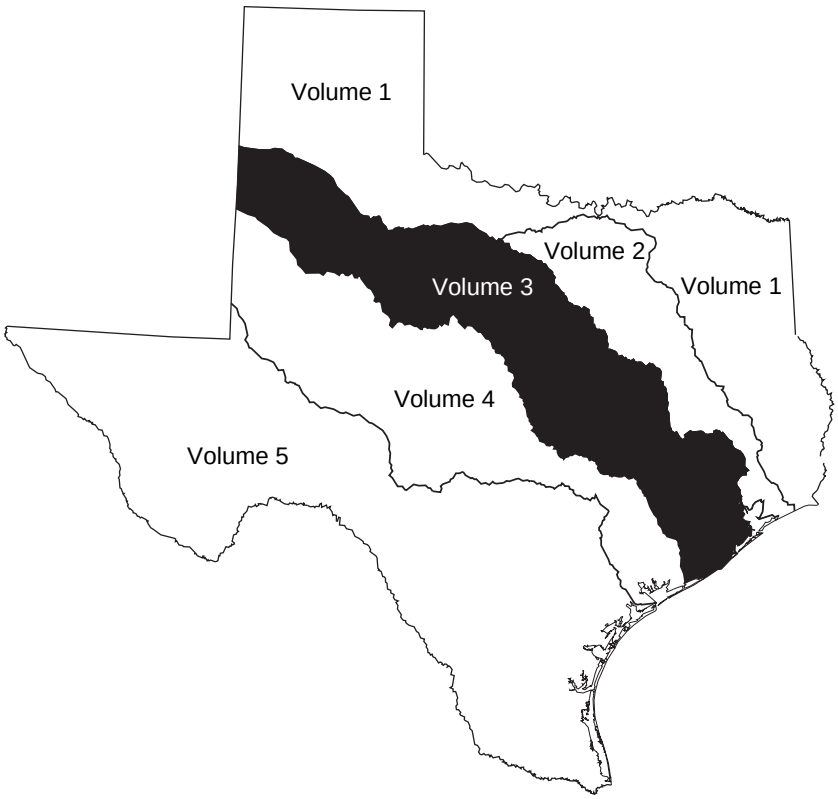
U.S. Department of the Interior
U.S. Geological Survey

Water Resources Data
Texas
Water Year 2002

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

By S.C. Gandara

Water-Data Report TX-02-3



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

UNITED STATES DEPARTMENT OF THE INTERIOR

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2003

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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13. ABSTRACT *(Maximum 200 words)*

Water-resources data for the 2002 water year for Texas are presented in six volumes, and consist of records of stage, discharge, and water quality of streams and canals; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground-water wells. Volume 3 contains records for water discharge at 91 gaging stations; stage only at 8 gaging stations; stage and contents at 32 lakes and reservoirs; water quality at 44 gaging stations; and data for 33 partial-record stations comprised of 15 flood-hydrograph, 8 low-flow, and 10 crest-stage stations. Also included are lists of discontinued surface-water discharge or stage-only stations and discontinued surface-water-quality stations. Additional water data were collected at various sites, not part of the systematic data-collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating Federal, State, and local agencies in Texas. Records for a few pertinent stations in the bordering States also are included.

14. SUBJECT TERMS

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

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ILLUSTRATIONS

TABLES

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

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

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

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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Punta De Agua Creek near Channing (d)	07227448	3,568	1968-73
East Cheyenne Creek Tributary near Channing (e)	07227460	1.60	1965-74
Canadian River at Tascosa (d)	07227470	18,536	1969-77
Tecovas Creek Tributary near Bushland (e)	07227480	2.5	1966-74
Dixon Creek near Borger (d)	07227920	134	1974-89
Palo Duro Creek near Canyon (e)	07229700	982	1942-54
Palo Duro Creek near Spearman (d)	07233500#	1,076	1954-79, 1999-2001
White Woman Creek Tributary near Darrouzett (e)	07234150	4.03	1966-74
Tierra Blanca Creek above Buffalo Lake near Umbarger (d)	07295500	1,968	1939-54, 1967-73
Buffalo Lake near Umbarger (e)	07296000	2,075	1938-54
Tierra Blanca Creek below Buffalo Lake near Umbarger (d)	07296100	2,075	1967-73
Prairie Dog Town Fork Red River near Canyon (d)	07297500	3,369	1924-26, 1938-49
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
Prairie Dog Town Fork Red River near Brice (d)	07298500	6,082	1939-44, 1949-51, 1960-63
Mulberry Creek near Brice (d)	07299000	534	1949-51
Prairie Dog Town Fork Red River near Lakeview (d)	07299200	6,792	1963-80
Little Red River near Turkey (d)	07299300	139	1968-81
Prairie Dog Town Fork Red River near Estelline (d)	07299500	7,293	1924-25, 1938-47
Prairie Dog Town Fork Red River below Mountain Creek near Estelline (e)	07299505	7,341	1974-77
Prairie Dog Town Fork Red River above Jonah Creek near Estelline (e)	07299510	7,533	1974-77
Jonah Creek at Weir near Estelline (d)	07299512	65.50	1974-82
Jonah Creek below Weir near Estelline (d)	07299514	66.60	1974-76
Jonah Creek at mouth near Estelline (d)	07299516	76	1974-76
Salt Creek near Estelline (d)	07299530	142	1974-79
Buck Creek near Wellington (e)	07299550	210	1951-64
Red River near Quanah (d)	07299570	8,321	1960-82
North Groesbeck Creek Tributary near Kirkland (d)	07299575	0.16	1966-74
Wanders Creek at Odell (e)	07299750	199	1949-50, 1952-89
Salt Fork Red River near Clarendon (d)	07299850	457	1960-64
Lelia Lake Creek near Hedley (e)	07299900	86	1951-70
Salt Fork Red River near Hedley (e)	07299930	744	1951, 1956-62
Oklahoma Draw Tributary near Hedley (e)	07299940	1.1	1965-74
Sweetwater Creek near Wheeler (e)	07301400	164	1951-64
Doodlebug Creek near Wheeler (e)	07301405	0.19	1967-73
Elm Creek near Shamrock (e)	07303300	N/A	1947-89
Quitaque Creek near Quitaque (d)	07307500	293	1945-59
North Pease River near Childress (d)	07307600	1,434	1973-79
North Pease River near Kirkland (e)	07307660	N/A	1973-79
Roaring Springs near Roaring Springs (e)	07307700	N/A	1937, 1943-95
Cottonwood Creek Tributary near Afton (e)	07307720	0.68	1967-74

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Middle Pease River near Paducah (d)	07307750	1,086	1973-79
Middle Pease River near Paducah (d)	07307760	1,123	1980-82
Middle Pease River near Kirkland (e)	07307780	1,250	1973-79
Canal Creek near Crowell (e)	07307950	49.0	1968-70, 1978-79
Pease River near Crowell (d)	07308000	3,037	1924-47
Plum Creek near Vernon (e)	07308220	4.99	1967-74
China Creek near Electra (e)	07308400	37	1967-76
North Fork Wichita River near Crowell (d)	07311622	591	1971-76
Middle Fork Wichita River near Truscott (d)	07311648	161	1971-76
South Fork Wichita River near Guthrie (d)	07311780	239	1952-54, 1956-57 1971-76
South Fork Wichita River at Ross Ranch near Benjamin (d)	07311790	499	1971-79
Beaver Creek Tributary near Crowell (e)	07312140	3.43	1966-74
Wolf Creek near Iowa Park (e)	07312300	8.5	1966-74
North Fork Little Wichita River Tributary near Archer City (e)	07314200	0.10	1966-74
Little Wichita River near Henrietta (d)	07315000	1,037	1953-79
Little Wichita River near Ringgold (d)	07315400	1,350	1959-65
Farmers Creek near Saint Jo (e)	07315550	0.82	1966-74
Mineral Creek near Sadler (d)	07316200	26	1968-77
Sandy Creek near Sadler (e)	07316230	24	1968-74
Lake Texoma near Denison (e)	07331500	39,719	1942-93, 2000
Bois D'Arc Creek near Randolph (d)	07332600	72	1963-85
Cooper Creek near Bonham (e)	07332602	6.21	1966-74
Sanders Creek near Chicota (d)	07335400	175	1968-86
Little Pine Creek near Kanawha (d)	07336750	75.40	1969-80
Pecan Bayou near Clarksville (d)	07336800	100	1962-77
Red River near DeKalb (d)	07336820	47,348	1967-98
McKinney Bayou near Leary (e)	07336940	3.33	1966-73
Barkman Creek near Leary (e)	07336950	31.5	1958-64
Nelson Branch near Leonard (e)	07342450	0.22	1966-74
South Sulphur River near Commerce (d)	07342470	189	1980-91
Cuthand Creek near Bogata (d)	07343300	69	1964-74
Dial Branch near Bagwell (e)	07343350	1.00	1966-74
White Oak Creek near Mt. Vernon (e)	07343480	434	1966, 1969-75
White Oak Creek below Talco (d)	07343800	579	1938-50
Buck Creek near Cookville (e)	07343900	0.78	1966-74
Sulphur River near Darden (d)	07344000	2,774	1924-56
Sulphur River near Texarkana (d)	07344210	3,443	1980-85
Big Cypress Creek near Winnsboro (d)	07344482	27.2	1974-92
Dragoo Creek near Mt. Pleasant (e)	07344490	4.27	1967-74
Williamson Creek near Pittsburg (e)	07344600	7.11	1967-74
Boggy Creek near Daingerfield (d)	07345000	72	1943-77
Ellison Creek Reservoir near Lone Star (e)	07345500	37	1943-62, 1974-89
Cypress Creek Tributary near Jefferson (e)	07346010	0.51	1966-74
Taylor Branch near Smithland (e)	07346072	0.73	1966-74
Big Cypress Creek near Karnack (e)	07346085	2,174	1980-85
Frazier Creek near Linden (d)	07346140	48.0	1965-91
Sabine River near Emory (d)	08017500	888	1952-73
Burnett Branch near Canton (e)	08017700	0.33	1966-74
Grand Saline Creek near Grand Saline (d)	08018200	91.4	1968-73
Burke Creek near Yantis (d)	08018730	33.10	1979-89
Dry Creek near Quitman (e)	08018950	63.6	1968-75
Lake Winnsboro near Winnsboro (d)	08019300	27.1	1962-86
Big Sandy Creek near Hawkins (e)	08019430	196	1980-82
Prairie Creek near Gladewater (d)	08020200	48.90	1968-77

