
31	22	---	34	23	---	24	---	23	---	33	22	---
TOTAL	719	770	849	1,075	2,391	898	1,406	1,683	12,362	3,706	857	687
MEAN	23.2	25.7	27.4	34.7	82.4	29.0	46.9	54.3	412	120	27.6	22.9
MAX	36	74	41	92	470	52	123	326	2,500	1,000	45	27
MIN	19	21	23	22	22	22	23	23	24	23	21	21
AC-FT	1,430	1,530	1,680	2,130	4,740	1,780	2,790	3,340	24,520	7,350	1,700	1,360

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	42.6	66.5	91.3	72.2	109	79.7	70.4	113	108	21.8	9.91	23.7
MAX	503	562	651	418	934	276	364	656	813	221	67.1	506
(WY)	(1995)	(1999)	(1992)	(1991)	(1992)	(1992)	(1976)	(1975)	(1987)	(1968)	(1974)	(1974)
MIN	0.00	0.02	0.77	2.55	3.65	3.89	1.00	2.98	0.91	0.00	0.00	0.00
(WY)	(1964)	(1964)	(1964)	(1990)	(1990)	(1972)	(1972)	(1984)	(1971)	(1967)	(1962)	(1963)

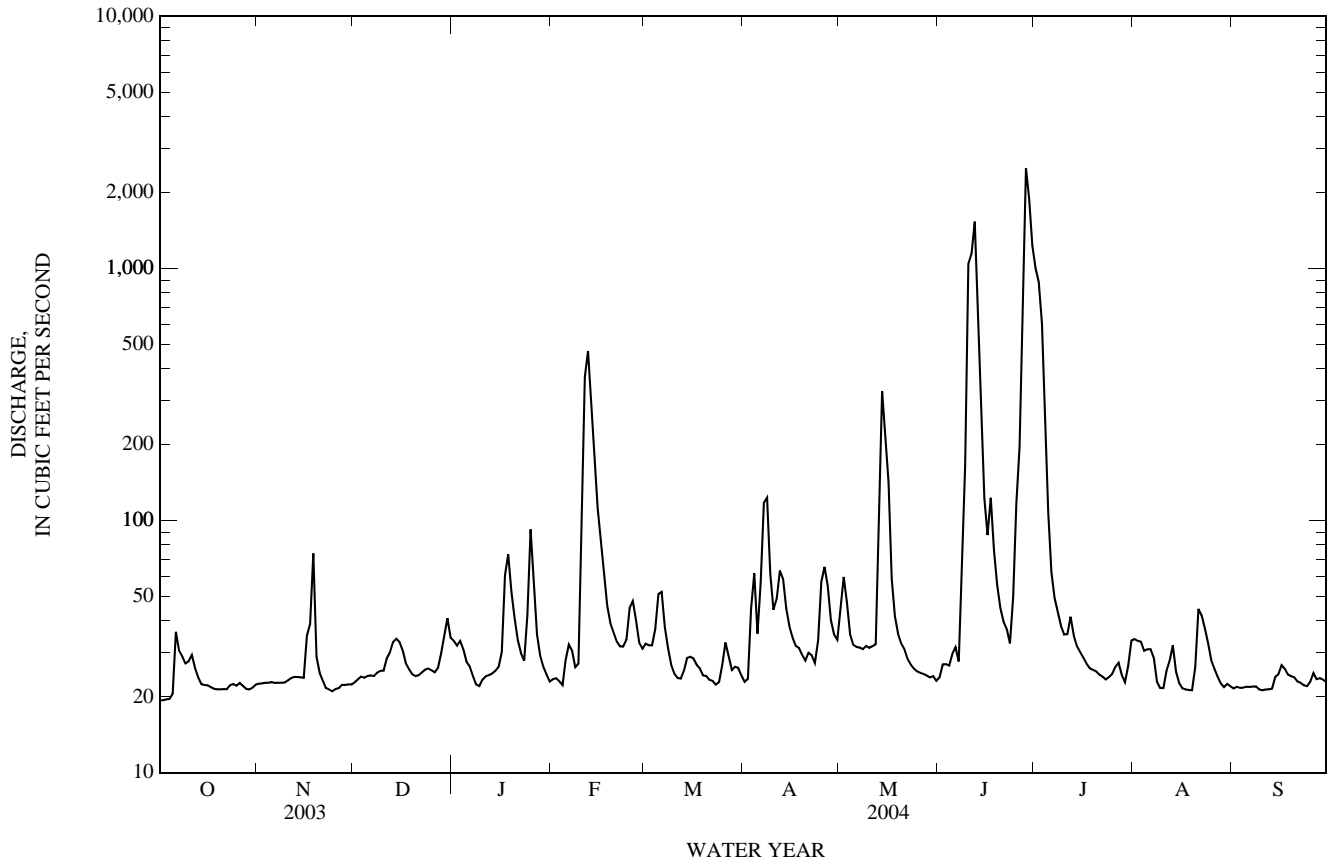
SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004	
ANNUAL TOTAL	32,391		27,403			
ANNUAL MEAN	88.7		74.9		67.1	
HIGHEST ANNUAL MEAN					245	1992
LOWEST ANNUAL MEAN					3.93	1971
HIGHEST DAILY MEAN	5,220	Feb 21	2,500	Jun 28	9,490	May 24, 1975
LOWEST DAILY MEAN	18	Aug 6	19	Oct 1	0.00	Aug 1, 1962
ANNUAL SEVEN-DAY MINIMUM	19	Aug 5	21	Oct 16	0.00	Aug 1, 1962
MAXIMUM PEAK FLOW			3,310	Jun 28	14,000	May 24, 1975
MAXIMUM PEAK STAGE			a10.96	Jun 28	13.91	May 24, 1975
ANNUAL RUNOFF (AC-FT)	64,250		54,350		48,580	
10 PERCENT EXCEEDS	90		75		81	
50 PERCENT EXCEEDS	26		27		14	
90 PERCENT EXCEEDS	20		22		0.47	

e Estimated

a From floodmark.

08109800 East Yegua Creek near Dime Box, TX—Continued



08109900 Somerville Lake near Somerville, TX

LOCATION.--Lat 30°19'20", long 96°31'32", Burleson County, Hydrologic Unit 12070102, in intake structure of Somerville Dam on Yegua Creek, at the southwest edge of the city limits of Somerville, and 20.0 mi upstream from mouth.

DRAINAGE AREA.--1,007 mi<sup>2</sup>.

PERIOD OF RECORD.--Feb. 1966 to Sept. 2000 (contents furnished by U.S. Army Corps of Engineers), Oct. 2000 to Sept. 2002 (daily mean contents). Oct. 2002 to current year. Prior to Oct. 1970, published as "Somerville Reservoir".

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 20,210 ft long, with a 4,715-foot-long dike and a 1,250-foot long uncontrolled spillway. Deliberate impoundment began Jan. 3, 1967, and the dam was completed Oct. 27, 1967. The spillway is an uncontrolled ogee weir 1,250 ft wide located near right end of dam. The low-flow outlet consists of one 10.0-foot-diameter conduit that is controlled by two 5.0- by 10.0-foot tractor-type gates. The dam is owned by the U.S. Army Corps of Engineers. The lake was designed for flood control and water conservation. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	280.0
Design flood	274.5
Crest of spillway	258.0
Top of conservation pool	238.0
Lowest gated outlet (invert of 10-foot conduit)	206.0

COOPERATION.--Prior to Oct. 1, 2000, record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey. A new capacity table, provided by Texas Water Development Board, was put into use Oct. 1, 1995.

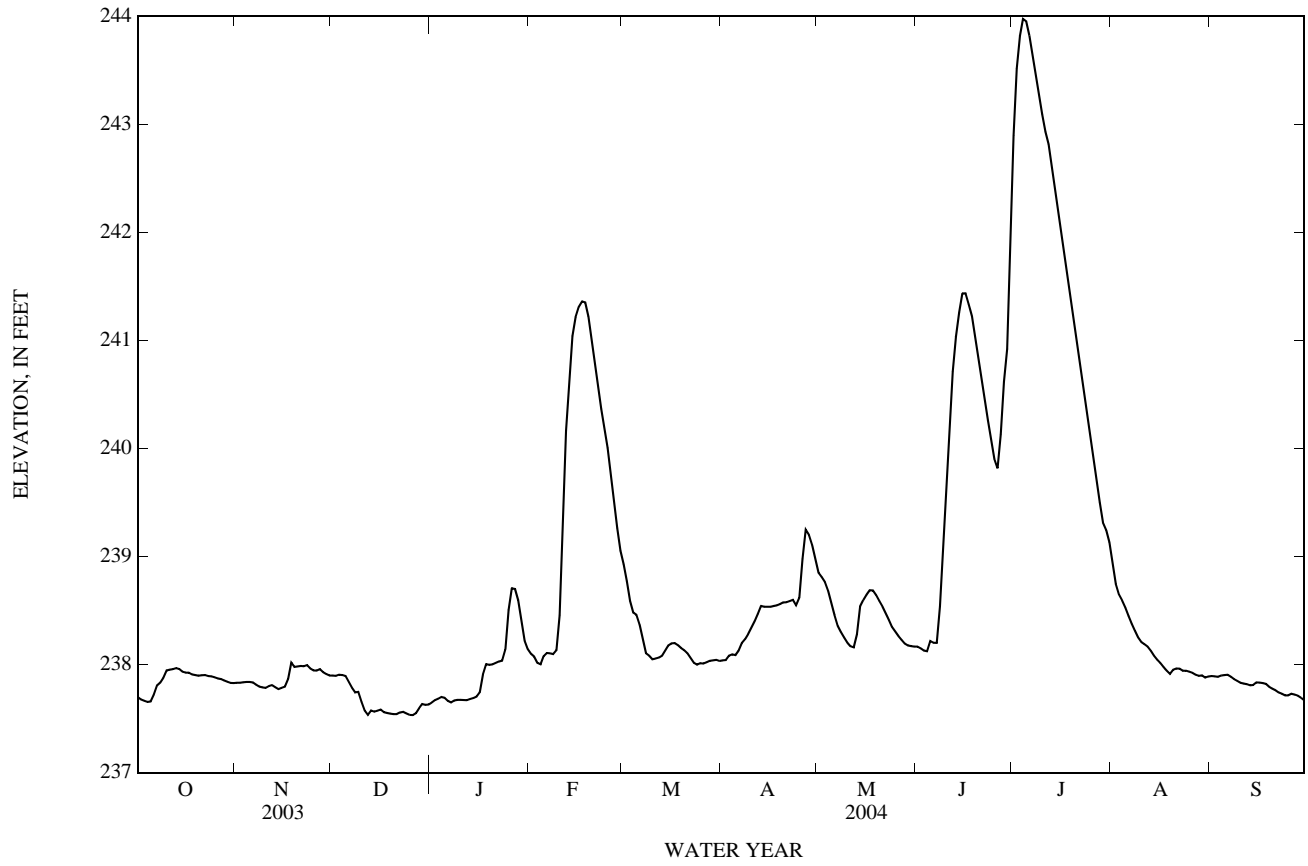
EXTREMES FOR PERIOD OF RECORD.--Feb. 1966 to Sept. 2002: Maximum contents, 547,600 acre-ft, Mar. 6, 1992; minimum contents 88,800 acre-ft; Feb. 1966 to current year: maximum elevation, 259.60 ft, Mar. 6, 1992, minimum elevation, 230.77 ft, Oct. 5, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 244.01 ft, Jul. 04; minimum elevation, 237.49, 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	237.70	237.83	237.90	237.65	238.10	238.93	238.04	238.85	238.17	242.89	238.94	237.89
2	237.68	237.83	237.90	237.67	238.07	238.77	238.04	238.81	238.15	243.52	238.75	237.89
3	237.66	237.84	237.91	237.68	238.02	238.59	238.08	238.76	238.13	243.82	238.65	237.89
4	237.66	237.84	237.90	237.70	238.00	238.48	238.09	238.68	238.12	243.98	238.59	237.90
5	237.66	237.84	237.89	237.69	238.08	238.46	238.09	238.57	238.22	243.95	238.53	237.90
6	237.72	237.83	237.84	237.67	238.11	238.37	238.13	238.46	238.20	243.82	238.45	237.91
7	237.81	237.81	237.79	237.65	238.10	238.23	238.20	238.36	238.20	243.65	238.38	237.89
8	237.83	237.80	237.74	237.67	238.10	238.10	238.23	238.30	238.54	243.47	238.31	237.87
9	237.88	237.79	237.75	237.67	238.13	238.08	238.28	238.25	239.19	243.27	238.25	237.85
10	237.95	237.78	237.66	237.67	238.46	238.05	238.34	238.20	239.71	243.09	238.21	237.83
11	237.95	237.80	237.57	237.67	239.31	238.06	238.40	238.17	240.28	242.93	238.19	237.83
12	237.96	237.81	237.53	237.67	240.17	238.07	238.47	238.16	240.71	242.82	238.17	237.82
13	237.97	237.79	237.57	237.68	240.65	238.08	238.54	238.28	241.04	242.63	238.13	237.81
14	237.96	237.77	237.56	237.69	241.04	238.13	238.54	238.54	241.26	242.44	238.08	237.81
15	237.93	237.78	237.57	237.70	241.22	238.18	238.53	238.60	241.43	242.24	238.05	237.84
16	237.93	237.79	237.58	237.74	241.31	238.20	238.54	238.65	241.44	242.04	238.01	237.83
17	237.92	237.87	237.56	237.91	241.36	238.20	238.54	238.69	241.34	241.84	237.98	237.83
18	237.91	238.02	237.55	238.00	241.35	238.18	238.55	238.69	241.22	241.63	237.94	237.82
19	237.90	237.98	237.55	238.00	241.22	238.15	238.56	238.64	241.04	241.41	237.91	237.80
20	237.90	237.98	237.54	238.00	241.02	238.13	238.58	238.59	240.85	241.20	237.95	237.78
21	237.90	237.99	237.54	238.02	240.81	238.11	238.58	238.54	240.64	240.99	237.96	237.76
22	237.90	237.98	237.56	238.03	240.58	238.06	238.59	238.48	240.46	240.78	237.96	237.74
23	237.90	237.99	237.56	238.04	240.37	238.02	238.60	238.41	240.26	240.58	237.94	237.73
24	237.89	237.96	237.55	238.14	240.18	238.00	238.55	238.35	240.09	240.37	237.94	237.72
25	237.88	237.95	237.53	238.51	240.00	238.01	238.62	238.30	239.90	240.15	237.93	237.72
26	237.87	237.94	237.53	238.71	239.75	238.01	238.98	238.26	239.82	239.94	237.92	237.73
27	237.87	237.96	237.55	238.70	239.51	238.02	239.25	238.23	240.13	239.73	237.91	237.72
28	237.85	237.93	237.60	238.59	239.26	238.03	239.20	238.20	240.62	239.50	237.90	237.71
29	237.84	237.91	237.64	238.40	239.06	238.04	239.11	238.18	240.92	239.31	237.90	237.69
30	237.83	237.90	237.63	238.22	---	238.04	238.98	238.17	241.80	239.25	237.88	237.67
31	237.83	---	237.63	238.14	---	238.03	---	238.17	---	239.13	237.89	---
TOTAL	7,373.44	7,136.29	7,367.18	7,376.28	6,949.34	7,383.81	7,155.23	7,391.54	7,199.88	7,496.37	7,382.60	7,134.18
MEAN	237.85	237.88	237.65	237.94	239.63	238.19	238.51	238.44	240.00	241.82	238.15	237.81
MAX	237.97	238.02	237.91	238.71	241.36	238.93	239.25	238.85	241.80	243.98	238.94	237.91
MIN	237.66	237.77	237.53	237.65	238.00	238.00	238.04	238.16	238.12	239.13	237.88	237.67
CAL YR	2003	TOTAL 87,542.69	MEAN 239.84	MAX 249.56	MIN 237.43							
WTR YR	2004	TOTAL 87,346.14	MEAN 238.65	MAX 243.98	MIN 237.53							

08109900 Somerville Lake near Somerville, TX—Continued



## BRAZOS RIVER BASIN

08110100 Davidson Creek near Lyons, TX

LOCATION.--Lat 30°25'10", long 96°32'24", Burleson County, Hydrologic Unit 12070102, on left bank 30 ft downstream from Farm Road 60, 1.2 mi downstream from Berry Creek, 2.8 mi northeast of Lyons, and 10.7 mi upstream from mouth.

DRAINAGE AREA.--195 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1962 to current year. Water-quality records: Sediment data: June 1966 to Sept. 1975.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 220.26 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records good except those estimated daily discharges, which are poor. No known regulation or diversions. The city of Caldwell discharges wastewater effluent into creek above station. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1947 reached a stage of 17 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	e1.0	2.0	2.3	9.9	17	24	10	12	5.2	3,810	11	1.0
2	e1.1	1.5	2.2	7.6	15	30	8.5	89	13	1,450	4.4	0.94
3	0.93	1.4	1.9	6.4	15	24	8.1	72	7.8	755	2.9	0.85
4	0.98	1.2	1.5	5.9	14	42	11	29	10	201	2.3	0.78
5	2.9	1.0	1.5	4.7	50	268	24	17	676	69	2.0	0.67
6	254	0.96	1.7	4.0	83	138	16	13	635	46	1.7	e0.65
7	e185	1.3	1.7	3.8	36	52	173	9.8	376	35	1.4	e0.67
8	e37	1.6	1.5	4.1	22	29	68	8.5	1,550	28	1.3	0.89
9	95	1.5	1.8	3.8	35	20	31	7.6	3,900	22	1.1	1.6
10	718	1.5	2.1	3.4	1,100	16	19	7.2	5,530	19	1.1	1.3
11	440	e1.5	2.8	3.1	1,690	14	22	9.0	3,750	36	1.1	0.93
12	99	e1.5	3.2	3.1	2,340	12	32	18	1,540	56	1.3	0.77
13	20	1.5	5.5	3.2	1,120	11	33	324	917	34	1.1	0.73
14	12	1.5	6.4	3.1	342	11	22	3,430	180	20	0.85	0.72
15	8.7	1.4	6.8	3.2	247	12	16	2,440	194	14	0.76	0.70
16	6.5	296	6.4	3.8	110	12	12	1,200	151	12	0.78	0.72
17	5.5	434	6.8	357	62	12	9.8	343	64	9.9	0.78	0.69
18	5.0	584	6.4	465	41	11	8.7	82	47	7.8	0.77	0.68
19	4.2	342	6.6	79	32	10	7.7	47	36	6.8	0.75	0.66
20	3.2	31	5.7	28	29	9.8	6.8	31	28	6.0	4.1	0.73
21	2.7	13	5.5	17	25	9.3	6.2	25	23	5.3	11	0.70
22	2.5	8.4	5.9	12	22	8.3	6.4	20	20	4.8	22	0.64
23	2.3	6.2	7.2	10	19	7.6	6.0	16	17	4.5	32	0.56
24	2.1	4.7	6.7	163	19	7.5	14	14	95	4.1	14	0.51
25	1.8	3.7	6.1	1,240	20	8.4	187	13	265	3.8	8.4	0.57
26	1.8	3.3	5.7	850	22	10	213	11	569	4.1	6.0	0.58
27	13	3.4	6.1	91	23	11	73	9.6	1,100	3.3	4.2	0.58
28	6.9	2.9	7.2	34	20	9.1	28	8.4	1,850	3.3	3.1	0.62
29	4.2	2.8	59	23	19	8.1	17	7.2	1,700	3.3	2.4	0.68
30	3.1	2.5	46	19	---	18	12	7.8	2,620	3.1	2.0	0.75
31	2.4	---	16	18	---	14	---	5.9	---	3.1	1.3	---
TOTAL	1,942.81	1,759.26	246.2	3,479.1	7,589	869.1	1,101.2	8,327.0	27,869.0	6,680.2	147.89	22.87
MEAN	62.7	58.6	7.94	112	262	28.0	36.7	269	929	215	4.77	0.76
MAX	718	584	59	1,240	2,340	268	213	3,430	5,530	3,810	32	1.6
MIN	0.93	0.96	1.5	3.1	14	7.5	6.0	5.9	5.2	3.1	0.75	0.51
AC-FT	3,850	3,490	488	6,900	15,050	1,720	2,180	16,520	55,280	13,250	293	45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2004, BY WATER YEAR (WY)

MEAN	58.5	58.8	95.5	91.4	135	80.8	92.3	116	124	12.5	4.58	26.6
MAX	886	513	646	687	948	357	692	451	929	215	42.5	428
(WY)	(1995)	(1999)	(1992)	(1991)	(1992)	(1979)	(1977)	(1992)	(2004)	(2004)	(1995)	(1974)
MIN	0.00	0.00	0.00	0.19	0.93	0.44	0.23	0.62	0.06	0.00	0.00	0.00
(WY)	(1964)	(1968)	(1968)	(1971)	(2000)	(1971)	(1972)	(1996)	(1971)	(1964)	(1964)	(1963)