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Sabine River near Longview (d)	08020500	2,947	1904-07, 1924-33
Rabbit Creek at Kilgore (d)	08020700	75.80	1964-77
Grace Creek Tributary at Longview (e)	08020800	5.05	1967-74
Mill Creek near Henderson (d)	08020960	20.30	1979-81
Mill Creek near Longview (d)	08020980	47.90	1979-81
Tiawichi Creek near Longview (d)	08020990	62.70	1978-81
Cherokee Bayou near Elderville (d)	08021000	120	1940-49
Lake Cherokee near Longview (e)	08021500	158	1951-83
Sabine River near Tatum (d)	08022000	3,493	1939-78,
" " " " (e)			1979-82
Redmon Branch near Hallesville (e)	08022010	0.46	1966-74
Eight Mile Creek near Tatum (e)	08022050	106	1962-71
Martin Creek near Tatum (d)	08022070	148	1974-96
Martin Creek near Beckville (e)	08022080	192	1962-71
Murvaul Bayou near Gary (d)	08022300	134	1958-83
Socagee Creek near Carthage (d)	08022400	82.60	1962-73
Tenaha Creek near Shelbyville (d)	08023200	97.80	1952-81
Dorsey Branch near Milam (e)	08024290	0.70	1967-74
Patroon Bayou near Milam (e)	08024300	130	1952-54, 1959-63
Sabine River near Milam (d)	08024400	6,508	1924-25, 1939-68
Palo Gaucho Bayou near Hemphill (d)	08024500	123	1952-65
Housen Bayou near Yellowpine (e)	08025250	92.1	1952-54, 1957, 1959-63
Sandy Creek near Yellowpine (e)	08025300	135	1952-54, 1957, 1959-63
Mill Creek near Burkeville (d)	08025307	17.6	1974-79
Little Cow Creek below McGraw Creek near Burkeville (e)	08026500	112	1952-58
Moore Branch near Newton (e)	08028505	3.77	1967-74
Nichols Creek near Buna (e)	08029750	54.4	1959-64
Cypress Creek near Buna (d)	08030000	69.20	1952-83
Adams Bayou Tributary near Deweyville (e)	08030700	12.4	1966-74
Cow Bayou near Mauriceville (d)	08031000	83.30	1952-86
Bethlehem Branch near Van (e)	08031100	1.09	1966-74
Kickapoo Creek near Brownsboro (d)	08031200	232	1962-89
Neches River near Reese (d)	08031500	851	1924-27
Hurricane Creek Tributary near Palestine (e)	08032100	0.39	1966-74
One Arm Creek near Maydelle (e)	08032250	6.01	1967-74
Squirrel Creek near Elkhart (e)	08032300	1.57	1967-74
Neches River near Alto (d)	08032500	1,945	1944-79
Piney Creek Tributary near Pennington (e)	08033250	1.17	1967-74
Piney Creek near Groveton (d)	08033300	79	1962-89
Shawnee Creek Tributary near Huntington (e)	08033450	0.52	1966-74
Greenwood Creek Tributary near Colmesneil (e)	08033480	0.15	1966-74
Bowles Creek near Selman City (e)	08033600	14.5	1968-85
Striker Creek near Summerfield (d)	08033700	146	1941-49
Striker Creek Reservoir near New Salem (e)	08033800	148	1941-49
East Fork Angelina River near Cushing (d)	08033900	158	1964-89
Mud Creek at Ponta (d)	08035000	475	1924-27
Angelina River near Lufkin (d)	08037000	1,600	1924-34, 1939-79
Bayou Lanana at Nacogdoches (d)	08037050	31.3	1965-86, 1988-93
Gingham Branch near Mt. Enterprise (e)	08037300	0.90	1967-74
Arenoso Creek near San Augustine (d)	08037500	75.30	1938-40
Angelina River near Zavalla (d)	08038500	2,892	1952-65
Ayish Bayou at San Augustine (d)	08039000	15.80	1924-25

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Angelina River at Horger (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	4.43	1967-74
North Creek SWS No. 28-A near Jermyn (e)	08042650	6.82	1972-80
North Creek near Jacksboro (d)	08042700	21.60	1956-80
Beans Creek at Wizard Wells (e)	08042900	29.60	1993-95
West Fork Trinity River at Bridgeport (d)	08043100	1,113	1984-89
West Fork Trinity River at Bridgeport (d)	08043500	1,147	1908-30
Big Sandy Creek near Bridgeport (d)	08044000	333	1937-95
Garrett Creek near Paradise (e)	08044135	52.5	1992-95
Salt Creek near Paradise (e)	08044140	52.7	1992-95
Walker Creek near Boyd (e)	08044200	2.95	1965-74
West Fork Trinity River at Lake Worth, Fort Worth (d)	08045500	2,069	1924-34
Clear Fork Trinity River near Aledo (d)	08046000	251	1947-75
Marine Creek at Fort Worth (d)	08048500	16.80	1950-58
Sycamore Creek at I.H. 35W, Fort Worth (d)	08048520	17.70	1970-76
Sycamore Creek Trib. above Seminary South, Fort Worth (d)	08048530	0.97	1970-76
Sycamore Creek Trib. at I.H. 35W, Fort Worth (d)	08048540	1.35	1970-76
Dry Branch at Fain Street at Fort Worth (d)	08048600	2.15	1969-76
Big Fossil Creek at Haltom City (d)	08048800*	52.8	1959-73
Little Fossil Creek at I.H. 820, Fort Worth (e)	08048820	5.64	1969-73
Little Fossil Creek at Mesquite Street, Fort Worth (d)	08048850	12.30	1969-76
Deer Creek Tributary near Crowley (e)	08048900	5.86	1967-74
Village Creek at Kennedale (d)	08048980	100	1986-89
Village Creek near Handley (d)	08049000	126	1925-30
Big Bear Creek near Grapevine (d)	08049550	29.6	1967-79
Trigg Branch at DFW Airport near Euless (d)	08049565	1.73	1983-87
Mountain Creek near Cedar Hill (d)	08049600	119	1961-84
Mountain Creek above Duncanville (e)	08049850	224	1986-87
Mountain Creek near Duncanville (e)	08049900	225	1971-90
Mountain Creek near Grand Prairie (d)	08050000	273	1925-33
Elm Fork Trinity River SWS 6-O near Muenster (e)	08050200	0.77	1957-73
Elm Fork Trinity River near Muenster (d)	08050300	46	1957-73
Elm Fork Trinity River near Sanger (d)	08050500	381	1949-85
Isle Du Bois Creek near Pilot Point (d)	08051000	266	1949-85
Elm Fork Trinity River near Pilot Point (d)	08051130	692	1985-92
Elm Fork Trinity River above Aubrey (e)	08051190	684	1981-89
Elm Fork Trinity River near Denton (d)	08052000	1,084	1924-27
Lake Dallas near Lake Dallas (e)	08052500	1,165	1929-57
Little Elm Creek SWS #10 near Gunter (e)	08052630	2.10	1966-72
Little Elm Creek near Celina (d)	08052650	46.70	1966-76
Hickory Creek at Denton (d)	08052780	129	1985-87
Indian Creek at Hebron Parkway at Carrollton (d)	08053010	15.0	1987-90
Furneaux Creek at Josey Lane at Carrollton (d)	08053030	4.10	1987-90
Hutton Branch at Broadway at Carrollton (e)	08053090	9.10	1987-90
Jones Valley Creek Tributary near Forestburg (e)	08053100	1.70	1966-74
Denton Creek near Roanoke (d)	08054000	621	1924-28, 1939-55
Gamble Branch near Argyle (e)	08054200	0.50	1965-74
Denton Creek near Grapevine (d)	08055000	705	1948-91
Joe's Creek at Royal Lane, Dallas (e)	08055580	1.94	1973-78
Joes Creek near Dallas (e)	08055600	7.4	1964-79
Bachman Branch at Dallas (d)	08055700	10	1964-79
Turtle Creek at Dallas (d)	08056500	7.98	1952-80, 1984-91
Coombs Creek at Sylvan Avenue, Dallas (e)	08057020	4.75	1965-78
Cedar Creek at Bonnie View Road, Dallas (e)	08057050	9.42	1965-78
White Rock Creek at Keller Springs Road, Dallas (d)	08057100	29.40	1961-79

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Spanky Branch at McCallum Lane at Dallas (e)	08057120	6.77	1962-78
Rush Branch at Arapaho Road, Dallas (e)	08057130	1.22	1973-78
Newton Creek at Interstate Highway 635, Dallas (e)	08057135	5.91	1974-78
Cottonwood Creek at Forest Lane, Dallas (e)	08057140	8.50	1962-78
Floyd Branch at Forrest Lane, Dallas (e)	08057160	4.17	1962-78
White Rock Creek at White Rock Lake, Dallas (d)	08057300	100	1963-79
Ash Creek at Highland Road, Dallas (e)	08057320	6.92	1963-78
Forney Creek at Lawnview Avenue, Dallas (e)	08057340	1.84	1963-72
White Rock Creek at Scyene Road, Dallas (d)	08057400	122	1963-79
Trinity River below Dallas (d)	08057410	6,278	1956-98
Elm Creek at Seco Boulevard, Dallas (e)	08057415	1.25	1973-78
Fivemile Creek at Kiest Boulevard, Dallas (e)	08057418	7.65	1974-78
Fivemile Creek at US Highway 77 West, Dallas (e)	08057420	14.30	1965-78
Woody Branch at US Highway 77 West, Dallas (e)	08057425	10.30	1965-78
Fivemile Creek at Lancaster Road, Dallas (e)	08057430	37.90	1965-78
White Branch at Interstate Highway 635, Dallas (e)	08057440	2.53	1974-78
Tenmile Creek at State Highway 342 at Lancaster (d)	08057450	52.80	1970-79
Honey Creek SWS #11 near McKinney (e)	08057500	2.14	1952-73
Honey Creek SWS #12 near McKinney (e)	08058000	1.26	1952-77
Honey Creek near McKinney (d)	08058500	39	1951-73
East Fork Trinity River near McKinney (d)	08059000	190	1949-75
Arls Branch near Westminster (e)	08059200	0.52	1965-74
Sister Grove Creek near Princeton (d)	08059500	113	1949-75
East Fork Trinity River above Pilot Grove near Lavon (d)	08060000	324	1949-53
East Fork Trinity River near Lavon (d)	08061000	773	1954-89
East Fork Trinity River near Rockwall (d)	08061500	840	1924-54
Duck Creek at Buckingham Road, Garland (e)	08061620	8.05	1969-76
Duck Creek near Garland (d)	08061700	31.6	1958-93
South Mesquite Creek at State Highway 352, Mesquite (e)	08061920	13.40	1969-76
South Mesquite Creek at Mercury Road near Mesquite (d)	08061950	23	1969-79
Cedar Creek Reservoir Spillway Outflow near Trinidad (d)	08062650	1,007	1966-82
Cedar Creek near Kemp (d)	08062800	189	1963-87
Bachelor Creek near Terrell (e)	08062850	13.0	1967-74
Kings Creek near Kaufman (d)	08062900	233	1963-87
Lacey Fork near Mabank (d)	08062980	118	1983-84
Cedar Creek near Mabank (d)	08063000	733	1939-66
South Twin Creek near Eustace (d)	08063003	27.40	1983-84
Red Oak Branch near Eustace (e)	08063005	0.90	1966-74
Cedar Creek at Trinidad (d)	08063020	1,011	1965-71
Briar Creek Tributary near Corsicana (e)	08063180	0.72	1966-74
Pin Oak Creek near Hubbard (d)	08063200	17.60	1956-72
Richland Creek near Richland (d)	08063500	734	1939-88
Alvarado Branch near Alvarado (e)	08063550	0.84	1966-74
Kings Branch near Reagor Springs (e)	08063620	0.62	1966-74
Chambers Creek near Corsicana (d)	08064500	963	1939-84
Richland Creek near Fairfield (d)	08064600	1,957	1972-83
Saline Branch Tributary near Bethel (e)	08064630	0.22	1967-74
Catfish Creek near Tennessee Colony (d)	08064800	207	1962-89
Mayes Branch near Latexo (e)	08065320	4.26	1967-74
Trinity River near Midway (d)	08065500	14,450	1939-71
Caney Creek near Madisonville (d)	08065700	112	1963-77
Nelson Creek near Riverside (e)	08065950	86.4	1949, 1965, 1970-74
Harmon Creek near Huntsville (e)	08065975	89.2	1973-81
West Carolina Creek near Oakhurst (e)	08066050	15.2	1949, 1966-73
White Rock Creek near Trinity (e)	08066100	222	1974-85
White Rock Creek near Trinity (e)	08066130	228	1966-74
Tantaboque Creek near Trinity (e)	08066140	61.3	1966-73
Caney Creek near Groveton (e)	08066145	41.4	1966-73

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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	38.80	1966-89
Gaylor Creek near Moss Hill (e)	08066800	32.3	1966-73
Devers Canal near Liberty (d)	08067080	N/A	1972-82
Goose Creek near McNair (e)	08067520	6.7	1963-65,
Welch Branch near Huntsville (e)	08067550	2.35	1965-74
Lake Conroe near Montgomery (e)	08067580	445	1973-76
Lake Conroe at Outflow Weir near Conroe (d)	08067610	445	1974, 1977-89
Caney Creek near Dobbin (d)	08067700	40.40	1963-65
Landrum Creek Tributary near Montgomery (e)	08067750	0.13	1965-74
Lake Creek near Conroe (e)	08067900	291	1969-89
West Fork San Jacinto River near Porter (e)	08068100	970	1970-76
Mill Creek Tributary near Dobbin (e)	08068300	4.07	1967-73
Swale No. 8 at Woodlands (e)	08068438	0.55	1975-76, 1980-88
Spring Creek at Spring (d)	08068520	419	1975-95
Spring Creek near Humble (e)	08068600	435	1971-76
Cypress Creek at Sharp Road near Hockley (d)	08068700	80.7	1975-85
Cypress Creek near Cypress (e)	08068750*	138	1971-76
Cypress Creek at Stuebner-Airline Road near Westfield (d)	08068900*	248	1982-87
Cypress Creek near Humble (e)	08069200	319	1971-76
West Fork San Jacinto River near Humble (d)	08069500	1,741	1929-54
Bear Creek near Cleveland (e)	08069850	1.46	1967-73
Caney Creek near New Caney (e)	08070600	178	1970-76
Peach Creek near New Caney (e)	08071100	155	1970-76
Tarkington Bayou near Dayton (e)	08071200	142	1964-76
Luce Bayou near Huffman (e)	08071300	226	1971-76
San Jacinto River near Huffman (d)	08071500	2,800	1937-53
Buffalo Bayou at Clodine (e)	08072400	84.2	1974-85
Bettina Street Ditch at Houston (e)	08073630	1.37	1979-85
Stony Brook Street Ditch at Houston (e)	08073750	0.50	1967-72
Bering Ditch at Woodway Drive, Houston (e)	08073800	2.77	1965-73
Cole Creek at Guhn Road at Houston (e)	08074100	7.05	1964-72
Bingle Road Storm Sewer at Houston (e)	08074145	0.21	1980-88
Cole Creek at Deihl Road at Houston (d)	08074150*	7.50	1964-86
Brickhouse Gully at Clarblak Street at Houston (e)	08074200	2.56	1965-83
Brickhouse Gully at Costa Rica Street at Houston (d)	08074250*	11.4	1964-81
Lazybrook Street Storm Sewer, Houston (e)	08074400	0.13	1978-88
Little White Oak Bayou at Houston (e)	08074550	20.9	1971-79
Buffalo Bayou at Main St., Houston (d)	08074600*	469	1962-94
Buffalo Bayou at McKee Street, Houston (d)	08074610	469	1992-2000
Buffalo Bayou at 69th Street, Houston (e)	08074700	476	1961-86
Brays Bayou at Addicks-Clodine Rd., Houston (e)	08074750	0.87	1974-77
Brays Bayou at Alief Road, Alief (e)	08074760*	12.9	1977-85
Keegans Bayou at Keegans Road near Houston (e)	08074780*	7.47	1964-71
Keegans Bayou at Roark Road near Houston (d)	08074800*	13.0	1964-85
Bintliff Ditch at Bissonnet Street, Houston (e)	08074850	4.38	1968-82
Willow Waterhole Bayou at Landsdowne Street, Houston (e)	08074900	3.81	1965-72
Hummingbird Street Ditch at Mullins Street, Houston (e)	08074910	0.32	1979-84
Brays Bayou at Scott Street, Houston (e)	08075100	106	1971-81
Sims Bayou at Carlsbad Street, Houston (e)	08075300	3.81	1964-72
Sims Bayou at MLK Blvd., Houston (e)	08075470	48.4	1978-89
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 Forest Oaks Street, Houston (e)	08075650*	10.7	1968-82