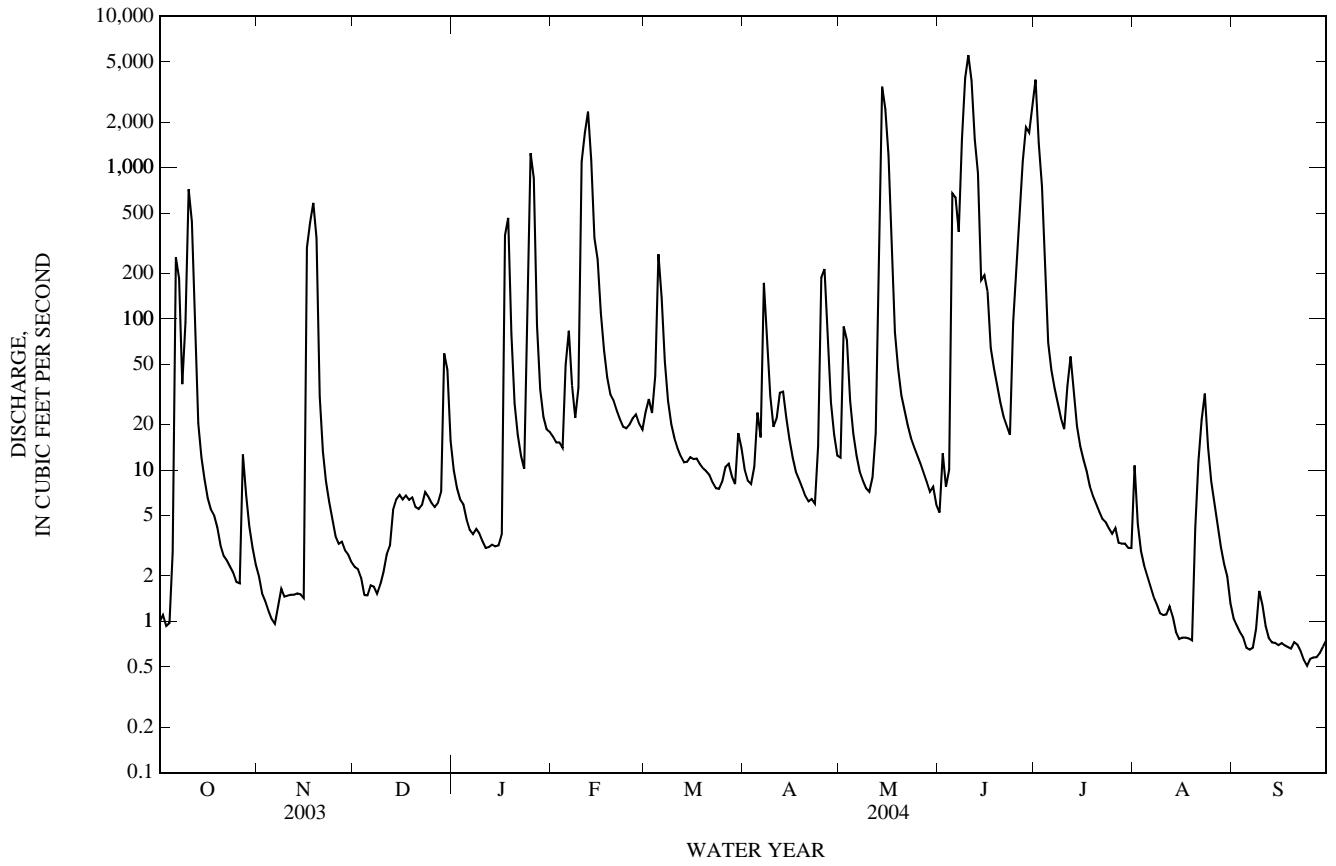
SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1963 - 2004	
ANNUAL TOTAL	32,392.95		60,033.63			
ANNUAL MEAN	88.7		164		74.3	
HIGHEST ANNUAL MEAN					237	
LOWEST ANNUAL MEAN					1.42	
HIGHEST DAILY MEAN	10,000	Feb 21	5,530	Jun 10	18,000	Oct 17, 1994
LOWEST DAILY MEAN	0.00	Aug 17	0.51	Sep 24	0.00	Jun 16, 1963
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 26	0.58	Sep 22	0.00	Jun 16, 1963
MAXIMUM PEAK FLOW			9,090	Jun 10	26,400	Oct 17, 1994
MAXIMUM PEAK STAGE			17.06	Jun 10	19.33	Oct 17, 1994
ANNUAL RUNOFF (AC-FT)	64,250		119,100		53,790	
10 PERCENT EXCEEDS	81		304		78	
50 PERCENT EXCEEDS	5.9		9.5		2.8	
90 PERCENT EXCEEDS	0.40		0.99		0.00	

e Estimated



08110100 Davidson Creek near Lyons, TX—Continued



## BRAZOS RIVER BASIN

08110300 Lake Mexia near Mexia, TX

LOCATION.--Lat 31°38'37", long 96°34'43", Limestone County, Hydrologic Unit 12070103, 550 ft downstream from Cedar Creek, 610 ft upstream from spillway of dam on Navasota River, 1.0 mi upstream from Echo Dam, 1.6 mi upstream from Jacks Creek, 6.0 mi southwest of Mexia, and 180.0 mi upstream from mouth.

DRAINAGE AREA.--196 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1961 to Sept. 1986, Apr. 1999 to Sept. 2002 (daily mean contents). Oct. 2002 to current year.

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

REMARKS.--Records good. The lake is formed by an earthfill dam, 1,645 ft long, including a 520-foot uncontrolled concrete ogee-type spillway near the center of dam. The dam was completed and deliberate impoundment of water began June 5, 1961. The dam is owned by the Bistone Municipal Water District. Data regarding the dam and lake are given in the following table:

	Elevation (feet)
Top of dam	462.3
Crest of spillway	448.3
Lowest gated outlet (invert)	442.1

COOPERATION.--Diversions from lake for municipal use were furnished by the Bistone Municipal Water Supply District.

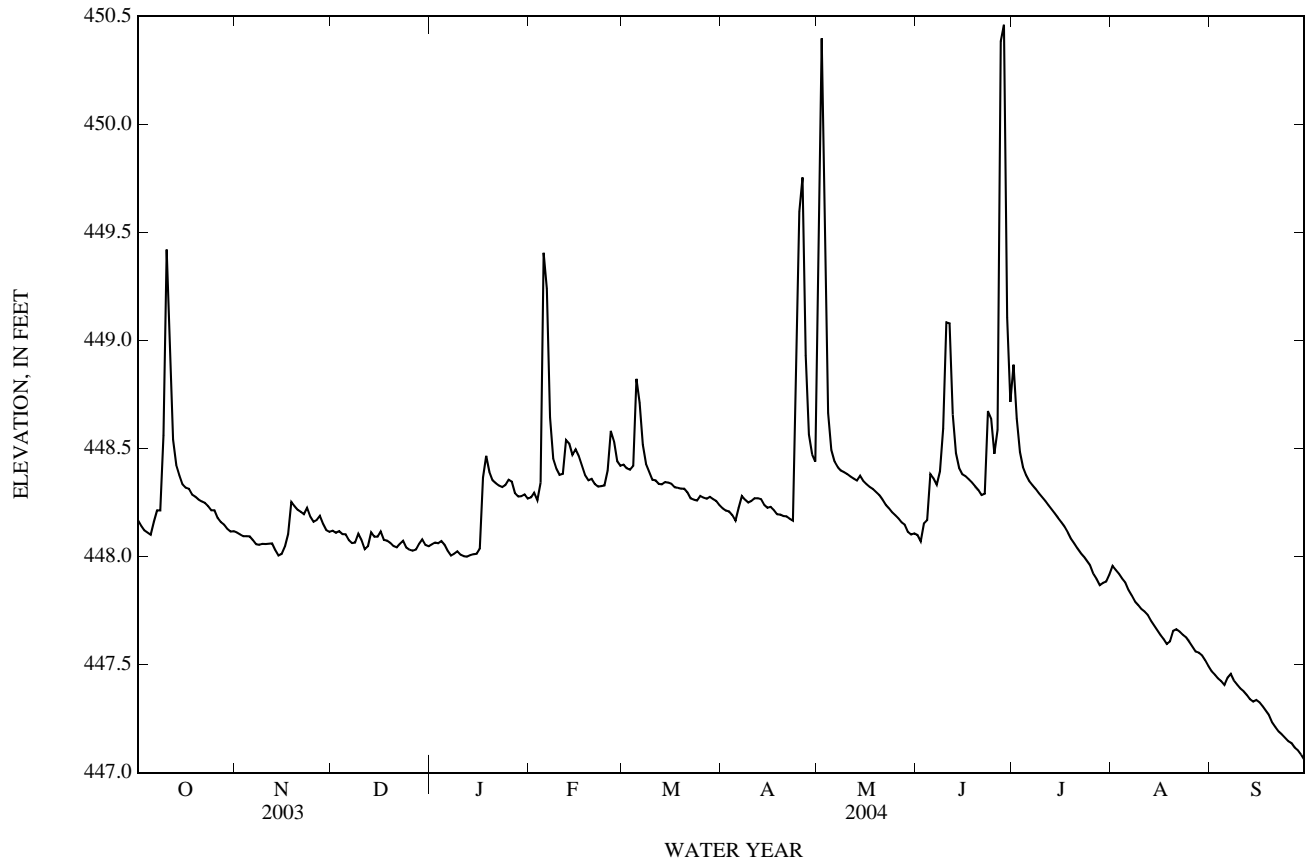
EXTREMES FOR PERIOD OF RECORD.--July 1961 to Sept. 1986, Apr. 1999 to Sept. 2002: Maximum contents, 22,460 acre-ft, May 11, 1979; minimum contents, 2,440 acre-ft, Jan. 15, 1964; July 1961 to Sept. 1986, Apr. 1999 to current year: maximum elevation, 455.36 ft, May 11, 1979; minimum elevation, 445.48 ft, Jan. 15, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 451.21 ft, Jun. 27; minimum elevation, 447.05 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	448.17	448.11	448.12	448.06	448.27	448.43	448.22	449.18	448.10	448.89	447.96	447.47
2	448.14	448.10	448.11	448.06	448.30	448.41	448.21	450.40	448.07	448.64	447.94	447.45
3	448.12	448.09	448.12	448.06	448.26	448.40	448.21	449.36	448.15	448.48	447.92	447.44
4	448.11	448.09	448.10	448.07	448.34	448.42	448.19	448.66	448.17	448.41	447.90	447.42
5	448.10	448.09	448.10	448.05	449.41	448.82	448.17	448.49	448.38	448.38	447.88	447.41
6	448.16	448.08	448.08	448.03	449.24	448.71	448.23	448.44	448.36	448.35	447.85	447.44
7	448.21	448.06	448.06	448.00	448.64	448.52	448.28	448.41	448.33	448.33	447.82	447.46
8	448.21	448.05	448.06	448.01	448.45	448.43	448.26	448.40	448.39	448.31	447.79	447.43
9	448.56	448.06	448.11	448.02	448.41	448.39	448.25	448.39	448.59	448.29	447.78	447.41
10	449.42	448.06	448.08	448.01	448.38	448.36	448.26	448.38	449.08	448.27	447.76	447.39
11	448.90	448.06	448.03	448.00	448.38	448.35	448.27	448.37	449.08	448.26	447.75	447.38
12	448.54	448.06	448.05	448.00	448.54	448.34	448.27	448.36	448.66	448.24	447.73	447.36
13	448.42	448.03	448.11	448.01	448.52	448.33	448.27	448.35	448.48	448.22	447.70	447.34
14	448.37	448.00	448.09	448.01	448.47	448.34	448.24	448.37	448.41	448.20	447.68	447.33
15	448.33	448.01	448.09	448.01	448.50	448.34	448.23	448.35	448.38	448.18	447.66	447.34
16	448.32	448.05	448.12	448.04	448.47	448.34	448.23	448.34	448.37	448.16	447.64	447.32
17	448.31	448.10	448.08	448.37	448.42	448.32	448.22	448.32	448.36	448.14	447.62	447.31
18	448.29	448.25	448.07	448.47	448.38	448.32	448.20	448.31	448.34	448.11	447.60	447.29
19	448.28	448.23	448.06	448.39	448.35	448.31	448.19	448.30	448.33	448.08	447.61	447.27
20	448.26	448.22	448.05	448.35	448.36	448.31	448.19	448.28	448.31	448.06	447.66	447.23
21	448.25	448.21	448.04	448.34	448.34	448.30	448.19	448.26	448.28	448.04	447.66	447.21
22	448.25	448.20	448.06	448.33	448.32	448.27	448.18	448.24	448.29	448.02	447.65	447.19
23	448.23	448.23	448.07	448.32	448.33	448.26	448.17	448.22	448.67	448.00	447.64	447.18
24	448.21	448.18	448.04	448.33	448.33	448.26	448.68	448.21	448.64	447.98	447.63	447.16
25	448.21	448.16	448.03	448.36	448.40	448.28	449.60	448.19	448.48	447.96	447.61	447.15
26	448.18	448.17	448.03	448.35	448.58	448.27	449.75	448.18	448.59	447.92	447.58	447.14
27	448.16	448.19	448.03	448.29	448.53	448.27	448.93	448.16	450.38	447.90	447.56	447.12
28	448.15	448.15	448.06	448.28	448.44	448.28	448.56	448.15	450.46	447.87	447.56	447.10
29	448.13	448.12	448.08	448.28	448.42	448.27	448.47	448.11	449.11	447.88	447.54	447.08
30	448.12	448.11	448.05	448.29	---	448.26	448.44	448.10	448.72	447.88	447.52	447.06
31	448.12	---	448.05	448.27	---	448.24	---	448.11	---	447.92	447.49	---
MEAN	448.30	448.12	448.07	448.18	448.48	448.36	448.39	448.43	448.60	448.17	447.70	447.30
MAX	449.42	448.25	448.12	448.47	449.41	448.82	449.75	450.40	450.46	448.89	447.96	447.47
MIN	448.10	448.00	448.03	448.00	448.26	448.24	448.17	448.10	448.07	447.87	447.49	447.06
WTR YR	2004	MEAN	448.17	MAX	450.46	MIN	447.06					

08110300 Lake Mexia near Mexia, TX—Continued



08110325 Navasota River above Groesbeck, TX

LOCATION.--Lat 31°34'27", long 96°31'14", Limestone County, Hydrologic Unit 12070103, at city of Groesbeck water supply pumping plant, 1.2 mi downstream from Springfield Lake, 3.7 mi north of Groesbeck, and 161.4 mi upstream from mouth.

DRAINAGE AREA.--239 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1975 to May 1978 (periodic gage-height and low-flow measurements only), June 1978 to current year. Water-quality records: Chemical data: Nov. 1967 to June 1989.

GAGE.--Water-stage recorder, crest-stage gage and concrete control. Datum of gage is 396.65 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those below 5 ft<sup>3</sup>/s, which are poor. Since installation of gage in 1975, at least 10% of contributing drainage area has been regulated. There are several diversions above station for irrigation, municipal supply, and oil field operation. The city of Groesbeck diverts water from pool at gage for municipal use, and returns wastewater effluent into river downstream from gage. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1910, 26 ft in 1910 and 1944, 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	0.01	0.00	0.12	0.54	4.7	68	0.24	566	0.09	682	0.46	0.00
2	0.00	0.00	0.06	0.41	10	58	0.18	3,420	0.12	369	0.43	0.00
3	0.00	0.00	0.11	0.32	3.9	52	0.33	2,120	2.8	152	0.34	0.00
4	0.00	0.00	0.21	0.27	29	49	0.26	469	0.77	83	0.14	0.00
5	0.00	0.00	0.49	0.24	1,450	297	0.30	145	4.3	57	0.00	0.00
6	0.00	0.00	0.30	0.18	1,490	421	2.3	77	7.0	39	0.00	0.00
7	0.00	0.02	0.20	0.12	481	187	9.0	55	5.7	27	0.00	0.00
8	0.00	0.07	0.13	0.14	160	86	4.5	39	24	19	0.00	0.00
9	243	0.17	2.4	0.23	91	60	2.9	29	187	12	0.00	0.00
10	1,290	0.15	3.0	0.17	72	39	3.8	22	1,150	8.7	0.00	0.00
11	832	0.11	0.44	0.19	67	30	4.6	17	978	6.1	0.00	0.00
12	254	0.06	0.36	0.29	182	22	3.6	14	402	3.9	0.00	0.00
13	107	0.03	0.72	0.16	192	17	3.8	11	146	2.7	0.00	0.00
14	69	0.01	0.44	0.16	150	15	1.7	13	76	1.6	0.00	0.00
15	43	0.01	0.23	0.17	139	13	0.93	9.9	59	0.99	0.00	0.00
16	28	0.24	2.3	0.45	119	12	0.38	7.3	46	0.57	0.00	0.00
17	20	0.80	0.58	21	90	8.9	0.29	5.1	32	0.46	0.00	0.00
18	12	11	0.23	58	66	7.2	0.27	3.3	21	0.55	0.00	0.00
19	6.8	2.4	0.14	55	48	6.1	0.23	2.2	16	0.41	0.00	0.00
20	4.5	0.79	0.08	43	40	5.5	0.23	1.2	14	0.19	0.00	0.00
21	3.2	0.43	0.08	34	30	5.4	0.33	0.47	9.7	0.16	0.00	0.00
22	2.7	0.31	0.78	28	23	2.5	0.26	0.24	7.0	0.20	0.00	0.00
23	1.6	3.9	2.9	23	17	1.4	0.20	0.18	29	0.19	0.00	0.00
24	e0.69	1.4	0.49	22	14	0.84	243	0.14	185	0.15	0.00	0.00
25	1.8	0.39	0.18	24	25	1.9	1,630	0.10	125	0.14	0.00	0.00
26	3.1	0.16	0.09	28	74	1.8	2,250	0.05	317	0.15	0.00	0.00
27	0.90	2.2	0.04	16	139	1.7	1,010	0.03	3,730	0.11	0.00	0.00
28	e0.25	1.4	0.22	10	100	3.5	268	0.03	5,380	0.07	0.00	0.00
29	e0.08	0.42	1.5	7.8	79	3.2	112	0.02	1,580	0.15	0.00	0.00
30	e0.01	0.17	0.66	8.1	---	2.5	75	0.06	587	0.37	0.00	0.00
31	0.01	---	0.67	5.3	---	1.00	---	0.05	---	0.33	0.00	---
TOTAL	2,923.65	26.64	20.15	387.24	5,385.6	1,479.44	5,628.63	7,027.37	15,121.48	1,468.19	1.37	0.00
MEAN	94.3	0.89	0.65	12.5	186	47.7	188	227	504	47.4	0.04	0.00
MAX	1,290	11	3.0	58	1,490	421	2,250	3,420	5,380	682	0.46	0.00
MIN	0.00	0.00	0.04	0.12	3.9	0.84	0.18	0.02	0.09	0.07	0.00	0.00
AC-FT	5,800	53	40	768	10,680	2,930	11,160	13,940	29,990	2,910	2.7	0.00

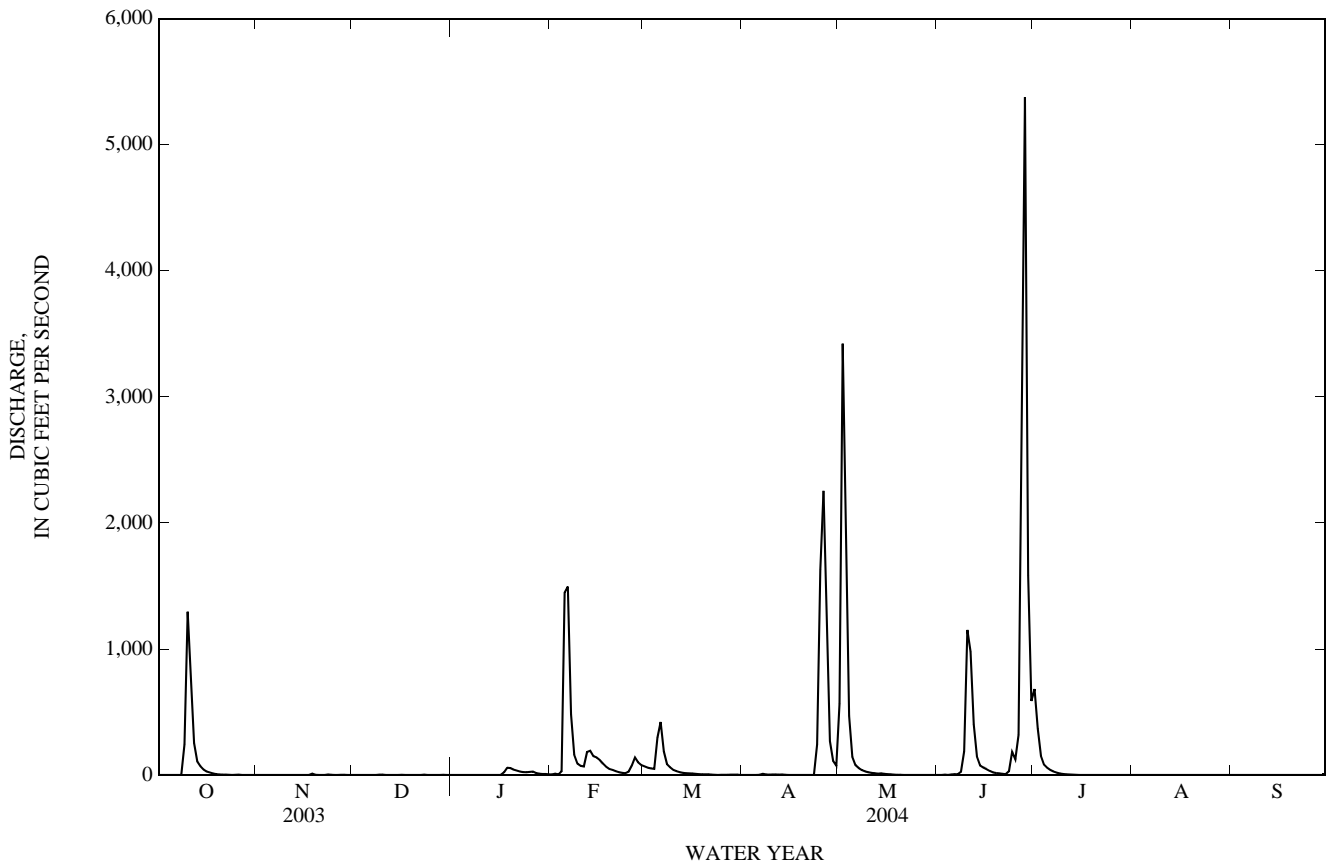
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2004, BY WATER YEAR (WY)

MEAN	41.2	57.9	230	129	249	167	92.2	234	126	6.94	26.1	0.64
MAX	347	450	1,154	806	909	1,109	857	1,384	648	51.4	570	5.24
(WY)	(1982)	(1986)	(1992)	(1998)	(1986)	(1990)	(1997)	(1979)	(2000)	(1981)	(1995)	(1979)
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)	(1993)	(1996)	(2000)	(2000)	(1996)	(1996)	(1996)	(1996)	(1996)	(1998)	(1994)	(1993)

08110325 Navasota River above Groesbeck, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1978 - 2004	
ANNUAL TOTAL	32,797.63		39,469.76		113	
ANNUAL MEAN	89.9		108		270	
HIGHEST ANNUAL MEAN					1992	
LOWEST ANNUAL MEAN					0.01	
HIGHEST DAILY MEAN	5,870	Feb 22	5,380	Jun 28	17,300	May 11, 1979
LOWEST DAILY MEAN	0.00	Jul 18	0.00	Oct 2	0.00	Jun 14, 1978
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 18	0.00	Oct 2	0.00	Jun 14, 1978
MAXIMUM PEAK FLOW			6,760	Jun 28	27,200	May 11, 1979
MAXIMUM PEAK STAGE			9.09	Jun 28	p15.06	May 11, 1979
ANNUAL RUNOFF (AC-FT)	65,050		78,290		82,120	
10 PERCENT EXCEEDS	55		147		103	
50 PERCENT EXCEEDS	1.4		0.82		1.2	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

p Observed.  
e Estimated



## BRAZOS RIVER BASIN

08110430 Big Creek near Freestone, TX

LOCATION.--Lat 31°30'24", long 96°19'28", Limestone County, Hydrologic Unit 12070103, 12 ft to left and 25 ft downstream from left end of bridge on State Highway 164, 5.1 mi southwest of Freestone, and 8.2 mi upstream from mouth.