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Berry Bayou at Galveston Road, Houston (e)	08075700	4.86	1965-72
Huntington Bayou Tributary at Cavalcade Street, Houston (e)	08075750	1.20	1965-72
Huntington Bayou at Falls Street, Houston (e)	08075760	2.75	1964-84
Halls Bayou at Deertrail Street at Houston (e)	08076200	8.69	1965-84
Carpenters Bayou at Cloverleaf (e)	08076900	25.8	1964, 1971-93
Clear Creek near Pearland (d)	08077000	38.8	1944-45, 1946-60, 1963-94
Clear Creek Tributary at Hall Road, Houston (e)	08077100	1.31	1965-86
Clear Creek at Friendswood (d)	08077540	99.6	1994-97
Cowart Creek near Friendswood (e)	08077550	18	1965-74
Clear Creek near Friendswood (e)	08077600	126	1966-94
Armand Bayou near Genoa (e)	08077620	18.2	1968, 1971-73
Highland Bayou at Hitchcock (e)	08077700	15.6	1963-82
Highland Bayou Tributary near Texas City (e)	08077750	1.97	1966-73
Highland Bayou near Texas City (e)	08077780	20.8	1965-88
Flores Bayou near Danbury (e)	08078700	23.3	1967-72
Oyster Creek near Angleton (d)	08079000	171	1945-80
North Fork Double Mountain Fork Brazos River at Lubbock (d)	08079500	5,300	1940-49,
North Fork Double Mountain Fork Brazos River above Buffalo Springs nr Lubbock (e)	08079530	29.3	1952-54, 1957, 1962, 1967-76
Buffalo Springs Lake near Lubbock (e)	08079550	236	1967-77
Barnum Springs Draw near Post (e)	08079570	4.99	1965-73
North Fork Double Mountain Fork Brazos River near Post (d)	08079575	438	1984-93
Rattlesnake Creek near Post (e)	08079580	2.75	1966-74
Double Mountain Fork Brazos River near Rotan (d)	08080000	8,536	1950-51
Guest-Flowers Draw near Aspermont (e)	08080510	3.02	1965-74
McDonald Creek near Post (d)	08080540	103	1966-78
Running Water Draw at Plainview (d)	08080700	1,291	1939-53, 1957-78
Callahan Draw near Lockney (e)	08080750	37.5	1966-77
White River near Crosbytown (e)	08080800	529	1951-64
White River below falls near Crosbytown (e)	08080900	529	1951-64
Salt Fork Brazos River at Farm Road 1081 near Clairemont (e)	08080916	1,135	1968-77
Red Mud Creek near Spur (e)	08080918	65.1	1967-74
Salt Fork Brazos River at State Highway 208 near Clairemont (e)	08080940	1,357	1968-77
Duck Creek near Girard (d)	08080950	431	1965-89
Salt Fork Brazos River at U.S. Highway 380 near Jayton (e)	08080959	1,797	1968-77
Salt Fork Brazos River near Peacock (d)	08081000	4,619	1950-51, 1965-86
Short Croton Creek at mouth near Jayton (e)	08081050	18.1	1959-82
Croton Creek below Short Croton Creek near Jayton (e)	08081100	250	1959-82
Croton Creek near Jayton (d)	08081200	290	1959-86
Salt Croton Creek at Weir D near Aspermont (e)	08081400	55.5	1957-76
Haystack Creek at Weir E near Aspermont (e)	08081450	15.1	1957-77
Salt Croton Creek near Aspermont (d)	08081500	64.30	1957-77
Stinking Creek near Aspermont (d)	08082100	88.80	1966-83
North Croton Creek near Knox City (d)	08082180	251	1965-86
North Elm Creek near Throckmorton (e)	08082900	3.58	1965-77
Elm Creek near 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	39.10	1964-79
Elm Creek at Abilene (d)	08083430	422	1980-83
Cedar Creek at Abilene (d)	08083470	119	1971-84

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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
Deep Creek at Moran (d)	08086050	228	1963-75
Hubbard Creek near Albany (d)	08086100	454	1962-75
Salt Prong Hubbard Creek below Lake McCarty near Albany (e)	08086110	45.5	1963-66
Salt Prong Hubbard Creek at U.S. 380 near Albany (d)	08086120	61	1964-68
Cook Creek near Albany (e)	08086130	11.3	1963-76
North Fork Hubbard Creek near Albany (d)	08086150	39.3	1963-90
Salt Prong Hubbard Creek near Albany (d)	08086200	115	1962-63
Snailum Creek near Albany (d)	08086210	22.90	1964-66
Big Sandy Creek near Eolian (e)	08086220	91.4	1963-76
Battle Creek near Putnam (e)	08086230	32.0	1963-66
Battle Creek near Moran (d)	08086235	108	1967-68
Battle Creek near Eolian (e)	08086240	137	1963-66
Pecan Creek at FM 1853 near Eolian (e)	08086250	6.95	1963-66
Pecan Creek near Eolian (d)	08086260	26.40	1967-75
Big Sandy Creek near Breckenridge (e)	08086300	288	1962-75
Hubbard Creek near Breckenridge (d)	08086500	1,089	1955-86
Clear Fork Brazos River near Crystal Falls (e)	08087000	5,658	1916-20, 1928-51
Clear Fork Brazos River near Eliasville (d)	08087300	5,697	1916-20, 1924-25, 1928-51, 1962-82
Salt Creek at Olney (d)	08088100	11.80	1958-77
Salt Creek near Newcastle (d)	08088200	120	1958-60
Briar Creek near Graham (d)	08088300	24.20	1958-89
Brazos River at Farm Road 1287 near Graham (e)	08088420	13,432	1970-77
Big Cedar Creek near Ivan (d)	08088450	97	1965-89
Brazos River at Morris Sheppard Dam near Graford (d)	08088600	14,030	1990-94
Elm Creek Tributary near Graford (e)	08089100	1.10	1965-74
Palo Pinto Creek near Santo (d)	08090500	573	1925, 1951-76
Cidwell Branch near Granbury (e)	08090850	3.37	1966-73
Morris Branch near Bluff Dale (e)	08091200	0.06	1965-73
Panther Branch near Tolar (e)	08091700	7.82	1966-74
Nolan River at Blum (d)	08092000*	282.0	1924-87
Brazos River near Whitney (d)	08093000	17,648	1939-74
Bond Branch near Hillsboro (e)	08093200	0.36	1965-74
Hackberry Creek at Hillsboro (d)	08093250	57.9	1980-92
Hackberry Creek below Hillsboro (e)	08093260	86.8	1980-92
Cobb Creek near Abbott (d)	08093400	12.40	1967-79
Aquilla Creek near Aquilla (d)	08093500#	308	1939-2001
Aquilla Creek at RR bridge near Aquilla (e)	08093530	345	1976-85
Aquilla Creek at Farm Road 2114 near Aquilla (e)	08093540	351	1976-85
Aquilla Creek at Farm Road and 1858 near Ross (e)	08093560	392	1976-85
Aquilla Creek at Farm Road 933 near Ross (e)	08093580	397	1976-85
North Bosque River at Stephenville (d)	08093700	95.90	1958-79
Green Creek SWS #1 near Dublin (d)	08094000	4.19	1955-77
Green Creek near Alexander (d)	08094500	45.40	1958-73
South Bosque River near McGregor (e)	08095220	15.9	1967-73
Willow Branch at McGregor (e)	08095250	2.52	1966-73
Middle Bosque River near McGregor (d)	08095300*	182.0	1959-86
Hog Creek near Crawford (d)	08095400*	78.0	1959-86
South Bosque River near Speegleville (d)	08095500	386	1924-30

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
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	83.50	1958-75
Brazos River near Marlin (d)	08097500	30,211	1939-51
Deer Creek at Chilton (d)	08098000	84.50	1934-36
Little Pond Creek at Burlington (d)	08098300	23	1963-82
Leon River near De Leon (d)	08099100*	479.0	1960-87
Sabana River near De Leon (d)	08099300*	264.0	1960-87
Sabana River Tributary near De Leon (e)	08099350	0.48	1966-74
Leon River near Hasse (d)	08099500	1,261	1939-91
Eidson Creek near Hamilton (e)	08100100	2.91	1965-73
Bermuda Branch near Gatesville (e)	08100400	0.50	1966-73
Hoffman Branch near Hamilton (e)	08100800	5.56	1966-74
Cowhouse Creek near Killeen (d)	08101500	667	1925, 1939-42
Nolan Creek at Belton (d)	08102600	112	1974-82
School Branch near Lampasas (e)	08102900	0.90	1966-73
Fleece Branch near Lampasas (e)	08103450	1.08	1965-74
Lampasas River at Youngsport (d)	08104000	1,240	1924-80
Lampasas River near Belton (d)	08104100*	1,321	1963-89
Salado Creek above Salado (e)	08104290*	134	1985-88
Salado Creek below Salado Springs (d)	08104310*	136	1985-87
N. Fork San Gabriel River upstream from State Highway 418 at Georgetown (e)	08104795*	271	1985-88
North Fork San Gabriel River at Georgetown (d)	08104800	268	1964-68
South Fork San Gabriel River near Bertram (e)	08104850	8.9	1967-74
San Gabriel River at Georgetown (d)	08105000*	405	1924-25, 1934-73, 1984-87
Berry Creek at State Hwy. 971 near Georgetown (d)	08105200*	117	1985-87
San Gabriel River near Weir (d)	08105300*	563	1977-90
San Gabriel River near Circleville (d)	08105400	599	1924-34, 1967-77
Avery Branch near Taylor (e)	08105900	3.52	1966-73
Brushy Creek at Coupland (d)	08106000	205.0	1924-26
Brushy Creek near Rockdale (d)	08106300	505	1967-80
San Gabriel River near Rockdale (d)	08106310	1,359	1975-92
Big Elm Creek near Temple (d)	08107000	74.70	1934-36
Big Elm Creek near Buckholts (d)	08107500	171	1934-36
North Elm Creek near Ben Arnold (d)	08108000	32.20	1935-36
North Elm Creek near Cameron (d)	08108200	44.80	1963-73
Little Branch near Bryan (e)	08108800	0.14	1966-73
Brazos River near Bryan (d)	08109000	39,515	1899-1903, 1918-92
Brazos River near College Station (d)	08109500	30,033	1899-1902, 1918-25
Yegua Creek near Somerville (d)	08110000	1,009	1924-92
Brazos River at Washington (e)	08110200	41,192	1966-95
Plummers Creek at Mexia (e)	08110350	4.42	1965-73
Navasota River near Groesbeck (d)	08110400	311	1965-79
Navasota River near Bryan (d)	08111000	1,454	1951-94, 1994-97
Navasota River near College Station (d)	08111010	1,809	1977-85
Burton Creek at Villa Maria Road, Bryan (d)	08111025	1.33	1968-70
Hudson Creek near Bryan (d)	08111050	1.94	1968-70
Winkleman Creek near Brenham (e)	08111100	0.75	1965-73
Piney Creek near Bellville (e)	08111600	30.7	1948, 1955, 1958, 1964-89
West Fork Mill Creek near Industry (e)	08111650	15.3	1964-89
Mill Creek near Bellville (d)	08111700	376	1963-93