DRAINAGE AREA.--97.2 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1975 to June 1978 (periodic gage-height and low-flow measurements only), July 1978 to current year.

REVISED RECORDS.--WDR TX-92-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 362.94 ft above NGVD of 1929. Apr. 25, 1985, to Aug. 17, 1987, at site 62 ft downstream at same datum. Satellite telemeter at station.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1950, 19 ft in Apr. 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	0.00	0.00	0.53	2.1	1.5	5.9	1.6	325	0.06	422	3.7	0.95
2	0.00	0.00	0.65	1.8	1.6	5.9	1.4	563	0.00	93	2.3	0.39
3	0.00	0.00	0.22	1.6	2.0	5.1	1.2	306	83	37	1.6	0.46
4	0.00	0.00	0.25	1.5	2.5	36	0.98	31	17	23	1.2	0.07
5	0.00	0.00	0.30	1.3	81	152	0.89	13	8.5	16	0.53	0.00
6	0.23	0.00	0.46	1.1	223	75	3.6	7.6	3.5	12	0.22	4.4
7	0.09	0.00	0.48	1.0	36	19	9.2	4.8	1.8	9.6	0.20	35
8	0.03	0.00	0.60	0.90	11	9.5	4.5	3.5	508	8.2	0.13	13
9	34	0.00	0.70	0.83	7.6	6.7	2.3	3.6	1,210	7.2	0.09	4.8
10	41	0.00	0.60	0.78	30	5.1	1.8	5.6	2,060	6.4	0.04	2.7
11	12	0.00	0.80	1.1	70	4.5	2.1	10	1,170	5.6	0.03	1.9
12	3.5	0.00	1.1	1.6	230	3.8	2.6	12	582	5.1	0.00	1.4
13	1.4	0.00	1.6	1.7	187	3.7	2.9	7.6	123	4.4	0.10	1.2
14	0.62	0.00	2.2	1.7	41	3.7	2.4	7.0	32	3.8	0.03	0.94
15	0.20	0.00	2.2	1.8	52	3.6	1.9	6.8	35	3.3	0.00	0.60
16	0.16	0.00	1.7	1.9	38	3.6	1.4	5.1	135	3.0	0.00	0.33
17	0.13	7.4	1.3	11	16	3.3	1.3	3.5	60	2.7	0.00	0.49
18	0.11	29	1.2	13	10	3.0	1.1	2.6	22	2.4	0.00	0.29
19	0.09	6.2	0.95	10	7.7	2.9	0.82	1.9	14	2.3	1.7	0.24
20	0.08	2.1	0.85	6.0	6.7	2.6	0.67	1.4	10	2.0	99	0.10
21	0.08	1.1	0.84	4.3	5.6	2.5	0.69	1.1	8.3	1.8	53	0.00
22	0.12	0.69	0.86	3.2	4.7	2.2	1.8	0.63	8.4	1.6	33	0.00
23	0.10	1.2	0.97	2.5	4.2	1.8	1.5	0.42	9.9	1.4	12	0.00
24	0.09	0.88	0.92	2.4	4.2	1.5	62	0.33	8.4	1.4	6.9	0.00
25	0.08	0.93	1.0	3.2	4.9	2.9	187	0.24	15	1.3	4.8	0.00
26	0.08	0.93	1.1	3.3	6.6	3.1	252	0.18	383	1.1	3.4	0.00
27	0.07	0.95	1.4	3.0	6.2	2.4	99	0.12	924	1.1	2.6	3.2
28	0.06	0.74	7.4	2.3	5.0	2.5	17	0.03	782	0.84	2.2	1.7
29	0.05	0.76	19	2.0	5.0	3.1	8.3	0.02	467	0.76	1.8	1.1
30	0.03	0.59	9.1	1.7	---	2.5	7.8	0.00	555	3.4	1.7	0.35
31	0.01	---	3.1	1.6	---	1.9	---	0.00	---	6.1	1.4	---
TOTAL	94.41	53.47	64.38	92.21	1,101.0	381.3	681.75	1,324.07	9,235.86	689.80	233.67	75.61
MEAN	3.05	1.78	2.08	2.97	38.0	12.3	22.7	42.7	308	22.3	7.54	2.52
MAX	41	29	19	13	230	152	252	563	2,060	422	99	35
MIN	0.00	0.00	0.22	0.78	1.5	1.5	0.67	0.00	0.00	0.76	0.00	0.00
AC-FT	187	106	128	183	2,180	756	1,350	2,630	18,320	1,370	463	150

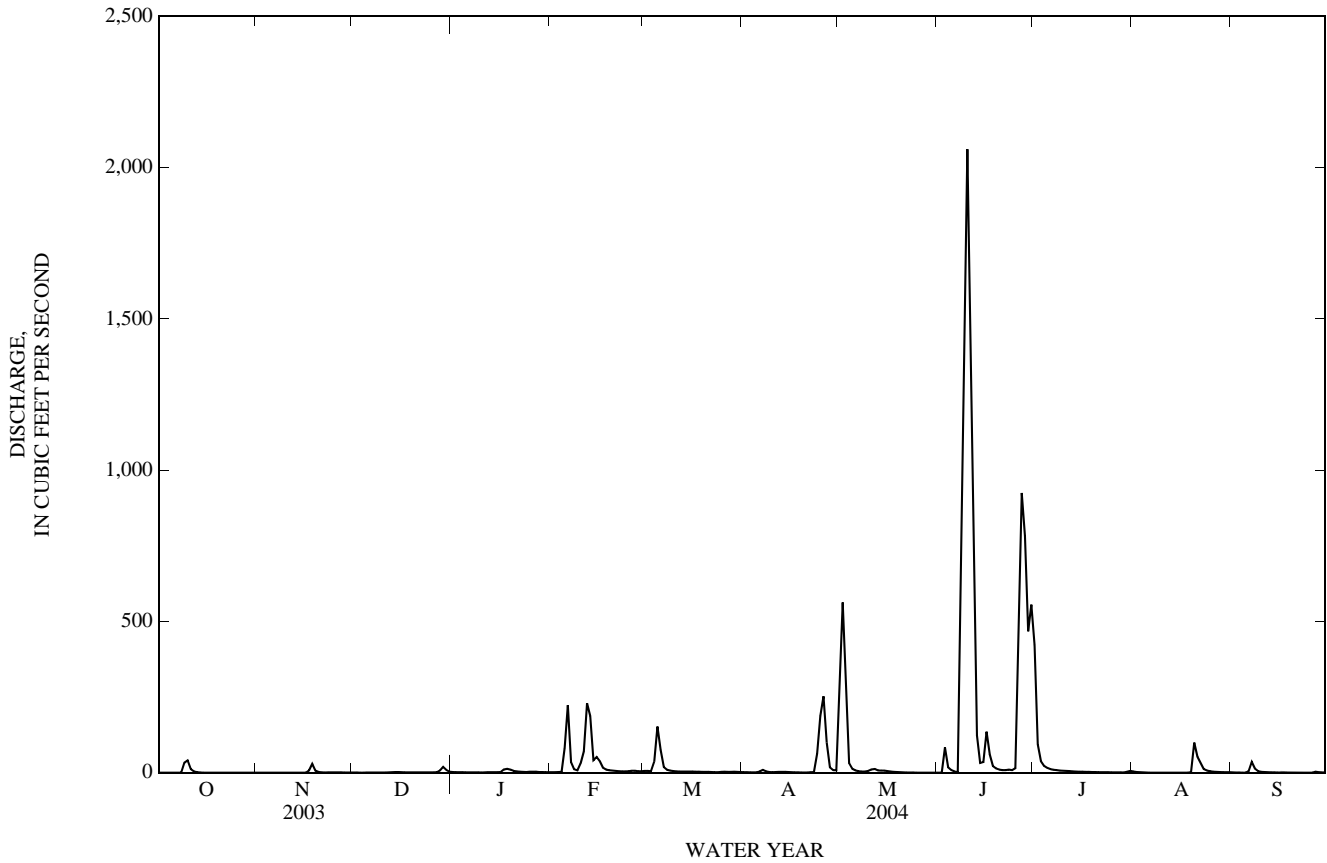
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2004, BY WATER YEAR (WY)

MEAN	29.4	32.0	97.1	71.8	103	74.7	48.5	76.6	50.0	5.77	2.34	4.90
MAX	301	155	609	329	307	234	348	335	308	62.0	18.5	44.0
(WY)	(1999)	(2001)	(1992)	(1998)	(1997)	(2001)	(1997)	(1990)	(2004)	(1981)	(1995)	(1998)
MIN	0.00	0.00	0.06	0.20	2.64	4.50	3.31	0.26	0.00	0.00	0.00	0.00
(WY)	(1990)	(1996)	(1981)	(1981)	(2000)	(1986)	(1984)	(1984)	(1996)	(1996)	(1984)	(1984)

08110430 Big Creek near Freestone, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1978 - 2004	
ANNUAL TOTAL	12,670.27		14,027.53			
ANNUAL MEAN	34.7		38.3		49.5	
HIGHEST ANNUAL MEAN					138	1992
LOWEST ANNUAL MEAN					3.46	1996
HIGHEST DAILY MEAN	3,360	Feb 22	2,060	Jun 10	8,390	Dec 21, 1991
LOWEST DAILY MEAN	0.00	Jul 7	0.00	Oct 1	0.00	Sep 24, 1978
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 31	0.00	Nov 1	0.00	Sep 29, 1983
MAXIMUM PEAK FLOW			2,650	Jun 10	17,500	Dec 21, 1991
MAXIMUM PEAK STAGE			a13.98	Jun 10	16.33	Dec 21, 1991
ANNUAL RUNOFF (AC-FT)	25,130		27,820		35,890	
10 PERCENT EXCEEDS	21		37		79	
50 PERCENT EXCEEDS	1.0		1.9		3.1	
90 PERCENT EXCEEDS	0.00		0.01		0.00	

a From floodmark.



## 08110470 Lake Limestone near Marquez, TX

LOCATION.--Lat 31°19'30", long 96°19'08", Leon County, Hydrologic Unit 12070103, in left end bypass pier of Sterling C. Robertson Dam on the Navasota River, 7.5 mi northwest of Marquez, and 124 mi upstream from mouth.

DRAINAGE AREA.--675 mi<sup>2</sup>.

PERIOD OF RECORD.--Nov. 1978 to Sept. 2003, daily mean contents. Oct. 2003 to current year. Water-quality records: Chemical data: Jan. 1980 to Sept. 1997. Biochemical data: Jan. 1980 to Sept. 1997.

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 11,395 ft long, including the spillway. The lake was built for water conservation. The dam is owned by the Brazos River Authority. Deliberate impoundment began on Oct. 16, 1978. The spillway is an uncontrolled broad-crested weir 3,000 ft long located near left end of dam. The spillway for normal flood releases is a gated concrete gravity structure with an ogee weir section and stilling basin located near center of dam. It is controlled by five 40- by 28-foot tainter gates. There are two 4- by 8-foot slide gates located in each of the two center piers of the spillway that discharge into the stilling basin. These gates can also be opened during extreme floods. A low-flow outlet, consisting of a 10-inch-diameter cast iron pipe, is located in the left end of pier. In addition, there are two 36-inch (outside diameter) steel cylinder pipes located in the right end pier for water supply releases. The lowest invert for low flow and water supply releases is at elevation 325.50 ft. The city of Mexia releases various amounts of wastewater effluent into stream above lake. Data regarding dam are given in the following table:

	Elevation (feet)
Top of dam	380.0
Design flood	370.0
Crest of spillway	369.6
Top of gates	365.0
Concrete gated spillway	337.0
Lowest gated outlet (invert)	322.0

COOPERATION.--A new capacity table, provided by the Texas Water Development Board, was put into use Oct. 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Nov. 1978 to Sept. 2003: Maximum contents, 245,000 acre-ft, Dec. 21, 1991; minimum contents after initial filling, 138,400 acre-ft, Nov. 23, 1996; Nov. 1978 to current year: maximum elevation, 364.39 ft, Dec. 21, 1991; minimum elevation, 356.30 ft, Nov. 23, 1996.

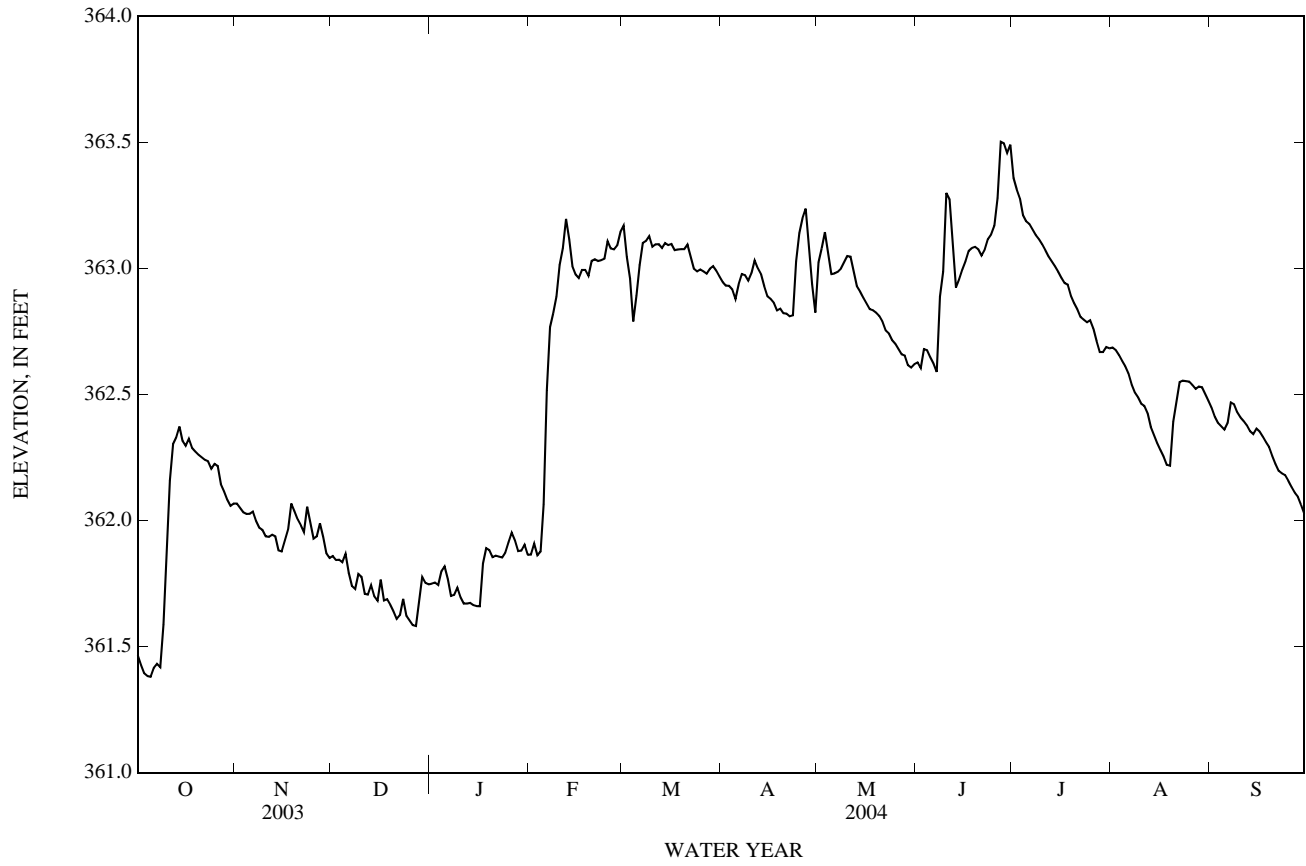
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 363.61 ft, Jun. 27; minimum elevation, 361.36 ft, Oct. 5.

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	361.47	362.07	361.86	361.75	361.87	363.17	362.95	363.02	362.63	363.36	362.69	362.45
2	361.43	362.05	361.84	361.75	361.91	363.05	362.93	363.08	362.60	363.31	362.68	362.41
3	361.39	362.03	361.84	361.74	361.86	362.96	362.93	363.14	362.68	363.28	362.66	362.39
4	361.38	362.03	361.83	361.80	361.88	362.79	362.92	363.06	362.68	363.21	362.63	362.37
5	361.38	362.03	361.87	361.82	362.06	362.89	362.88	362.98	362.65	363.19	362.61	362.36
6	361.42	362.04	361.79	361.77	362.52	363.01	362.94	362.98	362.62	363.18	362.58	362.39
7	361.43	362.00	361.74	361.70	362.77	363.10	362.98	362.99	362.59	363.15	362.54	362.47
8	361.42	361.97	361.73	361.70	362.82	363.11	362.97	363.00	362.89	363.13	362.51	362.46
9	361.59	361.96	361.79	361.73	362.89	363.13	362.95	363.02	362.99	363.12	362.49	362.43
10	361.90	361.94	361.78	361.70	363.01	363.09	362.98	363.05	363.30	363.10	362.46	362.41
11	362.16	361.94	361.71	361.67	363.08	363.10	363.03	363.05	363.27	363.07	362.45	362.39
12	362.30	361.94	361.71	361.67	363.20	363.10	363.00	362.99	363.12	363.05	362.43	362.38
13	362.33	361.94	361.74	361.67	363.12	363.08	362.98	362.93	362.92	363.03	362.37	362.35
14	362.37	361.88	361.70	361.66	363.01	363.10	362.93	362.91	362.96	363.01	362.34	362.34
15	362.32	361.88	361.68	361.66	362.98	363.09	362.89	362.88	363.00	362.99	362.31	362.36
16	362.30	361.92	361.77	361.66	362.96	363.10	362.88	362.86	363.03	362.96	362.28	362.35
17	362.32	361.96	361.68	361.83	362.99	363.07	362.86	362.84	363.07	362.94	362.25	362.33
18	362.29	362.07	361.69	361.89	362.99	363.08	362.83	362.83	363.08	362.94	362.22	362.31
19	362.27	362.04	361.67	361.88	362.97	363.08	362.84	362.82	363.09	362.89	362.22	362.29
20	362.26	362.00	361.64	361.86	363.03	363.08	362.82	362.81	363.08	362.86	362.39	362.26
21	362.25	361.98	361.61	361.86	363.04	363.09	362.82	362.79	363.05	362.84	362.47	362.22
22	362.24	361.95	361.63	361.86	363.03	363.05	362.81	362.75	363.07	362.81	362.55	362.20
23	362.23	362.06	361.69	361.85	363.03	363.00	362.81	362.74	363.12	362.80	362.55	362.19
24	362.21	361.99	361.62	361.87	363.04	362.99	363.03	362.72	363.13	362.79	362.55	362.18
25	362.22	361.93	361.60	361.91	363.11	363.00	363.14	362.70	363.17	362.79	362.55	362.16
26	362.22	361.94	361.59	361.95	363.08	362.99	363.20	362.68	363.28	362.76	362.54	362.13
27	362.14	361.99	361.58	361.92	363.08	362.98	363.24	362.66	363.50	362.71	362.52	362.11
28	362.12	361.94	361.69	361.88	363.09	363.00	363.08	362.65	363.50	362.67	362.53	362.09
29	362.08	361.87	361.78	361.88	363.14	363.01	362.94	362.62	363.46	362.67	362.53	362.06
30	362.06	361.85	361.75	361.90	---	362.99	362.83	362.61	363.49	362.69	362.50	362.03
31	362.07	---	361.75	361.86	---	362.97	---	362.62	---	362.68	362.48	---
MEAN	361.99	361.97	361.72	361.80	362.81	363.04	362.95	362.86	363.03	362.97	362.48	362.30
MAX	362.37	362.07	361.87	361.95	363.20	363.17	363.24	363.14	363.50	363.36	362.69	362.47
MIN	361.38	361.85	361.58	361.66	361.86	362.79	362.81	362.61	362.59	362.67	362.22	362.03
CAL YR	2003	MEAN	362.48	MAX	363.67	MIN	361.38					
WTR YR	2004	MEAN	362.49	MAX	363.50	MIN	361.38					



08110470 Lake Limestone near Marquez, TX—Continued



08110500 Navasota River near Easterly, TX

LOCATION.--Lat 31°10'12", long 96°17'51", Leon County, Hydrologic Unit 12070103, at left downstream end of bridge on U.S. Highway 79, 1.0 mi upstream from Missouri Pacific Railroad Co. bridge, 7.0 mi northeast of Easterly, and 105.7 mi upstream from mouth.