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Brazos River near San Felipe (d)	08112000	35,100	1939-57
Brazos River near Wallis (e)	08112200	44,700	1974-75
Brazos River Authority Canal A near Fulshear (d)	08112500	N/A	1932-54, 1958-73
Richmond Irrigation Co. Canal near Richmond (d)	08113500	N/A	1932-54, 1956-78
Brazos River near Juliff (d)	08114500	45,084	1949-69
Seabourne Creek near Rosenberg (e)	08114900	5.78	1968-74
Fairchild Creek near Needville (d)	08115500	26.20	1947-55
Big Creek near Guy (d)	08116000	116	1947-50
Dry Creek near Rosenberg (d)	08116400	8.65	1959-79
Dry Creek near Richmond (d)	08116500	12.20	1947-50, 1957-58
San Bernard River near West Columbia (e)	08117700	766	1949, 1971-77
Mound Creek Tributary at Guy (e)	08117800	1.48	1966-73
Big Boggy Creek near Wadsworth (d)	08117900	10.30	1970-77
Bull Creek near Ira (d)	08118500	26.30	1948-54, 1959-62
Colorado River below Bull Creek near Ira (e)	08118600	3,524	1975-78
Bluff Creek near Ira (d)	08119000	42.60	1948-65
Bluff Creek at mouth near Ira (e)	08119100	44.1	1975-78
Colorado River near Ira (d)	08119500	3,483	1948-52, 1959-89
Morgan Creek near Westbrook (d)	08121500	273	1954-63
Graze Creek near Westbrook (d)	08122000	21.70	1954-59
Morgan Creek near Colorado City (d)	08122500	313	1947-49
Champlin Creek near Colorado City (d)	08123500	198	1948-59
Sulphur Springs Draw near Wellman (e)	08123620	41.80	1966-74
Beals Creek above Big Spring (d)	08123650	9,319	1959-79
Beals Creek at Big Spring (d)	08123700	9,341	1957-59
Beals Creek near Coahoma (d)	08123720	9,383	1983-88
Coahoma Draw Tributary near Big Spring (e)	08123750	2.38	1966-74
Bull Creek Tributary near Forsan (e)	08123760	0.4	1966-74
Colorado River near Silver (d)	08123900	14,997	1957-70
Bitter Creek near Silver (e)	08123920	4.3	1967-74
Salt Creek Tributary near Hylton (e)	08125450	0.25	1966-74
Fish Creek Tributary near Hylton (e)	08126300	0.25	1966-71
Colorado River at Ballinger (d)	08126500	16,413	1907-79
Dry Creek near Christoval (e)	08127100	0.79	1965-73
South Concho Irrigation Co. Canal at Christoval (d)	08127500	N/A	1940-83
Middle Concho River near Tankersley (d)	08128500	2,653	1930-61
Spring Creek above Tankersley (d)	08129300*	424.7	1961-95
Dove Creek Springs near Knickerbocker (d)	08129500*	N/A	1944-58
Dove Creek at Knickerbocker (d)	08130500*	226	1961-95
Spring Creek near Tankersley (d)	08131000	699	1930-60
South Concho River above Pecan Creek near San Angelo (e)	08131300	470	1963-84
Tom Green Co. WCID No. 1 Canal near San Angelo (d)	08131600	N/A	1963-81
South Concho River at San Angelo (d)	08132500	3,866	1932-53
Quarry Creek near Sterling City (e)	08133300	3.25	1965-73
North Concho River at Sterling City (d)	08133500*	588.0	1939-87
Broome Creek near Broome (e)	08133800	0.29	1965-73
Nolke Station Creek near San Angelo (e)	08134300	0.59	1965-73
Gravel Pit Creek near San Angelo (e)	08134400	0.19	1965-74
North Concho River at San Angelo (d)	08135000	1,525	1916-31, 1947-90
Concho River near Veribest (e)	08136150	5,610	1970-74, 1998-2000
Puddle Creek near Veribest (e)	08136200	12.0	1966-73
Frog Pond Creek near Eden (e)	08136300	1.96	1967-73

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Mukewater Creek SWS No. 10A near Trickham (e)	08136900	15.3	1965-72
Mukewater Creek SWS No. 9 near Trickham (e)	08137000	4.02	1961-72
Mukewater Creek at Trickham (d)	08137500	70	1951-73
Deep Creek SWS No. 3 near Placid (e)	08139000	3.42	1954-60
Deep Creek near Mercury (d)	08139500	43.90	1954-73
Deep Creek SWS No. 8 near Mercury (e)	08140000	5.14	1952-71
Dry Prong Deep Creek near Mercury (d)	08140500	8.31	1951-71
Lake Clyde near Clyde (e)	08140600	36.9	1970-85
Pecan Bayou near Cross Cut (d)	08140700	532	1968-79
Jim Ned Creek near Coleman (d)	08140800	333	1965-80
McCall Branch near Coleman (e)	08141100	2.17	1966-73
Hords Creek near Valera (d)	08141500	54.20	1947-91
Hords Creek at Coleman (d)	08142000	107	1941-70
Brown County WID No. 1 Canal near Brownwood (d)	08142500	N/A	1950-83
Pecan Bayou at Brownwood (d)	08143500	1,660	1917-18, 1924-83
Brown Creek Tributary near Goldthwaite (e)	08143700	2.48	1966-73
Noyes Canal at Menard (d)	08144000	N/A	1924-83
Brady Creek near Eden (d)	08144800	101	1962-85
Brady Creek Tributary near Brady (e)	08145100	4.05	1967-73
Lake Buchanan near Burnet (e)	08148000	31,910	1937-90
Llano River Tributary near London (e)	08150200	0.58	1966-73
Stone Creek Tributary near Art (e)	08150900	0.40	1966-73
Llano River near Castell (d)	08151000	3,747	1924-39
Johnson Creek near Valley Spring (e)	08151300	5.66	1967-73
Little Flatrock Creek near Marble Falls (e)	08152700	3.20	1966-74
Spring Creek near Fredericksburg (e)	08152800	15.20	1967-73
Pedernales River at Stonewall (d)	08153000	647	1924-34
Cane Branch at Stonewall (e)	08153100	1.37	1965-71
Pedernales River near Spicewood (d)	08154000	1,294	1924-39
Lake Travis near Austin (d)	08154500	38,755	1940-90
Colorado River below Mansfield Dam, Austin (d)	08154510	38,755	1975-90
West Bull Creek at Loop 360 near Austin (e)	08154750	6.77	1976-82
Bull Creek at FM 2222, Austin (e)	08154760	30.4	1975-78
Bee Creek at West Lake Drive near Austin (e)	08154950	3.28	1980-82
Barton Creek near Camp Craft Road near Austin (d)	08155260	109	1982-89
Skunk Hollow Creek below Pond 1 at Austin (e)	08155400	0.12	1982-84
West Bouldin Creek at Riverside Drive, Austin (e)	08155550	3.12	1976-82
Shoal Creek at Steck Avenue, Austin (e)	08156650	2.79	1975-82
Shoal Creek at Northwest Park at Austin (d)	08156700	6.52	1975-84
Shoal Creek at White Rick Drive, Austin (e)	08156750	12.30	1975-82
Waller Creek at 38th Street, Austin (d)	08157000	2.31	1955-80
Waller Creek at 23rd Street, Austin (d)	08157500	4.13	1955-80
East Bouldin Creek at South 1st Street, Austin (d)	08157600	2.4	1997-2001
Blunn Creek near Little Stacey Park, Austin	08157700	1.2	1997-2001
Boggy Creek at US Highway 183, Austin	08158050	13.1	1977-86 1994-2001
Walnut Creek at Farm-Market 1325 near Austin (e)	08158100	12.60	1975-88
Walnut Creek at Dessau Road, Austin (e)	08158200	26.20	1975-88
Ferguson Branch at Springdale Road, Austin (e)	08158300	1.63	1978-82
Little Walnut Creek at Georgian Drive, Austin (e)	08158380	5.22	1975-88
Little Walnut Creek at IH 35, Austin (e)	08158400	5.57	1975-82
Little Walnut Creek at Manor Road, Austin (e)	08158500	12.1	1975-82
Walnut Creek at Southern Pacific Railroad bridge, Austin (e)	08158640	53.5	1975-86
Onion Creek at Buda (e)	08158800	166	1961-78,
" " " (d)			1979-83, 1992-95
Bear Creek at Farm-Market Road 1626 near Manchaca (e)	08158820	24.0	1979-83
Little Bear Creek at Farm-Market Road 1626 near Manchaca (d)	08158825	21.0	1979
Slaughter Creek at FM 2304 near Austin (e)	08158860	23.1	1978-83
Boggy Creek (South) at Circle S Road, Austin (e)	08158880	3.58	1976-88