DRAINAGE AREA.--968 mi<sup>2</sup>.

PERIOD OF RECORD.--Mar. 1924 to current year. Water-quality records: Chemical data: Dec. 1941 to Sept. 1947, Feb. 1966 to Aug. 1985. Sediment data: Oct. 1968 to Sept. 1973.

REVISED RECORDS.--WSP 898: 1924, 1926-27, 1928(M), 1929-30, 1931(M). WSP 1512: 1932(M), 1936. WDR TX-76-2: Drainage area. WDR TX- 78-2: 1974(M), 1977.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 271.46 ft above NGVD of 1929. Prior to June 11, 1932, nonrecording gage at railroad bridge 1.0 mi downstream at 19.86-foot higher datum. June 11, 1932, to Sept. 30, 1978, water-stage recorder 46 ft upstream at 5.00-foot higher datum. Satellite telemeter at station.

REMARKS.--Records poor. Since water year 1961, at least 10% of contributing drainage area has been regulated. There are numerous diversions above station for irrigation, municipal supply, and oil field operation.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--36 years (water years 1925-60), 406 ft<sup>3</sup>/s, 294,100 acre-ft/yr.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1845, 29 ft in June 1899, from information by local residents (discharge, 90,000 ft<sup>3</sup>/s), from rating curve extended above 60,000 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS, 1924-1960:Maximum discharge, 60,300 ft<sup>3</sup>/s May 2, 1944 (gage height, 27.13 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	10	15	18	34	31	81	30	1,280	44	8,470	51	16
2	10	15	17	30	33	e725	28	2,270	45	5,250	37	16
3	10	16	17	27	30	e1,040	27	3,270	41	e1,530	33	16
4	11	15	18	25	30	1,100	26	3,680	40	e975	29	15
5	13	15	19	23	57	1,800	24	3,750	44	e547	28	15
6	16	15	19	21	136	1,310	33	1,360	38	e164	28	14
7	25	14	19	20	286	388	87	e103	29	80	26	13
8	18	14	19	20	119	122	69	e74	843	71	26	103
9	70	14	20	21	57	e80	44	e56	6,750	66	24	109
10	619	14	20	22	641	e60	47	e55	9,700	63	23	34
11	615	14	19	22	1,230	49	111	53	10,900	58	24	20
12	354	14	19	22	2,080	43	107	326	8,270	55	22	16
13	65	14	25	22	2,660	39	74	721	6,070	e46	19	14
14	30	13	21	22	2,800	38	50	988	3,350	38	17	13
15	23	13	19	23	2,050	38	38	427	631	34	16	13
16	21	45	18	24	954	38	34	103	1,220	31	17	13
17	19	107	19	120	270	40	29	65	862	33	16	12
18	18	189	20	347	90	43	26	53	225	32	15	12
19	18	86	20	156	67	43	23	47	98	31	19	12
20	16	39	20	81	57	39	20	44	79	30	124	11
21	15	26	20	54	49	e36	21	43	70	30	118	11
22	14	22	20	43	44	e34	22	41	66	28	191	11
23	13	20	24	38	41	32	24	39	104	27	175	11
24	13	19	24	52	42	32	e89	37	134	26	94	11
25	13	19	23	261	53	36	e1,040	39	114	25	45	12
26	12	18	21	208	72	35	e2,200	37	131	24	30	14
27	13	18	21	75	74	33	2,910	35	668	23	23	13
28	15	18	27	43	70	33	2,750	e34	1,620	23	21	13
29	15	18	97	36	60	35	2,370	e34	7,110	25	20	12
30	15	18	113	33	---	35	1,460	e34	10,300	70	19	12
31	15	---	48	32	---	32	---	33	---	114	18	---
TOTAL	2,134	877	824	1,957	14,183	7,489	13,813	19,131	69,596	18,019	1,348	607
MEAN	68.8	29.2	26.6	63.1	489	242	460	617	2,320	581	43.5	20.2
MAX	619	189	113	347	2,800	1,800	2,910	3,750	10,900	8,470	191	109
MIN	10	13	17	20	30	32	20	33	29	23	15	11
AC-FT	4,230	1,740	1,630	3,880	28,130	14,850	27,400	37,950	138,000	35,740	2,670	1,200

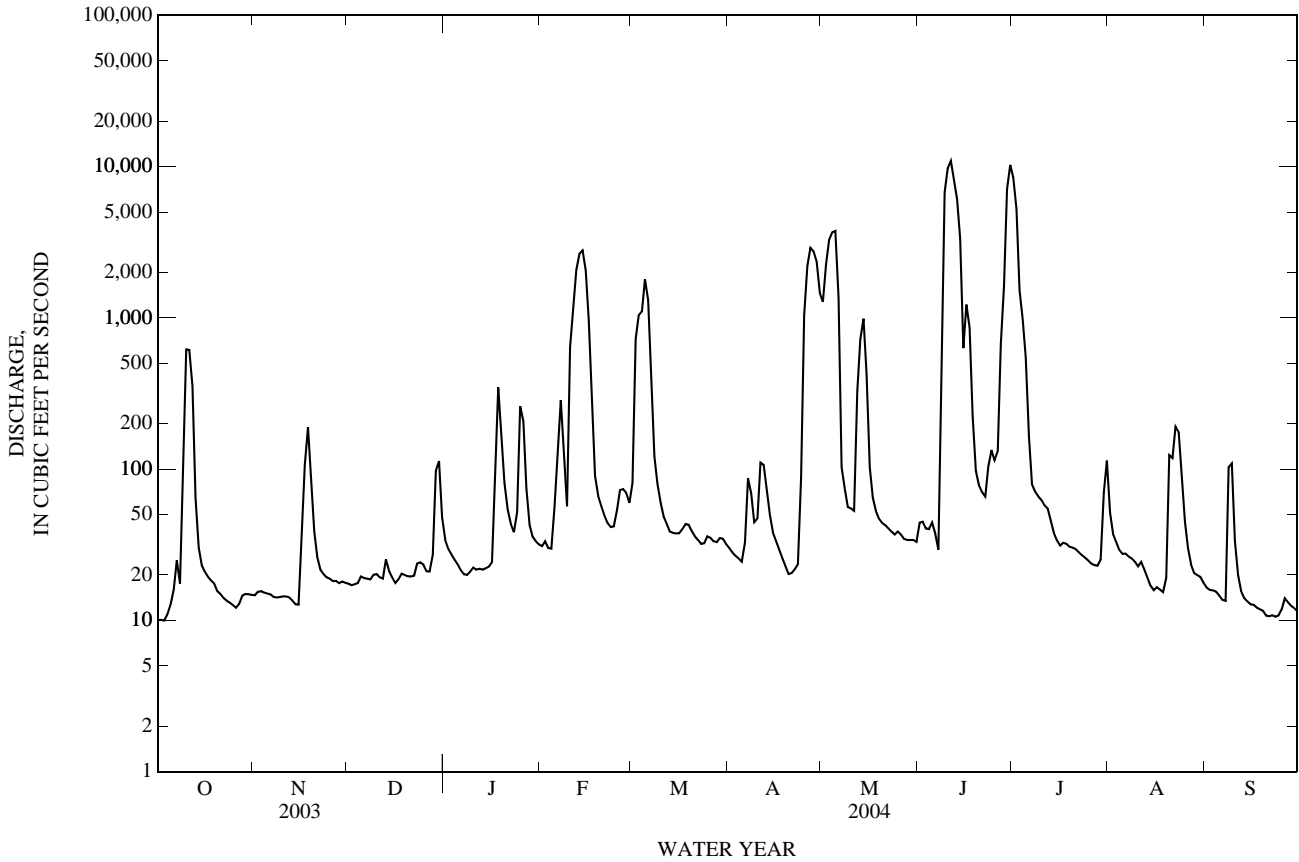
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004z, BY WATER YEAR (WY)

MEAN	215	295	708	599	751	610	593	811	498	80.9	64.4	102
MAX	2,427	4,059	5,244	2,974	3,322	2,386	3,761	5,195	2,794	581	1,032	1,614
(WY)	(1974)	(1975)	(1992)	(1961)	(1992)	(1993)	(1966)	(1965)	(1973)	(2004)	(1995)	(1974)
MIN	1.20	1.73	4.63	9.52	13.9	11.3	8.36	6.88	1.88	0.37	0.81	1.20
(WY)	(1964)	(1964)	(1964)	(1964)	(1996)	(1996)	(1972)	(1972)	(1971)	(1964)	(1963)	(1972)

08110500 Navasota River near Easterly, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004z	
ANNUAL TOTAL	122,114		149,978			
ANNUAL MEAN	335		410		442	
HIGHEST ANNUAL MEAN					1,172	1992
LOWEST ANNUAL MEAN					15.4	1963
HIGHEST DAILY MEAN	20,100	Feb 22	10,900	Jun 11	57,400	Dec 22, 1991
LOWEST DAILY MEAN	10	Aug 27	10	Oct 1	0.19	Aug 11, 1980
ANNUAL SEVEN-DAY MINIMUM	10	Sep 28	11	Sep 18	0.26	Jul 12, 1964
MAXIMUM PEAK FLOW			12,700	Jun 30	61,800	Dec 22, 1991
MAXIMUM PEAK STAGE			a22.63	Jun 30	27.22	Dec 22, 1991
ANNUAL RUNOFF (AC-FT)	242,200		297,500		320,500	
10 PERCENT EXCEEDS	382		960		912	
50 PERCENT EXCEEDS	24		33		29	
90 PERCENT EXCEEDS	13		14		3.5	

z Period of regulated streamflow  
a From floodmark.  
e Estimated



## BRAZOS RIVER BASIN

08110800 Navasota River at OSR near Bryan, TX

LOCATION.--Lat 30°58'25", long 96°14'29", Robertson County, Hydrologic Unit 12070103, on right upstream end of bridge on Old San Antonio Road (OSR), 9.3 miles southwest of Normangee, 13 miles northeast of Wheelock, and 22 miles northeast of Bryan.

DRAINAGE AREA.--1,287 mi<sup>2</sup>.

PERIOD OF RECORD.--Apr. 1997 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area. TX-96-2: 1996 (M).

GAGE.--Water-stage recorder. Datum of gage is 245 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since installation of gage in Apr. 1997, at least 10% of contributing drainage area has been regulated. There are numerous diversions above station for irrigation, municipal supply and oil field operations.

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	23	37	90	239	141	218	92	2,630	83	10,800	169	52
2	23	36	83	150	132	280	83	2,250	152	8,880	115	47
3	22	36	78	122	132	645	76	2,180	202	7,170	79	45
4	21	35	73	110	126	918	76	2,700	141	5,560	64	43
5	22	36	69	101	206	1,170	70	3,250	102	3,790	57	45
6	26	35	68	93	382	1,460	66	3,490	89	1,840	52	45
7	36	34	66	84	455	1,590	86	3,270	80	810	49	43
8	54	34	66	80	477	1,210	199	1,610	113	410	46	42
9	151	34	68	77	330	632	180	628	1,010	260	45	68
10	432	35	70	77	348	353	122	336	4,750	204	43	118
11	677	37	70	77	988	249	110	247	11,200	166	41	76
12	864	38	68	77	1,600	201	269	221	13,800	139	40	54
13	728	38	79	76	2,300	173	298	907	10,900	119	41	46
14	363	36	131	76	3,160	159	207	1,990	7,640	101	39	42
15	147	34	135	77	3,360	153	142	2,950	6,250	86	36	40
16	88	667	105	81	3,110	149	107	3,160	4,270	76	33	41
17	69	2,480	87	156	2,190	146	89	1,770	2,770	69	32	40
18	59	2,640	76	470	1,240	149	80	864	2,100	65	31	39
19	52	1,870	71	727	633	140	75	449	1,340	62	31	39
20	48	1,290	68	622	374	128	71	292	679	58	100	38
21	44	749	66	356	271	123	67	211	363	56	520	35
22	40	429	66	230	226	130	67	164	241	54	725	32
23	39	303	72	178	194	121	65	137	192	56	663	31
24	37	240	97	166	172	108	67	118	354	55	447	32
25	36	176	107	447	185	112	195	102	440	50	258	30
26	37	138	95	808	258	130	824	89	429	47	156	28
27	43	147	85	790	312	127	1,310	84	695	46	106	27
28	39	138	83	476	274	117	1,640	76	1,190	46	80	27
29	37	111	118	249	229	112	2,150	70	2,230	46	66	27
30	38	98	341	178	---	103	2,540	68	6,010	49	61	32
31	38	---	400	155	---	100	---	68	---	89	58	---
TOTAL	4,333	12,011	3,151	7,605	23,805	11,406	11,423	36,381	79,815	41,259	4,283	1,304
MEAN	140	400	102	245	821	368	381	1,174	2,660	1,331	138	43.5
MAX	864	2,640	400	808	3,360	1,590	2,540	3,490	13,800	10,800	725	118
MIN	21	34	66	76	126	100	65	68	80	46	31	27
AC-FT	8,590	23,820	6,250	15,080	47,220	22,620	22,660	72,160	158,300	81,840	8,500	2,590

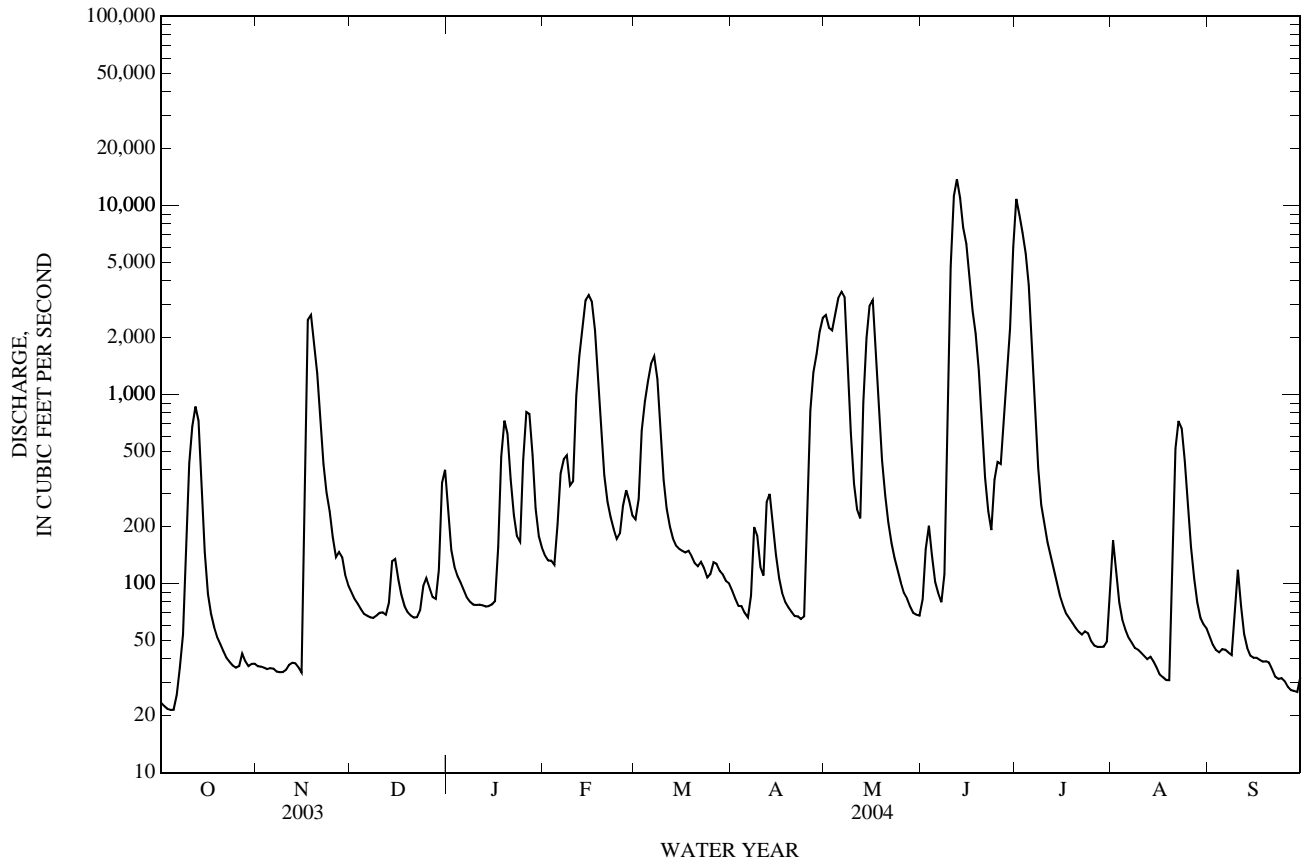
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2004, BY WATER YEAR (WY)

MEAN	433	601	1,315	1,185	1,299	811	559	432	660	245	52.9	44.5
MAX	2,596	1,927	2,646	2,950	3,082	2,661	2,063	1,174	2,660	1,331	138	88.1
(WY)	(1999)	(1999)	(2003)	(1998)	(2003)	(2001)	(1997)	(2004)	(2004)	(2004)	(2004)	(1998)
MIN	24.3	33.1	22.9	38.3	33.9	113	82.3	57.1	50.5	16.9	10.7	13.4
(WY)	(1998)	(1998)	(2000)	(2000)	(2000)	(2000)	(2003)	(2002)	(2002)	(2000)	(2000)	(2002)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1997 - 2004	
ANNUAL TOTAL	191,071		236,776			
ANNUAL MEAN	523		647		601	
HIGHEST ANNUAL MEAN					965	
LOWEST ANNUAL MEAN					106	
HIGHEST DAILY MEAN	22,400	Feb 23	13,800	Jun 12	28,800	Jan 31, 1999
LOWEST DAILY MEAN	17	Aug 29	21	Oct 4	5.0	Aug 25, 2000
ANNUAL SEVEN-DAY MINIMUM	18	Aug 25	25	Oct 1	5.1	Aug 20, 2000
MAXIMUM PEAK FLOW			14,600	Jun 12	30,100	Jan 31, 1999
MAXIMUM PEAK STAGE			17.18	Jun 12	20.53	Jan 31, 1999
ANNUAL RUNOFF (AC-FT)	379,000		469,600		435,500	
10 PERCENT EXCEEDS	1,070		1,850		1,460	
50 PERCENT EXCEEDS	72		112		73	
90 PERCENT EXCEEDS	26		37		18	

08110800 Navasota River at OSR near Bryan, TX—Continued



08111500 Brazos River near Hempstead, TX

LOCATION.--Lat 30°07'44", long 96°11'15", Washington County, Hydrologic Unit 12070101, at downstream side of bridge on U.S. Highway 290, 6,000 ft upstream from Texas and New Orleans Railroad Co. bridge, 6.5 mi northwest of Hempstead, 10.5 mi upstream from Caney Creek, and at mile 193.8.

DRAINAGE AREA.--43,880 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--Oct. 1938 to current year. Gage-height records collected in this vicinity at intermittent periods since 1903 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1512: 1941. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 107.90 ft above NGVD of 1929. Prior to Nov. 1, 1940, nonrecording gage at railroad bridge 6,000 ft downstream at datum 4.20 ft higher. Nov. 1, 1940, to Sept. 30, 1963, nonrecording gage at site 1,500 ft downstream at datum 10.00 ft higher. Oct. 1, 1964, to July 31, 1974, water-stage recorder 1,500 ft downstream at datum 10.00 ft higher. Aug. 1, 1974, to Dec. 31, 1988, water-stage recorder at present site at datum 10.00 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in water year 1939, at least 10% of contributing drainage area has been regulated. There are many diversions above station for irrigation, municipal and industrial uses, and oil field operations.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1899, 66.1 ft Dec. 8, 1913, at site 1,500 ft downstream at present datum, from information by Texas and New Orleans Railroad Co., obtained at bridge 6,000 ft downstream. Flood of July 4, 1899, reached a stage of 63.6 ft, at site 1,500 ft downstream at present datum, from information by Texas and New Orleans Railroad Co.