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

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Salado Creek at Rittman Road, San Antonio (e)	08178720	137.1	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		1978
Leon Creek Tributary at Kelly Air Force Base (d)	08181450	1.19	1969-79
Calaveras Creek SWS No. 6 (inflow) near Elmendorf (e)	08182400	7.01	1957-77
Calaveras Creek near Elmendorf (d)	08182500	77.20	1954-71
San Antonio River at Calaveras (d)	08183000	1,786	1918-25
Cibolo Creek near Boerne (d)	08183900	68.4	1963-95
Cibolo Creek near Bulverde (d)	08184000	198	1946-66
Cibolo Creek above Bracken (d)	08184500	250	1946-51
Cibolo Creek at Sutherland Springs (d)	08185500	665	1924-29
Ecleto Creek near Runge (d)	08186500	239	1962-89
Escondido Creek SWS No. 1 (inflow) near Kenedy (e)	08187000	3.29	1955-73
Escondido Creek at Kenedy (d)	08187500	72.40	1954-73
Escondido Creek SWS No. 11 (inflow) near Kenedy (e)	08187900	8.45	1959-77
Dry Escondido Creek near Kenedy (d)	08188000	9.43	1954-59
Baugh Creek at Goliad (e)	08188400	3.02	1966-74
Guadalupe-Blanco River Authority Calhoun Canal-Flume No. 2 near Long Mott (d)	08188750	N/A	1972-86
Guadalupe River at State Highway 35 near Tivoli (e)	08188810	10,280	1975-82
Olmos Creek Tributary near Skidmore (e)	08189600	0.58	1966-73
Chiltipin Creek at Sinton (d)	08189800	128	1970-91
Nueces River near Uvalde (d)	08191500	1,930	1928-39
Nueces River near Cinonia (d)	08192500	2,150	1915-25
Plant Creek near Tilden (e)	08194550	0.36	1965-74
Nueces River at Simmons (d)	08194600	8,561	1965-77
Frio River at Knippa (d)	08195700	N/A	1953
Dry Frio River at Knippa (d)	08196500	179	1953
East Elm Creek near Sabinal (e)	08198900	10.6	1967-74
Frio River near Frio Town (d)	08199700	1,460	1924-27
Hondo Creek near Hondo (d)	08200500	132	1953-64
Bone Creek near Hondo (e)	08200900	0.19	1965-74
Seco Creek near Utopia (d)	08202000	53.20	1952-61
Seco Creek Reservoir inflow near Utopia (d)	08202450	59.5	1991-98
Seco Creek near D'Hanis (d)	08202500	87.40	1952-64
Parkers Creek Reservoir (d)	08202800	10.0	1991-99
Leona River Tributary near Uvalde (e)	08203500	1.21	1966-74
Leona River Spring Flow near Uvalde (d)	08204000*	1.21	1939-77
Leona River near Divot (d)	08204500	565	1924-29
Frio River at Calliham (d)	08207000	5,491	1925-26, 1932-81
Rutledge Hollow Creek near Poteet (e)	08207200	9.33	1966-74
Rutledge Hollow at 7th Street, Poteet (d)	08207220	N/A	1979-2000
Atascoas River at U.S. Highway 281, Pleasanton (d)	08207300	N/A	1973-2000
Atascosa River near McCoy (d)	08207500	530	1951-57
Lucas Creek near Pleasanton (e)	08207700	32.80	1966-73
Ramirena Creek near George West (d)	08210300	84.40	1968-72
Lagarto Creek near George West (d)	08210400	155	1972-89
Nueces River below Mathis (d)	08211100	16,726	1966-67

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Rincon Bayou Channel near Calallen (d)	08211503	N/A	1996-2000
Pintas Creek Tributary near Banquete (e)	08211550	3.28	1966-74
Hamon Creek near Freer (e)	08211600	0.73	1965-73
San Diego Creek at Alice (d)	08211800	319	1964-89
Lake Alice at Alice (e)	08211850	150	1965-86
San Fernando Creek near Alice (d)	08212000	518	1962-63
North Las Animas Creek Tributary near Freer (e)	08212320	0.07	1969-74
Rio Grande at Vinton Bridge near Anthony (d)	08363840	28,680	1969-74
Northgate Reservoir at El Paso (e)	08365540	6.89	1973-75
Range Reservoir at El Paso (e)	08365545	11.89	1973-75
Franklin Canal at El Paso (d)	08365550	N/A	1969-72
McKelligon Canyon at El Paso (d)	08365600	2.30	1958-77
Government Ditch at El Paso (d)	08365800	6.40	1958-77
Rio Grande at Jaurez, MX (d)	08366000	29,350	1938-56
Riverside Canal near Socorro (d)	08366400	37,830	1969-72
Rio Grande at Island Station near El Paso (d)	08366500	29,743	1938-60
Rio Grande at Tornillo Branch near Fabens (d)	08367000	N/A	1924-38
Tornillo Drain at mouth near Tornillo (d)	08368000	N/A	1969-72
Tornillo Canal near Tornillo (d)	08368300	N/A	1969-72
Hudspeth Feeder Canal near Tornillo (d)	08368900	N/A	1969-72
Rio Grande at County Line Station near El Paso (d)	08369500	30,610	1938-60
Camo Rice Arroyo Tributary near Fort Hancock (e)	08370200	2.35	1966-74
Wild Horse Creek Tributary near Van Horn (e)	08370800	0.74	1966-73
Cibolo Creek near Presidio (d)	08373200	276	1971-77
Rio Grande above Presidio (lower Station) (d)	08373500	N/A	1901-13, 1924-54
Rio Grande at Langtry (d)	08377500	84,795	1900-14, 1920, 1924-60
Rio Grande Tributary near Langtry (e)	08377600	0.32	1966-74
Delaware River Tributary near Orla (e)	08407800	1.6	1966-74
Pecos River near Angeles (d)	08409500	20,540	1914-37
Salt Screwbean Draw near Orla (d)	08411500	464	1939-41, 1944-57
Pecos River near Mentone (d)	08414000	21,650	1922-26, 1969-73
Reeves County WID No. 2 Canal near Mentone (d)	08414500	N/A	1922-25, 1939-57, 1964-90
Ward County WID No. 3 Canal near Barstow (d)	08415000	N/A	1939-57, 1964-90
Pecos River above Barstow (d)	08416500	21,800	1916-21
Ward County Irrigation District No. 1 Canal near Barstow (d)	08418000	N/A	1922-25, 1939-57, 1964-90
Pecos River at Pecos (d)	08420500	22,100	1898-1907, 1914-15, 1922-26, 1939-55
Madera Canyon near Toyahvale (d)	08424500	53.80	1932-49
Phantom Lake Spring near Toyahvale (d)	08425500*	N/A	1932-34, 1942-66
San Solomon Springs at Toyahvale (d)	08427500*	N/A	1932-34, 1941-65
West Sandia Spring at Balmorhea (d)	08429000	N/A	1932-33
East Sandia Spring at Balmorhea (d)	08430000	N/A	1932-33
Toyah Creek near Pecos (d)	08431000	1,024	1940-41, 1944-45
Salt Draw near Pecos (d)	08431500	1,882	1939-41, 1944-45
Limpia Creek below Fort Davis (d)	08431800	227	1962-77

Station name	Station number	Drainage area (mi^2)	Period of record (water years)
Limpia Creek near Fort Davis (d)	08432000	303	1925-32
Toyah Creek below Toyah Lake near Pecos (d)	08434000	3,709	1939-51
Grandfalls-Big Valley Canal near Barstow (d)	08435000	N/A	1922-26, 1939-57, 1964-76
Pecos River below Barstow (d)	08435500	25,980	1939-41
Toronto Creek near Alpine (d)	08435600	27.90	1971-76
Alpine Creek at Alpine (d)	08435620	18.10	1971-76
Moss Creek near Alpine (d)	08435660	11.30	1971-76
Sunny Glen Canyon near Alpine (d)	08435700	29.70	1968-77
Coyanosa Draw near Fort Stockton (d)	08435800	1,182	1964-77
Pecos County WID No. 2 (Upper Div.) Canal near Grandfalls (d)	08436500	N/A	1922-25, 1939-57, 1964-90
Courtney Creek Tributary near Fort Stockton (e)	08436800	0.44	1966-74
Pecos County WID No. 2 Canal near Imperial (d)	08437500	N/A	1940-57, 1964-90
Lake Leon Tributary near Fort Stockton (e)	08437550	1.59	1966-74
Pecos County WID No. 3 Canal near Imperial (d)	08437600	N/A	1940-57, 1964-90
Monument Draw Tributary at Pyote (e)	08437650	178	1966-74
Ward County WID No. 2 Canal near Grand Falls (d)	08437700	N/A	1939-57, 1964-90
Pecos River near Grand Falls (d)	08438100	27,810	1916-26
Pecos River below Grand Falls (d)	08441500	27,820	1921-26, 1939-56
Three Mile Mesa Creek near Fort Stockton (e)	08444400	1.04	1966-74
Comanche Springs at Fort Stockton (d)	08444500	N/A	1936-64
Pecos River near Sheffield (d)	08447000	31,600	1922-25, 1940-49
Howards Creek Tributary near Ozona (e)	08447200	7.53	1967-73
Pecos River near Shumla (d)	08447400	35,162	1955-60
Pecos River near Comstock (d)	08447500	35,298	1900-54
Goodenough Springs near Comstock (e)	08448500	N/A	1929-60
Sonora Field Creek at Sonora (e)	08448800	2.60	1965-71
Devils River near Juno (d)	08449000	2,730	1925-49, 1964-73
Devils River near Comstock (d)	08449300	3,903	1955-58
Rough Canyon Tributary near Del Rio (e)	08449470	7.90	1967-73
Devils River near Del Rio (d)	08449500	4,185	1900-14, 1924-57
Evans Creek Tributary near Del Rio (e)	08449600	0.39	1966-73
Devils River near mouth, Del Rio (d)	08450500	4,305	1954-60
Rio Grande near Del Rio (d)	08452500	123,303	1900-15, 1920, 1924-54
San Felipe Creek near Del Rio (e)	08453000	46.0	1931-60
Zorro Creek near Del Rio (e)	08453100	10.0	1966-74
East Perdido Creek near Brackettville (e)	08454900	3.39	1965-74
Pinto Creek near Del Rio (d)	08455000	249	1929-69, 1971-72
Rio Grande at San Antonio Crossing (d)	08458700	129,226	1952-60
Arroyo San Bartolo at Zapata (e)	08459600	0.61	1966-74
Rio Grande near Zapata (d)	08460500	163,344	1932-53
International Falcon Reservoir near Falcon Heights (d)	08461200	N/A	1953-60
Rio Grande at Roma (d)	08462500	166,464	1900-13, 1923-54
Rio Grande near Rio Grande City (d)	08465500	180,941	1932-54
Rio Grande Tributary near Rio Grande City (e)	08466100	1.20	1966-74
Rio Grande Tributary near Sullivan City (e)	08466200	0.40	1966-74
North Floodway South of McAllen (d)	08468000	N/A	1928-60

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

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

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

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Canadian River at Tascosa	07227470	19,200	SC, T, Cl	1948-53,
		18,536	SC, T, pH, Cl	1969-77
Canadian River near Canadian	07228000	22,866	SC, T	1974-81
Prairie Dog Town Fork Red River near Wayside	07297910	4,221	SC, T	1969-81
Tule Creek near Silverton	07298200	1,150	SC, T, pH, Cl	1968-69
Prairie Dog Town Fork Red River near Brice	07298500	6,082	SC, pH, Cl, S	1949-51,
			T	1950-51
Mulberry Creek near Brice	07299000	534	SC, pH, Cl, S	1949-51
Prairie Dog Town Fork Red River near Lakeview	07299200	6,792	SC, T	1968-80,
			S	1979-80
Little Red River near Turkey	07299300	139	SC, T	1968-81,
			S	1979-81
Jonah Creek at Weir near Estelline	07299512	65.50	SC	1974-82
Jonah Creek below Weir near Estelline	07299514	66.60	SC	1974-76
Salt Creek near Estelline	07299530	142	SC	1974-79
Prairie Dog Town Fork Red River near Childress	07299540	7,725	SC, T	1968-82,
				1994-97
Salt Fork Red River near Hedley	07299930	868	SC, T, pH, Cl	1956-61
Salt Fork Red River near Wellington	07300000	1,222	SC, T, pH, Cl	1952-54,
			SC, T	1968-91
North Pease River near Childress	07307600	1,434	SC, T	1973-79
Middle Pease River near Paducah	07307750	1,086	SC	1973-79,
			T	1973-79,
			S	1994-97
Middle Pease River near Paducah	07307760	1,128	SC	1980-82,
			T	1980
Pease River near Childress	07307800	2,754	SC, T	1968-82,
				1994-97
Pease River near Crowell	07308000	3,037	SC	1942-43
Pease River near Vernon	07308200	3,488	SC,T	1999
Red River near Burkburnett	07308500	20,570	SC, T	1968-81
North Fork Wichita River near Paducah	07311600	540	SC, T	1968-76
North Fork Wichita River near Crowell	07311622	591	SC	1971-76
Middle Fork Wichita River near Truscott	07311648	161	SC	1970-76
Truscott Brine Lake near Truscott	07311669	26.2	SC, T	1985-90
North Fork Wichita River near Truscott	07311700	937	SC, T	1969-92
South Fork Wichita River near Guthrie	07311780	239	SC	1970-76
South Wichita River below Low-Flow Dam near Guthrie	07311783	223	SC, T	1987-89
South Fork Wichita River at Ross Ranch near Guthrie	07311790	499	SC	1971-79,
			Cl	1988-97,
			S	1978-79
Wichita River near Seymour	07311900	1,874	SC, T	1968-79
Beaver Creek near Electra	07312200	652	SC,T	1969-70
				1996-99
Little Wichita River near Archer City	07314500	481	SC	1953-55,
			T	1953-54
Little Wichita River near Henrietta	07314900	1,037	SC, DO	1999
Little Wichita River near Henrietta	07315000	1,037	SC, T, pH, Cl	1953-56,
			S, T	1959-66,
East Fork Little Wichita River near Henrietta	07315200	178	T	1954
Little Wichita River near Ringgold	07315400	1,350	SC, pH, Cl	1959-62

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Red River near Gainesville	07316000	30,872	SC, Cl	1944-46,
			SC, T, pH, Cl	1953-63,
			SC, T	1967-89,
Red River at Denison Dam near Denison	07331600	39,720	SC	1944-89,
			T	1945-89
Little Pine Creek near Kanawha	07336750	75.40	T	1980
Red River near De Kalb	07336820	47,348	SC, T	1968-91
Middle Sulphur River near Commerce	07342480	44.1	Cl, pH	1987-2001
South Sulphur River near Cooper	07342500	527	SC, T, pH, Cl	1959-66,
				1968-72,
			SC, T	1973-89
Sulphur River near Talco	07343200	1,365	SC, T, pH, Cl	1966-72,
			SC, T	1973-91
White Oak Creek near Talco	07343500	494	SC, T, pH, Cl	1966-72,
			SC, T	1973-91
Sulphur River near Darden	07344000	2,774	SC, T, pH, Cl	1947-50
Big Cypress Creek near Pittsburg	07344500	366	SC, T, pH, Cl	1968-72,
			SC, T	1973-89
Little Cypress Creek near Jefferson	07346070	675	SC, T, pH, Cl	1968-72,
			SC, T	1973-91
Sabine River near Emory	08017500	888	SC, T, pH, Cl	1952-54
Grand Saline Creek near Grand Saline	08018200	91.40	SC, T, pH, Cl	1968-73
Sabine River near Mineola	08018500	1,357	SC, T, pH, Cl	1968-72,
			SC, T	1973-92
Lake Fork Creek near Quitman	08019000	585	SC, T, pH, Cl	1968-72,
			SC, T	1973-89
Big Sandy Creek near Big Sandy	08019500	231	SC, T, S	1985-86
Sabine River near Beckville	08022040	3,589	SC, T	1952-98
Sabine River below Toledo Bend near Burkeville	08026000	7,482	SC, T	1969-86,
			C	1969-75
Sabine River near Bon Wier	08028500	8,229	SC, T, C	1969-84
Sabine River near Ruliff	08030500	9,329	SC	1945,
				1947-98
			T	1947-98
			pH, DO	1968-75,
			C	1970-76,
			Cl	1968
Cow Bayou near Mauriceville	08031000	83.30	SC, T, pH, Cl	1952-54,
			SC, T	1954-56
Neches River near Neches	08032000	1,145	SC, T	1974-91
Neches River near Alto	08032500	1,945	SC, T	1950-69
Neches River near Diboll	08033000	2,724	SC, T	1970-81
Neches River near Rockland	08033500	3,636	SC	1941-42,
				1946-47
Angelina River near Lufkin	08037000	1,600	SC, T, pH, Cl	1955-78,
			SC, T	1955-
Attoyac Bayou near Chireno	08038000	503	SC, T	1984-99
Sam Rayburn Reservoir near Jasper	08039300	3,449	SC, T	1964-84,
				1993-99
Angelina River below Sam Rayburn Dam near Jasper	08039400	3,449	SC, T	1964-79
Angelina River at SH 63 near Ebenezer	08039500	3,435	SC, T	1994-99
Village Creek near Kountze	08041500	860	SC, T	1968-70
Pine Island Bayou near Sour Lake	08041700	336	SC, T, pH, Cl	1968-72,
			SC, T	1973-89
Big Sandy Creek near Bridgeport	08044000	333	SC, T, S	1968-77,
Lake Worth above Fort Worth	08045400	2,064	pH, Cl	
Clear Fork Trinity River at Fort Worth	08047500	518	SC, pH, Cl	1949-52,
			T	1948-62

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Village Creek at Everman	08048970	84.5	SC, pH, T, DO	1990
Elm Fork Trinity River SWS # 6-0 near Muenster	08050200	0.77	S	1957-66
Elm Fork Trinity River near Muenster	08050300	46	SC	1967-68,
			T	1957-58,
				1966-68,
			S	1957-68
Clear Creek near Sanger	08051500	295	SC, T, S	1968-77
Little Elm Creek near Celina	08052650	46.70	SC	1967-75,
			T, S	1966-75
Little Elm Creek near Aubrey	08052700	75.50	SC	1967-75,
			T, S	1967-75
Elm Fork Trinity River near Lewisville	08053000	1,673	SC	1982-86,
			T	1976-86
White Rock Creek at Greenville Avenue, Dallas	08057200	66.4	SC, pH, T, DO	1997-2000
Trinity River below Dallas	08057410	6,278	SC, T	1968-2000,
			S	1972-75,
				1998-2000
			Cl	1970-81,
				1998-99
Lavon Lake near Lavon	08060500	770	SC,T,CL	1969-74,
				1975,82,
				1995-99
Duck Creek near Garland	08061700	31.6	SC, pH, T, DO	1988-89
East Fork Trinity River above Seagoville	08061970	1,183	SC, T, pH, DO	1987-93
East Fork Trinity River at Seagoville	08061980	1,224	SC, pH, T, DO	1987-96
East Fork Trinity River near Crandall	08062000	1,256	SC, T	1968-1981,
				1987-2000
			pH, DO	1977,
				1986-2000
			Cl	1964-81,
				1986-2000
Trinity River at Trinidad	08062700	8,538	SC, T	1967-81
				1986-2000
			pH, DO	1967-81,
				1986-2000
			Cl	1966-94
			S	1978-94
Cedar Creek near Mabank	08063000	733	SC, T, pH, Cl	1956-57
Pin Oak Creek near Hubbard	08063200	17.60	SC	1967-72,
			T	1957-60,
				1965-72,
			S	1957-60,
				1962-72
Richland Creek near Richland	08063500	734	SC, T, pH, Cl	1968-69,
			SC, T	1983-89
Chambers Creek near Corsicana	08064500	963	SC, T, pH, Cl	1961-70
Richland Creek near Fairfield	08064600	1,957	SC, T, pH, Cl	1956-66,
				1972,
			SC, T	1973-83
Trinity River near Oakwood	08065000	12,833	SC, T, pH, Cl	1948-54,
			SC, T, S	1977-81
Bedias Creek near Madisonville	08065800	321	SC, T	1985-87,
			S	1986
Long King Creek at Livingston	08066200	141	SC, T, pH, Cl	1963-72
Trinity River near Goodrich	08066250	16,844	SC, T	1970-73
Trinity River near Moss Bluff	08067100	17,738	SC, pH, Cl	1950-65
Old River near Cove	08067200	19.0	SC, pH, Cl	1950-65,
			T	1965