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

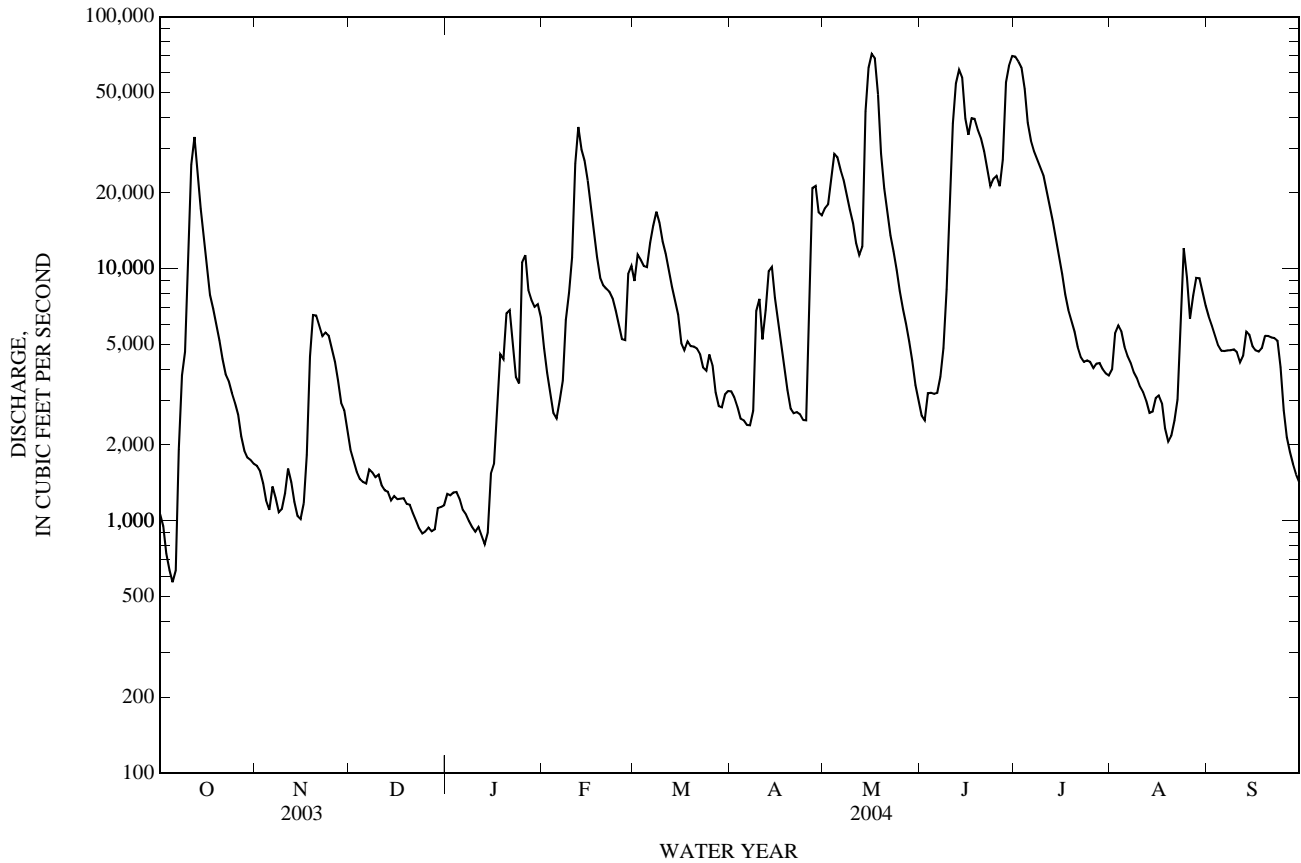
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,060	1,660	1,920	1,280	4,840	8,950	3,260	17,400	2,610	69,500	3,990	6,470
2	952	1,580	1,730	1,260	3,870	11,400	3,090	18,000	2,510	66,300	5,550	5,940
3	741	1,410	1,570	1,300	3,210	10,900	2,830	22,900	3,210	62,800	5,950	5,450
4	637	1,200	1,470	1,300	2,680	10,300	2,550	28,500	3,220	51,600	5,650	4,970
5	571	1,110	1,430	1,220	2,550	10,200	2,510	27,700	3,190	37,900	4,900	4,730
6	637	1,370	1,410	1,110	2,990	12,700	2,400	24,700	3,220	32,200	4,510	4,720
7	1,920	1,230	1,600	1,060	3,600	14,800	2,400	22,500	3,740	29,300	4,230	4,750
8	3,780	1,080	1,560	998	6,270	16,900	2,740	19,700	4,840	27,200	3,880	4,750
9	4,690	1,120	1,490	945	8,030	15,300	6,800	17,200	8,290	25,300	3,670	4,790
10	10,400	1,290	1,520	906	11,100	12,800	7,600	15,200	18,700	23,500	3,410	4,670
11	25,900	1,610	1,380	947	26,200	11,500	5,250	12,700	37,800	20,500	3,230	4,260
12	33,400	1,430	1,320	876	36,500	9,820	6,860	11,300	54,400	17,800	2,990	4,510
13	24,800	1,190	1,300	809	29,700	8,500	9,770	12,200	61,700	15,500	2,680	5,630
14	17,300	1,050	1,210	898	26,900	7,430	10,200	42,100	57,500	13,000	2,710	5,470
15	13,500	1,020	1,260	1,540	22,300	6,580	7,650	62,800	39,400	11,200	3,070	4,920
16	10,100	1,180	1,220	1,680	17,700	5,070	6,230	71,200	34,000	9,540	3,140	4,740
17	7,890	1,830	1,230	2,870	14,100	4,760	5,080	68,500	39,600	7,930	2,930	4,690
18	6,950	4,490	1,230	4,580	11,100	5,150	4,020	49,200	39,400	6,860	2,330	4,840
19	6,060	6,560	1,170	4,380	9,220	4,940	3,300	28,700	35,600	6,230	2,060	5,420
20	5,190	6,530	1,160	6,660	8,600	4,920	2,790	20,800	33,000	5,620	2,170	5,410
21	4,400	5,960	1,080	6,860	8,330	4,830	2,670	16,700	29,300	4,900	2,500	5,340
22	3,820	5,400	1,000	4,920	8,100	4,580	2,700	13,600	24,900	4,460	3,020	5,310
23	3,590	5,580	934	3,720	7,620	4,060	2,650	11,700	21,300	4,270	5,650	5,180
24	3,220	5,430	891	3,510	6,830	3,940	2,510	9,880	22,800	4,330	12,100	4,070
25	2,950	4,850	907	10,600	5,950	4,570	2,510	8,170	23,400	4,270	9,240	2,740
26	2,640	4,280	940	11,300	5,260	4,150	8,580	6,930	21,300	4,040	6,340	2,150
27	2,170	3,610	910	8,240	5,210	3,240	20,900	6,060	27,100	4,200	7,840	1,870
28	1,900	2,940	927	7,510	9,550	2,850	21,300	5,140	54,900	4,230	9,200	1,680
29	1,780	2,750	1,120	7,060	10,300	2,820	16,800	4,320	63,900	4,000	9,180	1,520
30	1,750	2,270	1,130	7,230	---	3,180	16,300	3,460	69,900	3,840	8,160	1,420
31	1,690	---	1,150	6,420	---	3,280	---	3,030	---	3,770	7,140	---
TOTAL	206,388	83,010	39,169	113,989	318,610	234,420	194,250	682,290	844,730	586,090	153,420	132,410
MEAN	6,658	2,767	1,264	3,677	10,990	7,562	6,475	22,010	28,160	18,910	4,949	4,414
MAX	33,400	6,560	1,920	11,300	36,500	16,900	21,300	71,200	69,900	69,500	12,100	6,470
MIN	571	1,020	891	809	2,550	2,820	2,400	3,030	2,510	3,770	2,060	1,420
AC-FT	409,400	164,700	77,690	226,100	632,000	465,000	385,300	1,353,000	1,676,000	1,163,000	304,300	262,600

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

MEAN	4,622	5,056	6,478	7,086	8,313	8,422	8,631	13,610	10,680	4,876	2,405	2,924
MAX	24,830	29,490	41,590	55,990	54,750	50,450	42,860	69,860	51,960	19,000	11,510	18,030
(WY)	(1960)	(1975)	(1941)	(1992)	(1992)	(1992)	(1945)	(1957)	(1957)	(1940)	(1995)	(1974)
MIN	181	318	299	386	484	426	922	954	1,027	817	678	454
(WY)	(1953)	(1989)	(1955)	(1940)	(2000)	(1954)	(1954)	(1996)	(1956)	(2000)	(2003)	(1954)

08111500 Brazos River near Hempstead, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004	
ANNUAL TOTAL	1,987,587		3,588,776		6,916	
ANNUAL MEAN	5,445		9,805		26,170	
HIGHEST ANNUAL MEAN					1,175	
LOWEST ANNUAL MEAN					138,000	
HIGHEST DAILY MEAN	72,700	Feb 24	71,200	May 16	143,000	May 1, 1957
LOWEST DAILY MEAN	454	Aug 29	571	Oct 5	137	Nov 6, 1952
ANNUAL SEVEN-DAY MINIMUM	586	Aug 16	911	Jan 8	140	Nov 3, 1952
MAXIMUM PEAK FLOW			72,800	May 17	143,000	May 2, 1957
MAXIMUM PEAK STAGE			42.61	May 17	54.21	May 2, 1957
ANNUAL RUNOFF (AC-FT)	3,942,000		7,118,000		5,011,000	
10 PERCENT EXCEEDS	11,300		26,000		17,900	
50 PERCENT EXCEEDS	2,330		4,810		2,570	
90 PERCENT EXCEEDS	826		1,210		690	



## BRAZOS RIVER BASIN

08111700 Mill Creek near Bellville, TX

LOCATION.--Lat 29°52'51", long 96°12'18", Austin County, Hydrologic Unit 12070104, on right bank at downstream side of bridge over main channel on State Highway 36, 5.0 mi southeast of Bellville, and 6.0 mi upstream from Brazos River.

DRAINAGE AREA.--376 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1963 to Sept. 1993, Apr. 2000 to current year. Water-quality records: Chemical data: Oct. 1968 to Sept. 1985. Sediment data: Oct. 1966 to Sept. 1985.

REVISED RECORDS.--WSP 2122: 1965(P). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 122.82 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records poor. No known regulation or diversions. During the year, the city of Bellville discharges sewage effluent into a tributary of Mill Creek above gage.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1899, 22.8 ft in 1940, from information by local residents and the 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	13	7.1	19	23	73	125	e191	e508	e150	1,260	53	14
2	12	7.5	18	23	62	228	e196	e874	e167	626	40	13
3	10	7.9	18	23	57	207	e282	e497	e169	295	33	14
4	9.9	7.7	18	23	50	156	e131	e394	e120	212	29	15
5	10	7.6	18	23	113	144	e97	e231	e90	165	26	17
6	10	7.2	18	23	263	200	e149	e136	e104	130	23	17
7	15	6.3	18	23	138	170	e145	e111	e94	113	21	15
8	20	5.9	18	23	93	130	e113	e92	e563	93	20	13
9	23	6.0	18	23	74	110	e100	e97	e1,010	195	19	12
10	43	6.2	18	23	283	97	e105	e81	e1,030	475	18	11
11	44	7.0	18	24	2,640	87	e1,120	e81	e615	286	18	11
12	44	7.1	18	24	5,520	79	e1,280	e125	e308	256	18	11
13	42	6.1	21	24	2,650	78	e456	e478	e160	200	17	11
14	28	5.8	24	24	540	80	e262	e2,980	e195	134	17	11
15	23	6.0	24	24	491	95	e176	e2,600	909	108	15	17
16	17	5.9	24	28	306	123	e137	e708	1,760	87	15	19
17	14	7.5	21	47	193	120	e116	e458	878	74	15	15
18	13	17	20	72	154	96	e104	e266	1,850	66	14	12
19	13	18	19	121	131	73	e96	e184	664	62	16	11
20	13	20	19	124	117	61	e90	e151	220	57	21	11
21	12	22	19	89	103	54	e85	e127	155	58	17	11
22	12	21	19	66	87	52	e81	e113	153	64	19	10
23	12	20	19	57	83	48	e79	e101	192	56	23	10
24	13	20	19	54	129	43	e104	e91	5,530	52	24	10
25	8.9	20	20	1,120	214	42	e316	e86	5,860	46	19	9.9
26	6.7	20	20	1,600	202	42	e896	e80	3,410	49	17	10
27	7.0	20	20	358	151	42	e538	e75	6,010	46	14	9.9
28	7.3	21	20	137	121	41	e454	e70	8,070	40	16	10
29	7.5	20	21	94	103	37	e303	e66	6,740	47	24	9.8
30	7.3	19	22	94	---	35	e162	e62	2,770	43	17	9.8
31	7.0	---	22	85	---	31	---	e62	---	52	16	---
TOTAL	517.6	372.8	610	4,496	15,141	2,926	8,364	11,985	49,946	5,447	654	370.4
MEAN	16.7	12.4	19.7	145	522	94.4	279	387	1,665	176	21.1	12.3
MAX	44	22	24	1,600	5,520	228	1,280	2,980	8,070	1,260	53	19
MIN	6.7	5.8	18	23	50	31	79	62	90	40	14	9.8
AC-FT	1,030	739	1,210	8,920	30,030	5,800	16,590	23,770	99,070	10,800	1,300	735
CFSM	0.04	0.03	0.05	0.39	1.39	0.25	0.74	1.03	4.43	0.47	0.06	0.03
IN.	0.05	0.04	0.06	0.44	1.50	0.29	0.83	1.19	4.94	0.54	0.06	0.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2004h, BY WATER YEAR (WY)

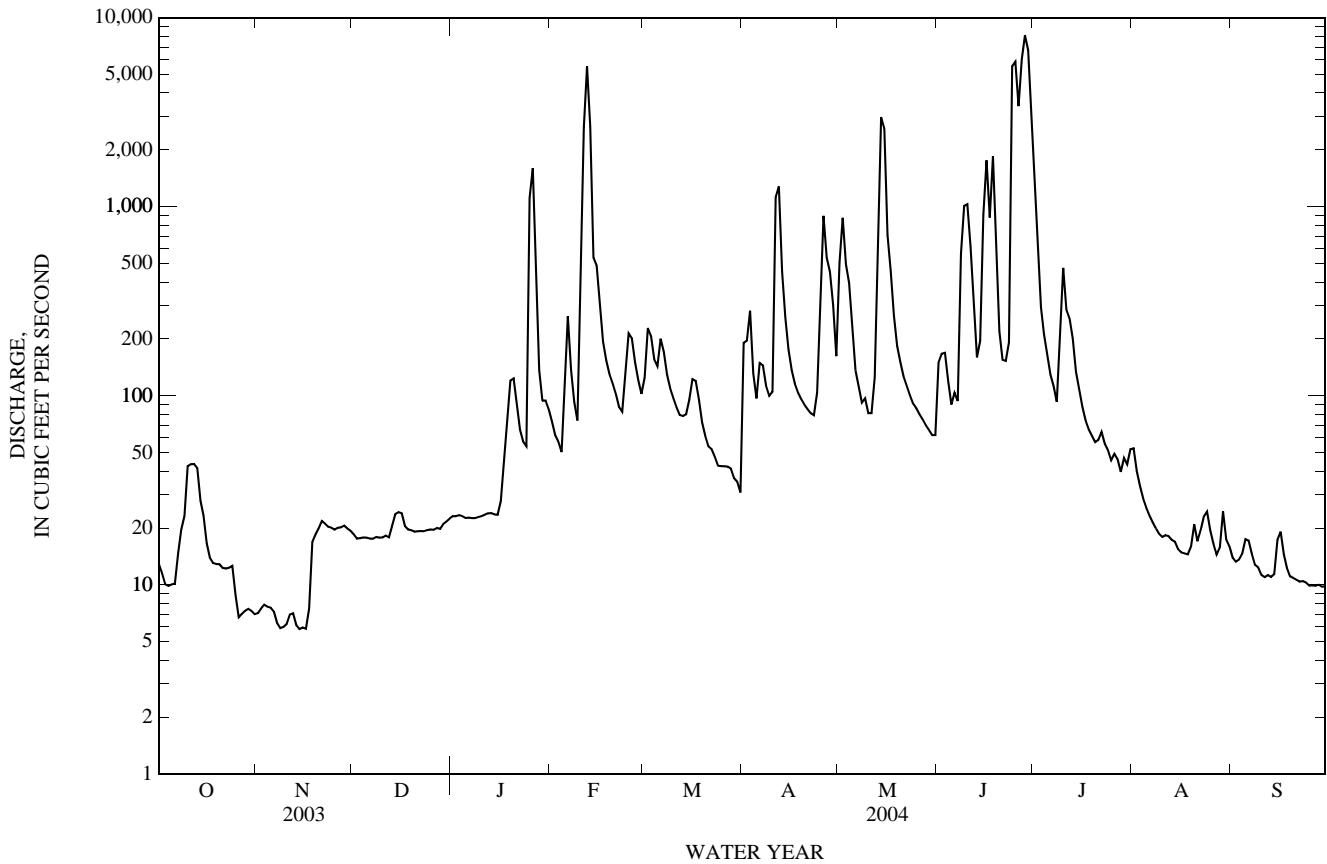
MEAN	138	200	262	282	351	271	314	471	468	37.7	28.0	94.6
MAX	1,008	1,575	1,472	1,350	2,188	1,202	1,604	1,930	2,022	201	302	1,202
(WY)	(2003)	(2003)	(1977)	(1974)	(1992)	(1983)	(1991)	(1979)	(1987)	(1968)	(1974)	(1974)
MIN	3.23	3.84	8.20	15.6	11.8	12.4	22.3	7.71	2.77	0.98	1.18	1.14
(WY)	(1989)	(1964)	(1964)	(1964)	(1967)	(1967)	(1971)	(2002)	(1990)	(1971)	(2000)	(1963)



08111700 Mill Creek near Bellville, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1963 - 2004 <sup>h</sup>	
ANNUAL TOTAL	49,218.1		100,829.8		245	
ANNUAL MEAN	135		275		667	
HIGHEST ANNUAL MEAN					21.5	
LOWEST ANNUAL MEAN					1967	
HIGHEST DAILY MEAN	7,540	Feb 22	8,070	Jun 28	24,000	Nov 1, 1981
LOWEST DAILY MEAN	2.8	Aug 9	5.8	Nov 14	0.08	Jul 22, 1971
ANNUAL SEVEN-DAY MINIMUM	3.1	Aug 8	6.3	Nov 8	0.20	Jun 28, 1967
MAXIMUM PEAK FLOW			10,700	Jun 28	44,400	Jun 13, 1973
MAXIMUM PEAK STAGE			14.39	Jun 28	17.95	Jun 13, 1973
ANNUAL RUNOFF (AC-FT)	97,620		200,000		177,200	
ANNUAL RUNOFF (CFSM)	0.359		0.733		0.651	
ANNUAL RUNOFF (INCHES)	4.87		9.98		8.84	
10 PERCENT EXCEEDS	169		476		300	
50 PERCENT EXCEEDS	21		48		36	
90 PERCENT EXCEEDS	6.5		10		4.4	

e Estimated  
h See PERIOD OF RECORD paragraph.



## 08114000 Brazos River at Richmond, TX

LOCATION.--Lat 29°34'56", long 95°45'27", Fort Bend County, Hydrologic Unit 12070104, on right bank at upstream side of downstream bridge on U.S. Highway 90 in Richmond, 850 ft downstream from Texas and New Orleans Railroad Co. bridge, and at mile 92.0.

DRAINAGE AREA.--45,107 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--Jan. 1903 to June 1906, Oct. 1922 to current year. Published as "at Rosenberg" Oct. 1922 to Sept. 1931. Records from June to Nov. 1901 and June to Sept. 1902 contained in U.S. Department of Agriculture, Office of Experiment Stations, Bulletin Nos. 119 and 133. Gage-height records collected in this vicinity since 1914 are contained in reports of the National Weather Service. Water-quality records: Chemical data: Oct. 1941 to Sept. 2002. Biochemical data: Jan. 1968 to Sept. 2002. Pesticide data: Oct. 1967 to May 1982. Sediment data: Apr. 1957 to Sept. 1986. Specific conductance: Oct. 1941 to Sept. 1995. Water temperature: Nov. 1950 to Sept. 1995. Suspended-sediment data: Jan. 1966 to Sept. 1986.

REVISED RECORDS.--WSP 1392: 1933. WSP 1632: 1958. WDR TX-76-2: Drainage area. WDR TX-00-3 Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 27.94 ft above NGVD of 1929. Prior to Oct. 1, 1922, various types of nonrecording gages at railroad bridge 925 ft upstream at different datums. Oct. 1, 1922 to Sept. 30, 1931, nonrecording chain gage at Rosenberg 7.6 mi upstream at datum about 17 ft higher; Oct. 1, 1931 to Sept. 30, 1975, water-stage recorder at present site at datum 13.00 ft higher; Oct. 1, 1975 to Dec. 31, 1988, water-stage recorder at present site and at datum 10.00 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since water year 1941, at least 10% of contributing drainage area has been regulated. Considerable water is diverted above station for irrigation and municipal supply.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--20 years (water years 1904-05, 1923-40) 7,209 ft<sup>3</sup>/s (5,223,000 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1852, 61.2 ft, Dec. 10, 1913, present datum, from floodmarks on right bank 1,000 ft upstream from gage. From information by Texas and New Orleans Railroad Co., stages of other floods at railroad bridge, present datum, are as follows: May 1884, 56.7 ft; June 13, 1885, 57.7 ft; July 1899, 58.6 ft; May 2, 1915, 56.3 ft; and May 9, 1922, 53.9 ft.

EXTREMES FOR PERIOD PRIOR TO REGULATION.-- WATER YEARS, 1903-1906, 1923-1940: Maximum discharge, 123,000 ft<sup>3</sup>/s, June 6, 1929 (gage height, 53.6 ft, from floodmark), present site and datum; minimum daily, 35 ft<sup>3</sup>/s, Aug. 23, 1934.

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	770	1,840	2,600	1,100	6,870	9,660	2,610	16,600	3,660	65,400	4,370	7,520
2	660	1,740	2,130	1,070	5,830	8,950	2,720	21,400	3,200	68,100	4,190	6,910
3	776	1,690	1,830	1,080	4,620	9,810	2,840	20,400	2,910	67,600	4,890	6,290
4	973	1,560	1,630	1,100	3,760	10,300	2,640	21,200	2,870	65,400	6,040	5,990
5	906	1,370	1,500	1,050	3,210	10,000	2,470	25,800	3,650	59,500	6,090	5,650
6	807	1,190	1,420	1,090	2,890	9,590	2,250	26,300	4,450	46,400	5,710	5,160
7	774	1,100	1,340	1,110	3,270	10,700	2,190	23,500	3,910	34,900	5,020	4,980
8	732	1,230	1,300	1,090	3,070	12,400	2,200	20,800	4,030	29,000	4,650	4,980
9	1,600	1,300	1,330	1,060	4,170	14,200	2,090	18,400	5,720	25,900	4,340	4,910
10	3,820	1,180	1,280	986	6,810	14,100	3,230	16,100	9,310	24,100	4,150	4,770
11	6,420	1,130	1,190	907	13,400	12,300	8,530	14,700	18,100	22,800	3,960	4,920
12	18,600	1,180	1,270	804	27,600	10,800	8,630	13,700	30,800	20,400	3,830	4,700
13	28,300	1,310	1,700	797	38,300	9,670	7,270	12,400	43,900	18,000	3,440	4,360
14	25,100	1,260	1,670	757	34,700	8,770	8,440	18,000	51,500	16,000	3,220	4,930
15	17,500	1,140	1,430	743	28,700	8,720	9,610	40,600	54,600	13,900	2,940	5,710
16	13,700	1,090	1,190	766	23,200	7,650	8,340	55,400	48,000	12,200	2,920	5,340
17	10,800	3,420	1,210	3,380	17,900	6,350	6,440	62,700	39,100	10,700	3,170	4,960
18	8,530	5,970	1,180	4,130	14,300	5,000	5,360	66,000	37,800	9,300	3,140	4,900
19	7,220	4,460	1,140	5,530	11,500	4,910	4,190	61,500	38,900	8,060	2,950	4,910
20	6,410	6,040	1,110	4,990	9,440	4,910	3,210	43,000	35,400	7,270	2,600	5,290
21	5,650	6,560	1,070	5,090	8,510	4,790	2,590	25,200	31,700	6,720	2,400	5,600
22	4,950	6,230	1,040	6,380	8,170	4,690	2,200	17,500	28,200	6,130	2,510	5,430
23	4,210	5,590	1,010	5,540	8,190	4,450	2,070	14,000	25,800	5,580	2,750	5,300
24	3,710	5,380	1,010	4,230	7,840	3,950	2,360	12,000	26,100	5,120	3,420	5,240
25	3,780	5,400	934	4,820	7,520	3,590	2,740	10,400	32,600	4,940	8,360	4,950
26	3,790	5,070	880	9,920	7,040	3,680	7,820	8,860	35,000	4,930	10,000	3,940
27	3,220	4,580	855	13,600	6,130	4,150	7,830	7,640	30,200	4,870	7,450	2,930
28	2,800	3,990	886	9,740	5,400	3,480	16,200	6,770	34,700	4,660	6,950	2,380
29	2,370	3,340	940	7,670	6,910	2,790	19,400	5,970	50,700	4,670	8,690	2,090
30	1,980	2,820	953	7,680	---	2,390	16,500	5,140	59,700	4,570	9,200	1,830
31	1,860	---	1,070	7,290	---	2,360	---	4,360	---	4,370	8,610	---
MEAN	6,217	3,005	1,293	3,726	11,350	7,391	5,832	23,110	26,550	21,980	4,902	4,896
MAX	28,300	6,560	2,600	13,600	38,300	14,200	19,400	66,000	59,700	68,100	10,000	7,520
MIN	660	1,090	855	743	2,890	2,360	2,070	4,360	2,870	4,370	2,400	1,830
AC-FT	382,300	178,800	79,530	229,100	653,100	454,400	347,100	1,421,000	1,580,000	1,352,000	301,400	291,300

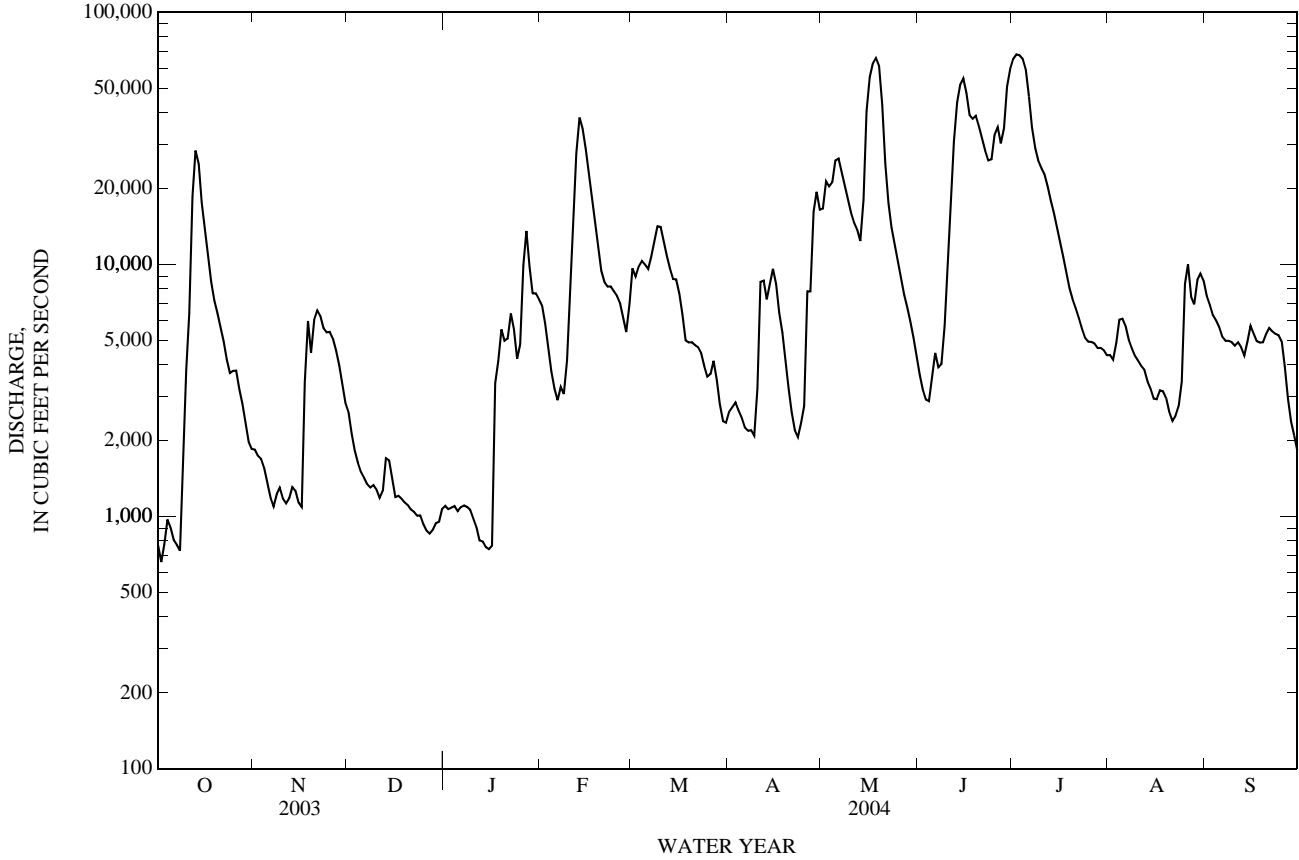
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004z, BY WATER YEAR (WY)

MEAN	5,173	5,893	7,284	8,041	9,034	9,327	9,142	14,550	11,620	5,039	2,561	3,292
MAX	28,760	32,360	52,860	60,500	54,410	54,050	41,900	77,200	58,350	21,980	11,800	19,850
(WY)	(1958)	(1975)	(1941)	(1992)	(1992)	(1992)	(1945)	(1957)	(1957)	(2004)	(1995)	(1974)
MIN	203	366	480	543	528	445	800	819	786	717	550	414
(WY)	(1953)	(1989)	(1955)	(1952)	(2000)	(1954)	(1996)	(1996)	(1956)	(1956)	(1963)	(1954)

08114000 Brazos River at Richmond, TX—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1941 - 2004z	
ANNUAL MEAN	5,604		10,010		7,569	
HIGHEST ANNUAL MEAN					26,620	1992
LOWEST ANNUAL MEAN					1,201	2000
HIGHEST DAILY MEAN	67,600	Feb 26	68,100	Jul 2	118,000	May 5, 1957
LOWEST DAILY MEAN	487	Aug 20	660	Oct 2	55	Jul 5, 1956
ANNUAL SEVEN-DAY MINIMUM	568	Aug 18	804	Oct 2	93	Jul 4, 1956
MAXIMUM PEAK FLOW			68,300	Jul 2	119,000	May 5, 1957
MAXIMUM PEAK STAGE			43.10	Jul 2	50.30	Oct 21, 1994
ANNUAL RUNOFF (AC-FT)	4,057,000		7,269,000		5,484,000	
10 PERCENT EXCEEDS	12,700		26,700		19,100	
50 PERCENT EXCEEDS	2,410		4,980		2,960	
90 PERCENT EXCEEDS	817		1,110		772	

z Period of regulated streamflow.



08115000 Big Creek near Needville, TX

LOCATION.--Lat 29°28'35", long 95°48'45", Fort Bend County, Hydrologic Unit 12070104, on left bank at downstream side of bridge on State Highway 36, 1.5 mi downstream from Coon Creek, 5.5 mi north of Needville, 10.5 mi upstream from Fairchild Creek, and 33.0 mi upstream from mouth.

DRAINAGE AREA.--42.8 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1947 to June 1950, Mar. 1952 to current year.

REVISED RECORDS.--WSP 1148: 1947. WSP 1712: 1957-58, 1959(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 59.39 ft above NGVD of 1929. Prior to June 1950, and May 1959 to Mar. 1960, nonrecording gage at datum 10.00 ft higher. Mar. to May 1959, and Mar. 1960 to Sept. 1967, water-stage recorder at datum 10.00 ft higher. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No known regulation or diversions. Channel was rectified in 2002. Low flow supplemented by drainage from irrigated fields. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1913, 24.4 ft in Aug. 1945 before channel rectification, 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	0.89	1.1	2.0	2.1	45	2.4	0.37	782	2.1	142	3.6	1.5
2	0.95	0.95	1.8	1.8	50	1.9	0.92	545	1.7	63	21	4.4
3	0.79	1.5	2.2	1.8	20	1.8	2.0	136	2.2	28	3.5	6.8
4	0.75	1.1	2.0	1.8	11	1.8	1.2	48	4.0	13	1.7	1.3
5	0.92	0.96	2.0	1.7	51	4.0	1.1	18	4.8	6.9	1.1	1.1
6	0.88	0.92	1.7	0.99	20	4.8	1.3	8.4	3.7	4.7	1.0	0.98
7	0.54	0.94	1.7	0.65	7.7	3.0	1.9	4.9	2.9	3.6	1.5	0.99
8	0.82	0.89	1.9	9.9	4.2	2.1	1.2	3.6	242	3.3	1.6	0.92
9	64	0.91	1.2	6.6	3.0	1.5	0.93	2.9	136	3.2	1.5	0.98
10	183	0.95	1.4	2.7	118	0.81	1.0	28	33	2.9	1.5	0.97
11	13	0.62	1.6	1.7	1,470	0.74	70	230	12	2.8	1.5	0.99
12	2.9	0.54	49	2.5	320	1.1	62	443	6.2	3.3	2.0	1.1
13	1.6	0.34	249	2.0	94	1.2	20	559	4.3	2.9	0.97	1.0
14	1.3	0.30	60	1.8	251	144	5.7	2,090	4.4	2.1	1.4	0.81
15	1.0	1.1	24	6.1	97	88	2.6	493	9.3	1.9	1.3	1.1
16	0.93	1.6	11	31	35	15	1.4	206	91	2.5	1.3	1.1
17	0.96	1,220	6.7	e1,790	17	5.0	1.2	112	220	2.8	1.3	1.1
18	0.88	2,490	4.4	e590	8.6	2.5	1.3	42	103	2.7	1.2	1.1
19	0.82	407	3.2	e144	5.7	1.6	1.3	54	20	2.6	0.97	1.2
20	0.87	131	2.8	e47	3.7	1.4	0.63	20	6.2	2.3	0.46	1.2
21	0.90	62	2.3	e18	2.7	1.3	0.91	9.5	3.9	1.7	1.2	1.3
22	0.82	33	2.1	e9.0	14	1.5	1.0	8.1	9.0	2.4	1.8	1.5
23	0.80	18	3.1	6.8	192	1.0	0.95	5.4	782	2.4	3.8	1.2
24	0.81	9.1	2.0	17	50	0.99	4.1	3.5	2,040	2.2	2.2	1.3
25	1.2	6.0	1.9	488	25	0.99	11	2.7	1,130	2.3	1.5	1.5
26	8.1	4.8	1.8	93	10	1.0	82	2.4	543	2.2	0.74	1.6
27	7.1	3.8	1.8	30	5.2	1.0	23	2.2	219	2.3	1.2	1.5
28	3.7	2.2	2.2	13	3.2	1.2	6.0	2.2	110	2.6	85	0.72
29	1.9	2.6	6.3	23	2.5	1.1	2.9	2.0	427	2.0	89	1.4
30	1.5	2.1	3.4	397	---	0.71	1.9	1.9	324	1.8	8.6	1.4
31	1.3	---	2.0	109	---	0.35	---	1.9	---	1.8	2.4	---
TOTAL	305.93	4,406.32	458.5	3,849.94	2,936.5	295.79	311.81	5,867.6	6,496.7	320.2	247.84	44.06
MEAN	9.87	147	14.8	124	101	9.54	10.4	189	217	10.3	7.99	1.47
MAX	183	2,490	249	1,790	1,470	144	82	2,090	2,040	142	89	6.8
MIN	0.54	0.30	1.2	0.65	2.5	0.35	0.37	1.9	1.7	1.7	0.46	0.72
AC-FT	607	8,740	909	7,640	5,820	587	618	11,640	12,890	635	492	87

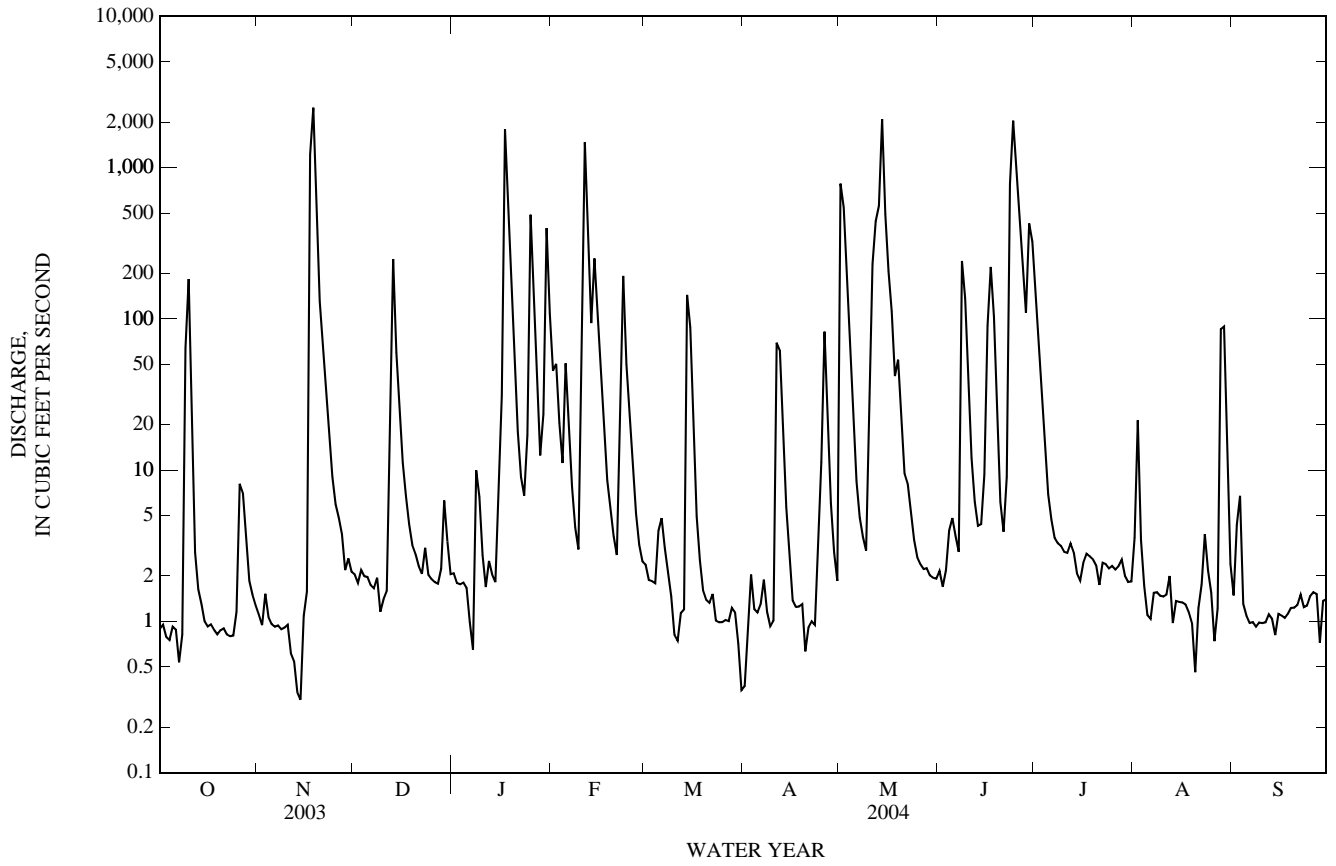
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2004h, BY WATER YEAR (WY)

MEAN	46.5	41.1	39.6	37.1	43.5	22.4	34.7	40.6	48.1	14.7	25.2	44.4
MAX	258	298	194	186	223	130	218	224	467	166	284	399
(WY)	(1995)	(1986)	(1987)	(1974)	(1959)	(1957)	(1973)	(1982)	(1960)	(1961)	(1983)	(1979)
MIN	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.33	0.02	0.02	0.00	0.00
(WY)	(1948)	(1956)	(1949)	(1957)	(1962)	(1954)	(1954)	(1963)	(1948)	(1956)	(1948)	(1948)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1947 - 2004h
ANNUAL TOTAL	9,172.65	25,541.19	
ANNUAL MEAN	25.1	69.8	36.3
HIGHEST ANNUAL MEAN			91.1
LOWEST ANNUAL MEAN			3.54
HIGHEST DAILY MEAN	2,490	Nov 18	2,490
LOWEST DAILY MEAN	0.00	Jun 5	0.30
ANNUAL SEVEN-DAY MINIMUM	0.33	Jun 3	0.65
MAXIMUM PEAK FLOW			4,050
MAXIMUM PEAK STAGE			21.93
ANNUAL RUNOFF (AC-FT)	18,190	50,660	26,330
10 PERCENT EXCEEDS	34	122	50
50 PERCENT EXCEEDS	2.7	2.4	1.8
90 PERCENT EXCEEDS	0.87	0.93	0.10

08115000 Big Creek near Needville, TX—Continued



## BRAZOS RIVER BASIN

08116650 Brazos River at Rosharon, TX

LOCATION.--Lat 29°20'58", long 95°34'56", Fort Bend County, Hydrologic Unit 12070104, on right bank at downstream side of bridge on Farm Road 1462, 2.0 mi downstream from Big Creek, 2.1 mi upstream from Cow Creek, 7.3 mi west of Rosharon, and at mile 56.7.

DRAINAGE AREA.--45,339 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--Apr. 1967 to Sept. 1980, Apr. 1984 to current year. Water-quality records: Chemical data: Oct. 1967 to Sept. 1980. Biochemical data: Oct. 1967 to Sept. 1980. Sediment data: Oct. 1974 to Sept. 1980. Specific conductance: Oct. 1967 to Sept. 1980. Water temperature: Oct. 1967 to Sept. 1980.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

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

REMARKS.--Records fair. Since installation of gage in Apr. 1967, at least 10% of contributing drainage area has been regulated. Water is diverted above station for irrigation, industrial, and municipal supply which materially affects low flows.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since at least 1884, 56.4 ft about Dec. 11, 1913, from information by the 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	879	2,220	3,060	e1,260	8,690	8,220	3,180	17,100	4,540	60,500	5,630	8,790
2	698	2,150	2,790	e1,290	7,750	9,660	3,390	24,400	4,030	63,100	5,710	7,960
3	650	2,050	2,370	e1,280	6,290	9,390	3,530	24,300	3,640	64,100	5,620	7,490
4	656	1,950	2,100	e1,200	5,150	10,300	3,570	21,700	3,400	63,800	6,460	7,130
5	871	1,770	1,890	e1,140	4,870	10,400	3,340	23,300	3,930	61,900	6,990	6,940
6	739	1,590	1,780	1,100	4,660	9,920	3,490	26,200	4,440	56,300	6,910	6,530
7	759	1,460	1,660	1,110	3,930	9,900	3,540	25,300	4,600	46,200	6,480	6,130
8	656	1,440	1,600	1,250	3,900	11,100	3,170	22,300	4,540	36,000	5,980	6,070
9	927	1,570	1,590	1,530	3,880	12,500	3,020	19,700	6,140	29,900	5,710	6,050
10	9,270	1,590	1,660	1,330	5,970	13,800	3,000	17,500	7,580	26,600	5,550	5,800
11	8,980	1,480	1,600	1,160	16,000	13,100	5,580	16,300	12,200	24,900	5,390	5,730
12	11,400	1,440	1,600	1,070	25,700	11,500	9,960	19,000	21,400	23,600	5,170	5,790
13	21,200	1,420	5,230	962	36,200	10,300	8,970	17,000	34,400	20,400	4,860	5,550
14	25,700	1,440	4,130	905	38,600	9,700	8,170	22,900	44,900	17,900	4,580	5,420
15	21,100	1,520	2,720	882	34,600	10,700	9,120	35,200	50,700	15,800	4,360	6,260
16	15,700	1,940	2,050	913	28,400	9,670	9,440	49,200	51,600	13,700	4,160	6,560
17	12,200	2,830	1,680	7,230	22,200	8,130	8,020	54,900	46,100	12,200	4,130	6,180
18	9,610	16,800	1,560	10,100	17,300	6,700	6,670	58,000	40,500	10,900	4,250	5,880
19	7,860	14,700	1,470	7,630	13,600	5,670	5,650	59,300	39,700	9,710	4,180	5,860
20	6,850	11,000	1,410	6,430	11,100	5,660	4,530	54,700	38,600	8,730	3,990	5,900
21	6,070	8,820	1,380	5,420	9,390	5,540	3,870	39,500	35,300	8,140	3,720	6,320
22	5,410	7,380	1,350	5,880	8,680	5,510	3,290	24,300	32,000	7,650	3,590	6,590
23	4,790	6,580	1,340	6,370	9,100	5,360	2,940	16,600	30,300	7,190	3,770	6,430
24	4,290	5,890	1,280	5,370	9,020	5,140	3,090	13,100	32,200	6,700	3,930	6,260
25	3,980	5,690	1,210	7,550	8,490	4,770	3,350	11,300	37,500	6,340	5,440	6,060
26	4,730	5,650	1,170	9,710	7,860	4,500	5,070	9,740	43,300	6,180	9,670	5,650
27	4,470	5,280	1,130	12,400	7,140	4,770	7,910	8,410	39,600	6,150	9,460	4,700
28	3,700	4,700	1,130	12,300	6,390	4,820	10,400	7,400	35,300	6,050	7,730	3,920
29	3,180	4,100	1,240	9,260	6,140	4,200	17,100	6,640	43,300	5,970	8,790	3,460
30	2,780	3,460	1,230	9,640	---	3,490	18,000	5,930	55,000	5,960	9,620	3,180
31	2,470	---	1,190	9,650	---	3,250	---	5,230	---	5,750	9,560	---
TOTAL	202,575	129,910	57,600	143,322	371,000	247,670	184,360	756,450	810,740	738,320	181,390	180,590
MEAN	6,535	4,330	1,858	4,623	12,790	7,989	6,145	24,400	27,020	23,820	5,851	6,020
MAX	25,700	16,800	5,230	12,400	38,600	13,800	18,000	59,300	55,000	64,100	9,670	8,790
MIN	650	1,420	1,130	882	3,880	3,250	2,940	5,230	3,400	5,750	3,590	3,180
AC-FT	401,800	257,700	114,200	284,300	735,900	491,300	365,700	1,500,000	1,608,000	1,464,000	359,800	358,200

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

MEAN	5,174	6,536	8,183	10,190	10,630	12,320	10,190	12,450	12,070	4,914	2,626	3,455
MAX	24,240	33,580	23,360	70,560	60,530	60,170	32,050	39,370	41,010	23,820	11,370	19,370
(WY)	(1974)	(1975)	(1992)	(1992)	(1992)	(1992)	(1977)	(1990)	(1987)	(2004)	(1995)	(1974)
MIN	342	290	504	665	436	498	511	312	367	246	400	347
(WY)	(2000)	(1989)	(2000)	(2000)	(2000)	(1971)	(1996)	(1978)	(1971)	(1971)	(2000)	(2000)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

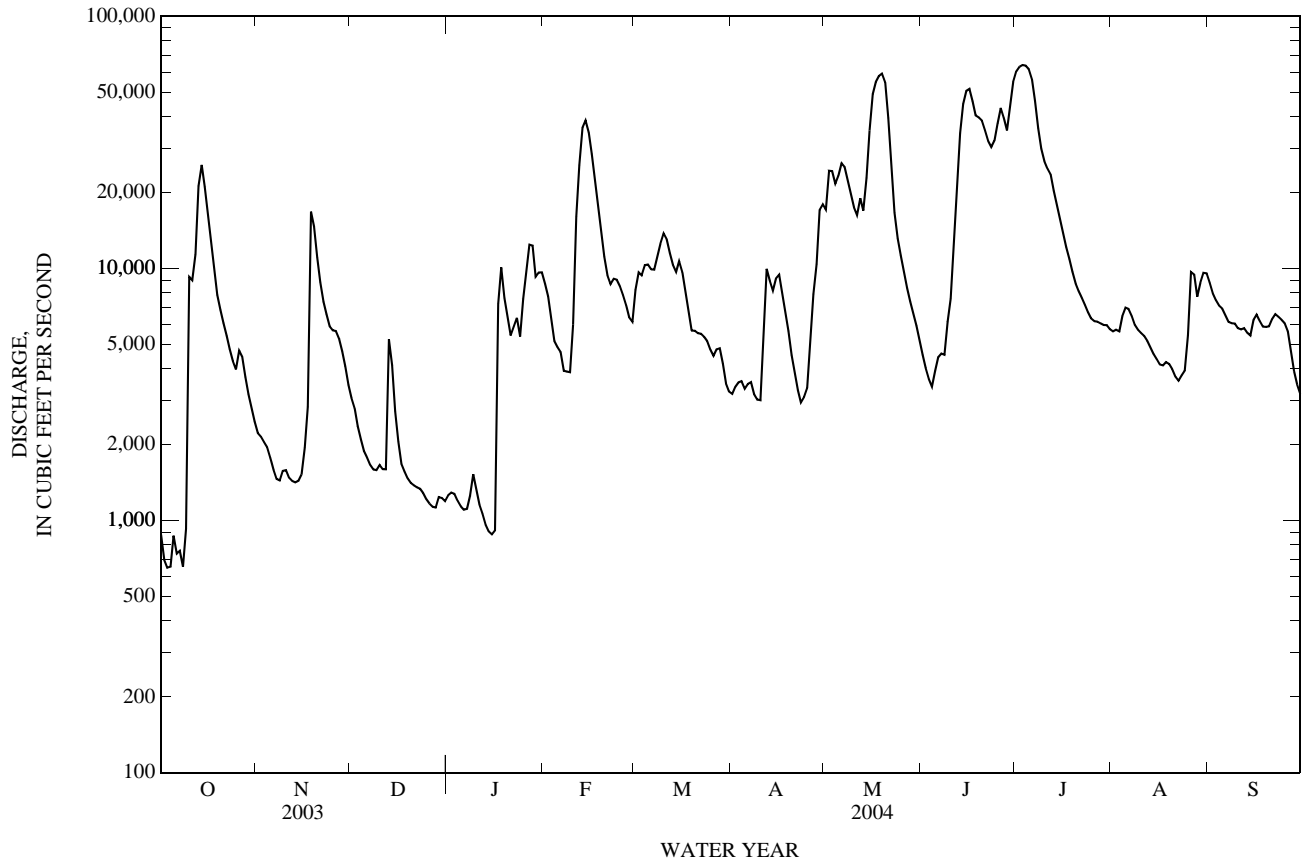
WATER YEARS 1967 - 2004h

ANNUAL TOTAL	2,120,544	4,003,927		
ANNUAL MEAN	5,810	10,940	8,384	
HIGHEST ANNUAL MEAN			29,050	1992
LOWEST ANNUAL MEAN			990	2000
HIGHEST DAILY MEAN	59,200	Feb 27	64,100	Jul 3
LOWEST DAILY MEAN	395	Aug 21	650	Oct 3
ANNUAL SEVEN-DAY MINIMUM	497	Aug 19	718	Oct 2
MAXIMUM PEAK FLOW			64,400	Jul 3
MAXIMUM PEAK STAGE			47.49	Jul 3
ANNUAL RUNOFF (AC-FT)	4,206,000	7,942,000	6,074,000	51.89
10 PERCENT EXCEEDS	12,400	30,000	21,800	
50 PERCENT EXCEEDS	2,910	6,070	3,650	
90 PERCENT EXCEEDS	876	1,420	712	

h See Period of Record paragraph.

e Estimated

08116650 Brazos River at Rosharon, TX—Continued



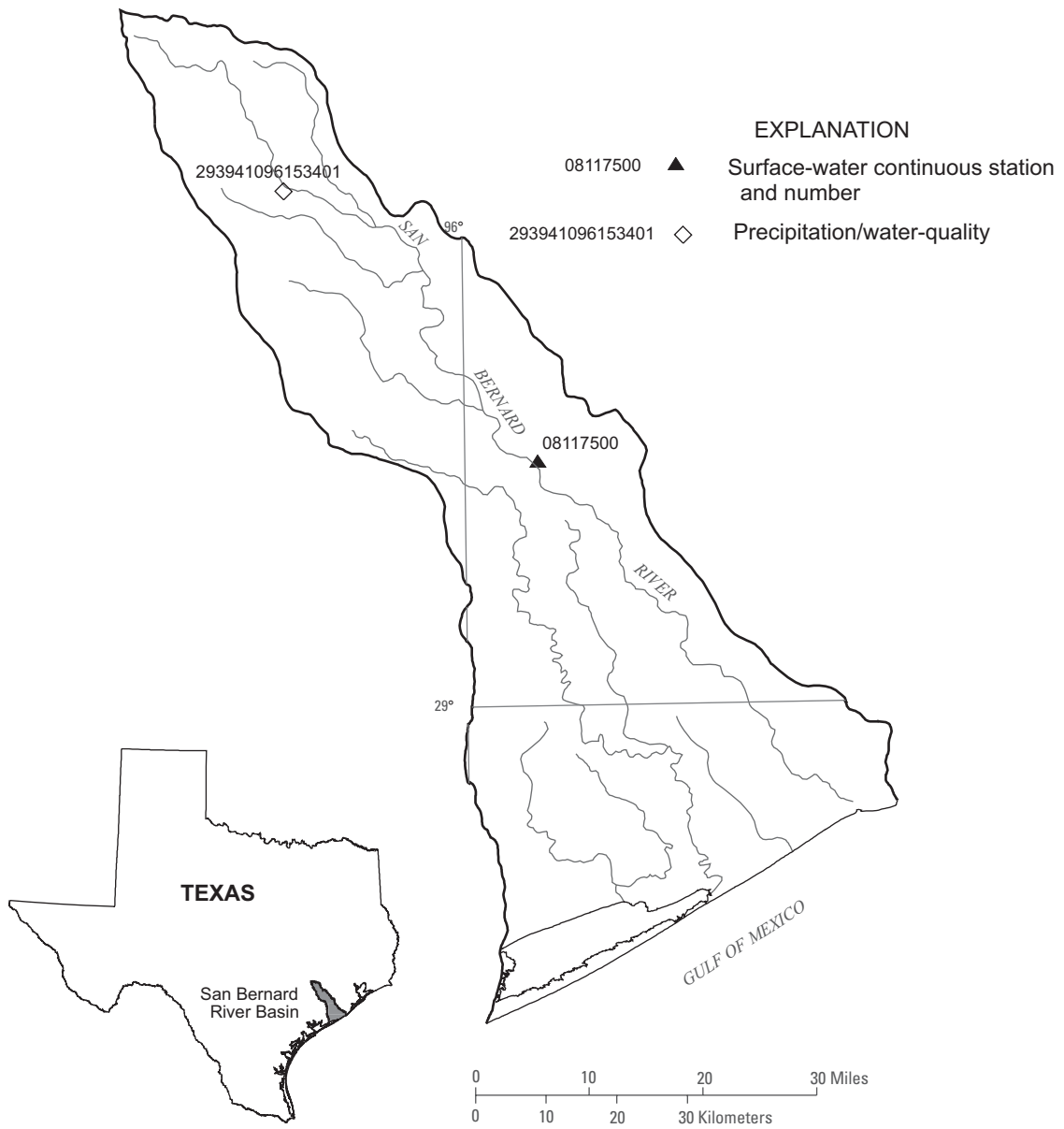


Figure 10.--Map showing location of gaging stations in the San Bernard River Basin



08117500	San Bernard River near Boling, TX . . . . .	526
293941096153401	Attwater Prairie Chicken National Wildlife Refuge near Eagle Lake, TX . . . .	528

## SAN BERNARD RIVER BASIN

08117500 San Bernard River near Boling, TX

LOCATION.--Lat 29°18'48", long 95°53'37", Fort Bend County, Hydrologic Unit 12090401, on left bank at downstream side of bridge on Farm Road 442, 2.5 mi downstream from Snake Creek, and 4.5 mi northeast of Boling.

DRAINAGE AREA.--727 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1954 to current year. Water-quality records: Chemical data: Feb. 1978 to Sept. 1986. Biochemical data: Feb. 1978 to Sept. 1986.

REVISED RECORDS.--WSP 1712: 1958. WSP 1922: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 30.81 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. Part of low flow is drainage from areas irrigated with diversions from the Colorado River. There are numerous diversions above station for irrigation and for other uses.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900, 43.5 ft in 1913 (probably Dec.). Flood in Sept. 1938 reached a stage of 43.3 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	51	209	43	37	1,430	466	44	1,540	92	6,220	314	92
2	38	185	34	32	987	357	41	3,080	113	5,260	386	75
3	32	132	29	31	800	253	328	2,620	108	4,420	329	85
4	32	84	26	32	641	193	643	2,740	105	3,610	273	70
5	34	55	23	30	502	179	385	3,090	117	2,520	248	153
6	44	36	21	26	491	212	164	2,910	122	1,430	231	177
7	70	24	20	23	461	200	114	1,910	107	913	204	157
8	137	19	19	32	363	176	106	1,090	115	637	186	198
9	414	17	18	67	351	155	109	735	329	434	176	204
10	2,090	16	18	47	734	130	85	477	654	321	150	159
11	786	15	17	33	3,810	108	126	600	848	311	146	131
12	393	14	19	29	4,550	93	892	2,540	842	330	149	105
13	302	13	884	25	3,300	76	1,250	2,930	723	362	126	82
14	255	12	1,130	23	3,060	92	1,600	6,160	715	385	121	77
15	225	11	766	24	2,890	345	2,200	7,080	805	367	108	68
16	197	11	479	53	2,110	520	2,080	5,820	813	320	112	62
17	152	1,030	325	2,380	1,390	687	1,380	5,500	759	274	113	130
18	124	8,380	229	1,930	993	657	959	5,090	734	230	94	156
19	102	6,770	149	1,200	744	723	656	4,290	641	212	95	149
20	84	4,180	96	833	534	709	415	3,240	596	193	100	159
21	64	2,710	65	732	368	547	239	1,870	507	195	123	147
22	46	1,350	46	768	258	350	146	1,090	396	206	181	125
23	35	898	38	678	373	222	104	785	773	220	194	108
24	31	682	34	478	319	157	109	542	4,260	265	233	95
25	25	478	28	1,860	245	115	180	340	6,970	411	259	79
26	545	302	24	1,510	430	91	633	217	5,880	461	241	73
27	801	186	23	1,150	462	75	929	156	6,800	409	208	56
28	680	118	23	1,150	435	65	1,310	129	7,520	388	178	46
29	411	80	26	1,300	501	59	1,390	108	7,820	406	153	38
30	313	57	27	1,770	---	54	1,180	89	7,180	340	145	37
31	249	---	28	1,770	---	49	---	84	---	325	119	---
TOTAL	8,762	28,074	4,707	20,053	33,532	8,115	19,797	68,852	57,444	32,375	5,695	3,293
MEAN	283	936	152	647	1,156	262	660	2,221	1,915	1,044	184	110
MAX	2,090	8,380	1,130	2,380	4,550	723	2,200	7,080	7,820	6,220	386	204
MIN	25	11	17	23	245	49	41	84	92	193	94	37
AC-FT	17,380	55,680	9,340	39,780	66,510	16,100	39,270	136,600	113,900	64,220	11,300	6,530

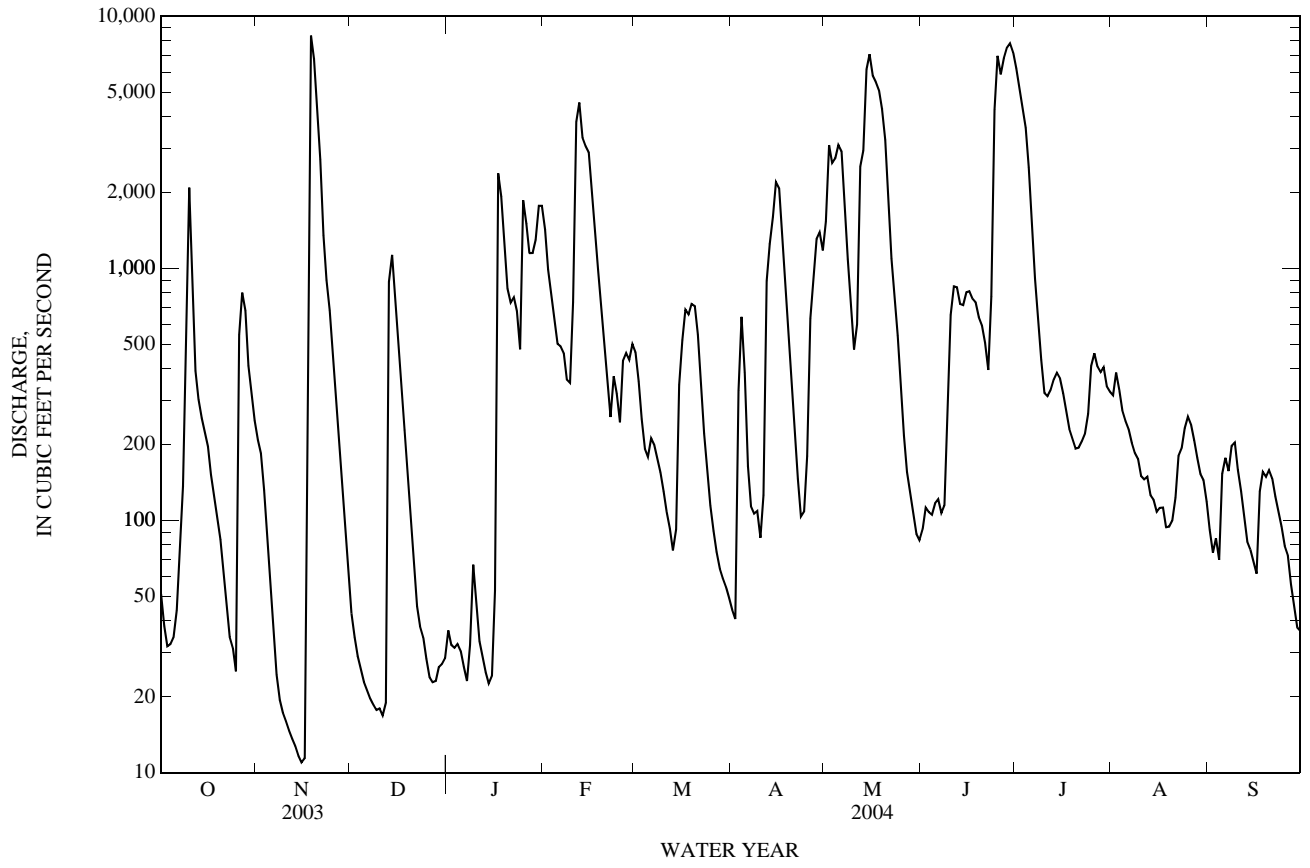
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2004, BY WATER YEAR (WY)

MEAN	705	633	471	573	652	421	501	650	818	355	224	662
MAX	5,565	4,423	2,497	2,316	4,303	2,680	3,348	2,840	5,083	1,472	1,188	3,794
(WY)	(1999)	(2003)	(1992)	(1979)	(1992)	(1997)	(1973)	(1972)	(1993)	(2002)	(2002)	(1979)
MIN	3.27	5.23	6.19	6.57	13.0	5.97	15.2	22.8	10.4	10.7	26.8	35.2
(WY)	(1957)	(1956)	(1990)	(1957)	(2000)	(1956)	(1963)	(1956)	(1956)	(1956)	(1956)	(1956)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1954 - 2004
ANNUAL TOTAL	122,681	290,699	
ANNUAL MEAN	336	794	558
HIGHEST ANNUAL MEAN			1,357
LOWEST ANNUAL MEAN			37.9
HIGHEST DAILY MEAN	8,380	Nov 18	8,380
LOWEST DAILY MEAN	11	Nov 15	11
ANNUAL SEVEN-DAY MINIMUM	13	Nov 10	13
MAXIMUM PEAK FLOW		9,210	Nov 18
MAXIMUM PEAK STAGE		30.41	Nov 18
ANNUAL RUNOFF (AC-FT)	243,300	576,600	403,900
10 PERCENT EXCEEDS	896	2,250	1,370
50 PERCENT EXCEEDS	125	227	126
90 PERCENT EXCEEDS	34	31	19

08117500 San Bernard River near Boling, TX—Continued



## 293941096153401 TX10 Attwater Praire Chicken National Wildlife Refuge

LOCATION.--Lat 29°39'41", long 96°15'34", Colorado County, Hydrologic Unit 12090401, 4.4 mi east and 5.3 mi north of Eagle Lake, 6.2 mi west and 7.8 mi south of Sealy.

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

INSTRUMENTATION.--Wet/dry precipitation collector, weighing-bucket type recording rain gage with alter wind shield and event recorder. National Weather Service standard 8-inch rain gage (back-up only).

EXTREMES FOR PERIOD OF DAILY RECORD.--Maximum field pH, 7.0 units, May 19-26, 1987; minimum field pH, 3.7 units, June 17-24, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum field pH, 6.7 standard units, Mar. 26 to Apr. 2; minimum field pH, 4.0 standard units, June 18-25.

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

Date	Time	Atm dep wet, liters (83177)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Calcium wet atm dep fltrd, mg/L (82932)	Calcium wet atm dep fltrd, mg/m2 (82933)	Magnes- ium, wet atm dep fltrd, mg/L (83002)	Magnes- ium, wet atm dep fltrd, mg/m2 (83003)	Potas- sium, wet atm dep fltrd, mg/L (83120)	Potas- sium, wet atm dep fltrd, mg/m2 (83121)	Sodium, wet atm dep fltrd, mg/L (83138)	Sodium, wet atm dep fltrd, mg/m2 (83139)	Chlor- ide, wet atm dep fltrd, mg/L (82944)
OCT													
07-14	0813	2.095	5.4	4	.02	.6	.01	.4	.01	.3	.11	3.3	.19
OCT													
21-28	0806	4.324	5.1	6	.05	3.4	.01	1.0	.03	1.6	.12	7.7	.24
OCT 28-													
NOV 04	0839	.212	4.8	30	.19	.6	.28	.9	.10	.3	2.54	7.9	4.37
NOV													
12-18	0827	4.900	5.1	8	.09	6.6	.03	2.3	.02	1.1	.29	20.6	.49
NOV													
18-25	0807	.065	--	--	.77	.7	.78	.8	.29	.3	6.77	6.5	12.2
NOV 25-													
DEC 02	0955	.321	5.3	23	.32	1.5	.26	1.2	.10	.5	2.16	10.2	3.92
NOV 25-													
DEC 02	0955	.321	5.3	23	.32	1.5	.26	1.2	.10	.5	2.16	10.2	3.92
DEC													
02-09	0836	.475	4.9	26	.18	1.3	.29	2.0	.10	.7	2.59	18.1	4.68
DEC													
09-16	0917	2.691	5.1	8	.06	2.3	.03	1.1	.01	.6	.24	9.7	.45
DEC													
16-23	0830	.677	6.2	10	.56	5.5	.07	.7	.06	.6	.54	5.4	.90
DEC													
23-30	0825	.613	4.7	20	.27	2.4	.12	1.1	.06	.6	.91	8.2	1.62
DEC 30													
2003-													
JAN 06													
2004	0842	.043	--	--	.43	.3	.48	.3	.27	.2	4.45	2.8	7.86
JAN													
06-13	0910	.843	4.6	13	.49	.6	.03	.4	.02	.2	.30	3.7	.53
JAN													
13-20	1125	3.064	5.2	6	.02	1.1	.01	.5	.01	.4	.13	5.7	.23
JAN													
20-27	0836	2.684	5.0	9	.09	3.4	.04	1.4	.02	.8	.30	11.8	.54
JAN 27-													
FEB 03	0811	2.337	4.7	14	.09	3.0	.06	2.0	.03	.9	.49	17.0	.90
FEB													
03-10	0807	1.251	4.8	18	.20	3.8	.12	2.1	.06	1.0	1.03	19.0	1.75
FEB													
10-17	1030	2.093	4.8	9	.13	3.9	.01	.2	.01	.3	.04	1.2	.09
FEB													
17-24	0843	1.127	4.5	18	.15	2.5	.03	.6	.03	.5	.25	4.2	.42
FEB 24-													
MAR 02	0827	.646	4.6	37	.39	3.7	.39	3.7	.16	1.5	3.62	34.5	5.96
MAR													
09-16	0815	2.479	4.8	15	.25	9.0	.07	2.4	.07	2.7	.51	18.5	.78
MAR													
16-23	0830	.069	--	--	.37	.4	.11	.1	.06	.1	.81	.8	1.24
MAR													
23-30	0815	.578	4.8	45	.38	3.3	.51	4.3	.21	1.8	4.61	39.2	7.79
MAR 30-													
APR 06	1023	1.641	6.5	5	.08	2.0	.03	.6	.01	.4	.21	5.1	.38
APR													
06-13	0835	3.930	5.0	11	.20	11.8	.03	1.6	.03	1.9	.16	9.3	.26
APR													
20-27	0803	2.526	4.9	13	.09	3.5	.06	2.1	.06	2.3	.47	17.6	.82
APR 27-													
MAY 04	0834	4.824	5.4	10	.09	6.1	.04	2.8	.06	4.1	.36	25.7	.63
APR 27-													
MAY 04	0905	4.824	5.4	10	.09	6.1	.04	2.8	.06	4.1	.36	25.7	.63
MAY													
04-11	0836	.969	5.1	13	.14	2.0	.09	1.3	.10	1.4	.77	10.9	1.34
MAY													
11-18	0810	5.066	5.0	9	.10	7.7	.04	2.7	.03	2.2	.27	20.1	.47
MAY													
18-25	0826	.133	5.3	14	.23	.5	.23	.4	.09	.2	1.97	3.9	3.31



## 293941096153401 TX10 Attwater Praire Chicken National Wildlife Refuge—Continued

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

Date	Time	Atm dep wet, liters (83177)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl- trd uS/cm 25 degC (00095)	Calcium wet atm dep fltrd, mg/L (82932)	Calcium wet atm dep fltrd, mg/m2 (82933)	Magnes- ium, wet atm dep fltrd, mg/L (83002)	Magnes- ium, wet atm dep fltrd, mg/m2 (83003)	Potas- sium, wet atm dep fltrd, mg/L (83120)	Potas- sium, wet atm dep fltrd, mg/m2 (83121)	Sodium, wet atm dep fltrd, mg/L (83138)	Sodium, wet atm dep fltrd, mg/m2 (83139)	Chlor- ide, wet atm dep fltrd, mg/L (82944)
MAY 25- JUN 01	0756	.027	--	--	2.96	1.2	1.21	.5	.81	.3	10.9	4.4	17.6
JUN 01-08	0906	3.390	5.2	8	.12	6.2	.06	3.0	.04	1.8	.48	23.8	.88
JUN 08-15	0823	3.518	5.4	8	.13	6.5	.07	3.6	.03	1.5	.59	30.5	1.06
JUN 15-22	0809	.415	4.8	13	.11	.7	.05	.3	.02	.1	.40	2.4	.79
JUN 22-29	0839	10.070	5.1	6	.05	7.0	.02	2.4	.01	2.2	.14	21.5	.25
JUL 06-13	1008	2.481	5.6	8	.16	5.7	.04	1.5	.02	.8	.26	9.4	.47
JUL 13-20	0826	.068	--	--	1.12	1.1	.08	.1	.08	.1	.23	.2	.42
JUL 20-27	0813	1.641	5.1	14	.20	4.9	.09	2.2	.05	1.3	.75	18.1	1.23
JUL 27- AUG 03	0813	180	4.6	16	.13	1.1	.02	.2	.02	.2	.15	1.2	.27
AUG 10-17	1237	.485	4.6	18	.70	5.0	.06	.4	.04	.3	.06	.5	.16
AUG 17-24	0822	2.185	5.4	11	.21	6.7	.09	2.8	.04	1.3	.69	22.2	1.22
AUG 24-31	0817	.067	--	--	.23	.2	.07	.1	.08	.1	.53	.5	.82
AUG 31- SEP 07	0837	.206	4.7	14	.17	.5	.03	.1	.04	.1	.15	.5	.30
SEP 14-21	0818	.823	5.1	8	.12	1.5	.06	.7	.07	.8	.43	5.2	.74
SEP 28- OCT 05	0828	.433	4.6	14	.12	.8	.03	.2	.05	.3	.18	1.2	.34

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

Date	Chlor- ide, wet atm dep fltrd, mg/m2 (82945)	Sulfate wet atm dep fltrd, mg/L (83160)	Sulfate wet atm dep fltrd, mg/m2 (83161)	Ammonia wet atm dep fltrd, mg/L as N (83044)	Ammonia wet atm dep fltrd, mg/m2 as N (83045)	Nitrate wet atm dep fltrd, mg/L as N (83068)	Nitrate wet atm dep fltrd, mg/m2 as N (83069)	Ortho- phos- phate, wet dep fltrd, mg/L as P (83108)	Ortho- phos- phate, wet dep fltrd, mg/m2 as P (83109)	Hy- drogen ion, wet atm dep fltrd, mg/m2 (82975)
MAY 25- JUN 01	7.1	10.5	4.2	2.40	.960	1.47	.6	.003	.0	.0
JUN 01-08	44.1	.56	28.2	.163	8.08	.134	6.7	.003	.1	.2
JUN 08-15	55.0	.44	22.6	.101	5.08	.860	4.5	.003	.1	.1
JUN 15-22	4.8	.79	4.8	.080	.460	.195	1.2	.003	M	.1
JUN 22-29	37.0	.42	62.5	.160	2.65	.108	16.0	.003	.4	1.8
JUL 06-13	17.0	.75	27.6	.130	4.69	.162	5.9	.003	.1	.3
JUL 13-20	.4	2.22	2.2	1.06	1.06	.841	.8	.003	M	.0
JUL 20-27	29.7	1.13	27.4	.310	7.46	.307	7.4	.003	.1	.2
JUL 27- AUG 03	2.2	1.58	13.1	.250	2.03	2.89	2.4	.003	M	.3
AUG 10-17	1.2	2.63	18.8	.400	2.82	.460	3.3	.003	M	.2
AUG 17-24	39.3	.80	25.7	.180	5.66	.200	6.3	.003	.1	.1
AUG 24-31	.8	2.58	2.5	.620	.610	.520	.5	.003	M	M
AUG 31- SEP 07	.9	2.58	2.9	.150	3.72	.350	1.1	.003	M	.1
SEP 14-21	9.0	.40	4.9	.117	1.44	.086	1.0	.010	.1	M
SEP 28- OCT 05	2.2	1.09	7.0	.140	.910	.290	1.9	M	M	.2

Remark codes used in this table:

M-- Presence verified, not quantified

Because the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the U.S. Geological Survey collects limited streamflow data at sites other than continuous stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage of those events. The data collected for special reasons are called measurements at miscellaneous sites.

Streamflow data collected at partial-record stations where water-quality data other than observations of water temperature are not obtained are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations; the second is a table of annual maximum stage and (or) discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low and high flows are given in a third table. Discharge measurements and water-quality data collected at partial-record stations are presented in downstream order in the section of this report entitled "Gaging-station records."

#### Low-flow partial-record stations

Measurements of streamflow at low-flow partial-record stations that are not published in the gaging-station section are given in the following table. Most of the measurements of low flow were made during periods when streamflow was sustained primarily by ground-water discharge. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will indicate the low-flow potential of the stream. The years listed in the column headed "Period of record" identifies the water years in which measurements were made at the same or at practically the same site.

#### Discharge measurements made at low-flow partial-record station during water year 2004

Station number	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
Brazos River Basin						
08084100	Deadman Creek near Nugent, TX	Lat 32°40'36", long 99°37'00", Jones County, Hydrologic Unit 12060102, at low-water crossing on county road, 3.2 mi east of Nugent, and 4.4 mi upstream from Clear Fork Brazos River.	163	1967-2004	11-06-03 11-20-03 01-15-04 03-09-04 04-20-04 05-27-04	3.68 10.0 9.87 21.9 22.1 21.6
08104795	North Fork San Gabriel River upstream from State Highway 418, Georgetown, TX	Lat 30°38'44", long 97°40'49", Williamson County, Hydrologic Unit 12070203, 0.2 mi upstream from bridge on State Highway 418 at Georgetown.	271	1984-88, 1990-2004	04-01-04 05-12-04 07-28-04 08-24-04 09-22-04	5.74 5.93 3.62 3.13 1.98
08104950	South Fork San Gabriel River upstream from State Hwy 418 at Georgetown, TX	Lat 30°38'38", long 97°40'50", Williamson County, Hydrologic Unit 12070203, 0.2 mi upstream from State Highway 418 at Georgetown.	136	1984-88, 1990-2004	04-01-04 05-12-04 07-28-04 08-24-04 09-22-04	26.8 54.6 30.3 13.3 2.03
08105000	San Gabriel River at Georgetown, TX	Lat 30°39'14", long 97°39'18", Williamson County, Hydrologic Unit 12070202, on left bank 100 ft downstream from Missouri-Kansas Railroad bridge, 1.2 mi below confluence of North and South Forks, about 1.5 mi below bridge on State Highway 418, and 1.8 mi northeast of Williamson County Courthouse in Georgetown.	405	1924-25, 1934-73†, 1984-87†, 1988, 1990-2004	03-31-04 05-28-04 07-30-04 08-27-04 09-22-04	54.1 49.2 50.1 30.2 22.8
08105095	Berry Creek at Airport Road near Georgetown, TX	Lat 30°42'11", long 97°39'58", Williamson County, Hydrologic Unit 12070203, about 1.4 mi upstream from IH-35 near Georgetown.	71.4	1984-88, 1990-2004	03-30-04 07-30-04 08-26-04 09-22-04	3.06 2.46 0.78 0.00
08105160	Dry Berry Creek near Georgetown, TX	Lat 30°41'04", long 97°38'14", Williamson County, Hydrologic Unit 12070205, 0.4 mi upstream from Berry Creek, and 4.0 mi northeast of Georgetown.	33.1	1986-88, 1990-2004	03-30-04 05-12-04 07-30-04 08-26-04 09-22-04	0.52 1.30 0 0.39 0.05
08105200	Berry Creek at State Highway 971 near Georgetown, TX	Lat 30°40'33", long 97°36'51", Williamson County, Hydrologic Unit 12070203, at downstream side of center downstream pier on State Highway 971 bridge and 4.7 mi northeast of Georgetown.	117	1964-73, 1984-87†, 1988, 1990-2004	03-30-04 05-12-04 07-29-04 08-26-04 09-22-04	16.34 26.9 15.4 13.4 6.92
08105300	San Gabriel River near Weir, TX	Lat 30°38'45", long 97°35'06", Williamson County, Hydrologic Unit 12070205, on left bank at downstream side of State Highway 29 bridge, 0.5 mi upstream from Manske Branch, 4.7 mi east of Georgetown, 2.0 mi south of Weir, and 54.8 mi upstream from mouth.	563	1976-90, 1991-2004	03-31-04 05-28-04 07-30-04 08-24-04 09-23-04	56.2 69.4 76.0 65.1 30.9

† Operated as a continuous-record station.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Crest-stage partial-record stations

The following table contains annual maximum stage and (or) discharge at partial-record stations operated primarily for the purpose of defining the flooding characteristics of the streams. At stations where discharge is given, or is footnoted "to be determined", a stage-discharge relation has been, or will be, defined by discharge measurements obtained by current meter or by indirect procedures. Water-stage recorders are located at these flood-hydrograph stations to facilitate complete hydrograph definition. At stations where only the maximum stage is given (discharge column is dashed), the data are generally collected for use in stage-frequency studies or definition of flood-profiles. Gages at these stations usually consist of a device that will register the peak stage occurring between inspection of the gage. The years used in the column "Period of record" identify the years in which the annual maximum has been determined.

Annual maximum stage and (or) discharge during water year 2004

Station name and number	Location	Period of record	Water Year 2004 maximum			Period of record maximum			
			Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)	
San Jacinto River Basin									
Goose Creek at Baytown, TX 08067525	Lat 29°46'14", long 94°59'58", Harris County, Hydrologic Unit 12040104, at bridge on Baker Road in Baytown, 1.1 mi upstream from West Fork Goose Creek, and 2.0 mi upstream from East Fork Goose Creek. Drainage Area is 15.8 mi <sup>2</sup> .	1986-2004	06-24-04	*18.66	--	01-22-98	*23.47	--	
Willow Creek near Tomball, TX 08068325	Lat 30°06'19", long 95°32'47", Harris County, Hydrologic Unit 12040102, on upstream side of bridge at Kuykendahl Road, 0.6 mi upstream from Cannon Gully, and 4.0 mi east of Tomball. Drainage area is 41.0 mi <sup>2</sup> .	1984-2004	10-09-03	27.55	1320	06-09-01	32.34	4,120	
Cypress Creek at Sharp Road near Hockley, TX 08068700	Lat 29°55'15", long 95°50'24", Harris County, Hydrologic Unit 12040102, on right at Sharp Road, 3.3 mi upstream from gaging station on Cypress Creek at Katy-Hockley Road, and 7.4 mi south of Hockley. Drainage area is 80.7 mi <sup>2</sup> .	1976-78 1979-2004	05-16-04	*66.63	--	10-18-94	*69.86	--	
Buffalo Bayou near Fulshear, TX 08072350	Lat 29°43'22", long 95°46'01", Ft. Bend County, Hydrologic Unit 12040104, on right bank at downstream side of bridge on Peek Road, about 200 ft downstream from Little Prong Bayou, 4,300 ft upstream from Mason Road, 8.3 mi east-northeast of Fulshear. Drainage area is 81.7 mi <sup>2</sup> .	1986-2004	11-17-03	12.96	--	02-21-94	r15.84	--	
South Mayde Creek near Addicks, TX 08072700	Lat 29°48'03", long 95°41'33", Harris County, Hydrologic Unit 12040104, on left bank 5 ft downstream from bridge on Groeschke Road, 3.2 mi west of Addicks, and 4.6 mi upstream from Langham Creek, and 5.5 mi upstream from Addicks Dam outlet works. Drainage area is 32.3 mi <sup>2</sup> .	1974-2004	11-17-03	*107.29	--	08-31-81	108.76	4,080	
Langham Creek near Addicks, TX 08072800	Lat 29°50'08", long 95°37'30", Harris County, Hydrologic Unit 12040104, on left bank 38 ft downstream from downstream side of bridge on Clay Road, 3.6 mi north of Addicks, 4.4 mi upstream from South Mayde Creek, and 5.3 mi upstream from Addicks Dam outlet works. Drainage area is 48.9 mi <sup>2</sup> .	1974-2004	11-17-03	*101.36	--	08-31-81	102.25	3,360	
Little Whiteoak Bayou at Trimble Street at Houston, TX 08074540	Lat 29°47'34", long 95°22'05", Harris County, Hydrologic Unit 12040104, on downstream side of bridge at Trimble Street in Houston, and 5,950 ft upstream from discontinued former site (Little Whiteoak at Houston, station 08074550). Drainage area is 18.1 mi <sup>2</sup> .	1979-2004	11-17-03	a/*13.19	--	06-09-01	*46.21	--	
Brays Bayou at Alief, TX 08074760	Lat 29°42'39", long 95°35'13", Harris County, Hydrologic Unit 12040104, near center of channel on downstream side of bridge on Belle Park Drive in Alief. Drainage area is 12.9 mi <sup>2</sup> .	1977-2004	11-17-03	17.71	--	03-04-92	21.16	--	
Keegans Bayou at Keegan Road near Houston, TX 08074780	Lat 29°39'55", long 95°35'42", Harris County, Hydrologic Unit 12040104, on downstream side of bridge on Keegan Road, 2.3 mi upstream from gage at Roark road (station 08074800), and about 16 mi southwest of downtown Houston. Drainage area is 8.63 mi <sup>2</sup> .	1965-71, 1975-2004	11-17-03	*81.27	--	04-14-66	83.55	--	
Greens Bayou at Cutten Road near Houston, TX 08075780	Lat 29°56'56", long 95°31'10", Harris County, Hydrologic Unit 12040104, at downstream side of bridge on Cutten Road, 7 mi upstream from station Greens Bayou at U.S. Highway 75 near Houston (station 08075900), and about 16.4 mi northwest of the main post office in downtown Houston. Drainage area is 8.65 mi <sup>2</sup> .	1965-2004	11-17-03	*115.10	5,210	02-21-69 06-09-01	*118.04 *116.77	508 5,670	

\* Elevation, in feet.

a/ From high-water mark.

r Revised.



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