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Trinity River at Anahuac	08067300	17,912	SC, pH, Cl	1950-65
Cedar Bayou near Crosby	08067500	69.4	SC, pH, Cl	1971-79
West Fork San Jacinto River near Conroe	08068000	828	SC, T	1962-90,
			DO	1979-81
Panther Branch near Spring	08068450	34.50	S	1975-76
West Fork San Jacinto River near Humble	08069500	1,741	SC, Cl	1945-46
East Fork San Jacinto River near New Caney	08070200	388	SC,T	1984-99
San Jacinto River near Huffman	08071500	2,800	SC	1945-54,
			T	1949-54
Buffalo Bayou at West Belt Drive at Houston	08073600	307	SC, T	1979-81
Buffalo Bayou at Houston	08074000	358	SC, pH, T, DO	1986-2000
			Cl	1969-81
Whiteoak Bayou at Main Street, Houston	08074598	127	SC, T, DO	1992-97
Buffalo Bayou at Main Street, Houston	08074600	469	SC, T, DO	1986-92
Buffalo Bayou at McKee Street, Houston	08074610	469	SC, T, DO	1992-2000
			pH	1998-2000
Sims Bayou at Houston	08075500	63.0	SC, T, DO	1994-97
Chocolate Bayou near Alvin	08078000	87.70	SC, T	1978-81
North Fork Double Mountain Fork Brazos River near Post	08079575	438	SC, T	1984-93
Double Mountain Fork Brazos River near Rotan	08080000	8,536	SC, T	1950-51
Double Mountain Fork Brazos River near Aspermont	08080500	8,796	SC, T, S	1949-51
			SC, T	1957-95
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	64.30	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	88.80	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
Medina River near Somerset	08082800	967	SC, T, Cl	1998-2000
Clear Fork Brazos River at Hawley	08083240	1,416	SC, T	1968-79,
				1982-84
Clear Fork Brazos River at Nugent	08084000	2,199	SC, T, pH, Cl	1948-53
California Creek near Stamford	08084800	478	SC, T	1963-79
Paint Creek near Haskell	08085000	914	SC, T	1950-5
Clear Fork Brazos River at Fort Griffin	08085500	3,988	SC, T, S	1950-51,
			SC, T	1968-79,
				1982-84
Hubbard Creek near Sedwick	08086015	128	SC, T	1964-66
Deep Creek at Moran	08086050	228	SC, T	1963-75
Hubbard Creek near Albany	08086100	454	SC, T	1962-75
Salt Prong Hubbard Creek at U.S. Highway 380 near Albany	08086120	61	SC, T	1964-68
North Fork Hubbard Creek near Albany	08086150	39.30	SC, T	1964-90
Salt Prong Hubbard Creek near Albany	08086200	115	SC, T	1962-63
Snailum Creek near Albany	08086210	22.90	SC, T	1964-66
Battle Creek near Moran	08086235	108	SC, T	1967-68
Pecan Creek near Eolian	08086260	26.40	SC, T	1967-75
Big Sandy Creek near Breckenridge	08086300	288	SC, T	1962-77
Hubbard Creek near Breckenridge	08086500	1,089	SC, T	1955-75
Clear Fork Brazos River at Eliasville	08087300	5,697	SC, T	1962-82
Brazos River near South Bend	08088000	22,673	SC, Cl	1942-48,
			SC, T	1978-81

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Salt Creek at Olney	08088100	11.80	SC, T	1958-60
Salt Creek near Newcastle	08088200	120	SC, T	1958-60
Brazos River at Morris Sheppard Dam near Graford	08088600	23,596	SC T	1942-91, 1950-55, 1966-91
Brazos River near Dennis	08090800	25,237	SC, T	1971-95
Brazos River at Whitney Dam near Whitney	08092600	27,189	SC, T	1947-97
Aquilla Creek above Aquilla	08093360	255	SC, T	1980-83
Aquilla Creek near Aquilla	08093500	308	SC, T	196066, 1968-82
Brazos River near Highbank	08098290	30,436	T	1968-84
Leon River near Eastland	08098500	235	SC, T	1950-53
Leon River near Hasse	08099500	1,261	SC, T	1980-82, 1990-97
Leon River near Belton	08102500	3,542	T	1957-72
South Fork Rocky Creek near Briggs	08103900	33.30	S	1963-65
Lampasas River at Youngsport	08104000	1,240	SC, T	1961-64
Little River near Little River	08104500	5,228	SC, T	1965-73, 1980-82
Little River near Cameron	08106500	7,065	SC, T	1959-97
San Gabriel River near Weir	08105300	563	T	1977-82
San Gabriel River at Laneport	08105700	738	T	1977-82
Brazos River at State Highway 21 near Bryan	08108700	39,049	SC, T	1961-65
Brazos River near Bryan	08109000	39,515	SC, T	1966
Brazos River near College Station	08109500	39,599	SC, T	1961-84
Yegua Creek near Somerville	08110000	1,009	SC, T	1961-67
Navasota River above Groesbeck	08110325	239	SC, T	1968-89
Navasota River near Groesbeck	08110400	311	SC, T	1968-78
Navasota River near Easterly	08110500	968	SC	1942-43, 1947
Navasota River near Bryan	08111000	1,454	SC, T S	1959-81, 1976-81
Brazos River near Richmond	08114000	45,007	S SC T	1966-86, 1942-95, 1951-95
Brazos River near Rosharon	08116650	45,399	SC, T	1969-80
Brazos River at Harris Reservoir near Angleton	08116700	44,000	SC T	1962-77, 1967-77
Brazos River at Brazoria Reservoir near Brazoria	08117200	44,000	SC T	1962-77, 1967-77
San Bernard River near Boling	08117500	727	SC, T	1978-81
Colorado River above Bull Creek near Knapp	08118200	N/A	SC, T, Cl	1950-52
Bull Creek near Ira	08118500	26.30	SC, T, pH, Cl	1950-51
Bluff Creek near Ira	08119000	42.60	SC, T, pH, Cl	1950
Colorado River near Ira	08119500	3,483	SC, T Cl	1950-52, 1959-70, 1975-82, 1951-52
Deep Creek near Dunn	08120500	198	SC, T	1953-54
Morgan Creek near Westbrook	08121500	273	T	1954-55
Graze Creek near Westbrook	08122000	21.70	T	1954-55
Morgan Creek near Colorado City	08122500	313	T	1947-49
Lake Colorado City near Colorado City	08123000	340	T	1954-55
Beals Creek above Big Spring	08123650	9,319	SC, T	1973-78
Beals Creek near Big Spring	08123700	9,341	SC, T	1956-57
Beals Creek near Coahoma	08123720	9,383	SC, T	1983-88
Colorado River near Silver	08123900	14,997	SC, T	1957-68

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Colorado River at Robert Lee	08124000	15,307	SC, T, pH, Cl	1948-51,
			S	1949-51
Oak Creek near Blackwell	08126000	209	SC, T	1950
Colorado River at Ballinger	08126500	16,413	SC, T	1961-79,
			S	1978-79
Pecan Bayou at Brownwood	08143500	1,660	SC, T	1948-49
Pecan Bayou near Mullin	08143600	2,073	SC, T	1968-91
San Saba River near San Saba	08145500	N/A	SC, T	1962-65
San Saba River at San Saba	08146000	3,046	SC	1962-69,
			T	1963-70
Colorado River near San Saba	08147000	37,217	SC, T	1947-92,
			S	1951-62
Llano River at Llano	08151500	4,197	SC, T	1979-81
Lake Austin at Austin	08154900	38,240	SC, T	1965-80
Barton Creek below Barton Springs at Austin	08155505	125	SC, T,	1965,
				1975-83,
				1989-91,
				1994-97
Waller Creek at 23rd Street at Austin	08157500	4.13	T	1955-60
East Bouldin Creek at South 1st Street, Austin	08157600	2.4	Cl	1997-2000
Blunn Creek near Little Stacey Park, Austin	08157700	1.2		1997-2001
Boggy Creek at US Highway 183, Austin	08158050	13.1	C	1977-86
			C, T	1994-2001
Colorado River at Austin	08158000	39,009	SC, T	1948-91
Colorado River above Columbus	08160700	41,403	SC, T	1983-86
Colorado River at Columbus	08161000	41,640	SC	1967-73,
			T	1957-59,
				1961-68
			S	1957-73
Colorado River at Wharton	08162000	42,003	SC	1945-92,
			T	1946-48,
Lavaca River near Edna	08164000	817	SC, T	1978-81
Navidad River near Speaks	08164350	437	SC, T, pH, Cl	1996-97
Navidad River near Ganado	08164500	826	SC, T	1960-80
Guadalupe River near Spring Branch	08167500	1,315	SC	1942-45
Guadalupe River at Sattler	08167800	1,436	T	1984-87
Blanco River at Wimberley	08171000	355	T	1977-78
Plum Creek near Luling	08173000	309	SC, T	1968-86
Sandies Creek near Westhoff	08175000	549	S	1966
			Cl	1962-99
Guadalupe River at Victoria	08176500	5,198	SC	1946-81,
			T	1951-81
Coleto Creek Reservoir (Condenser No. 1) near Fannin	08177360	414	T	1980-94
Coleto Creek Reservoir (outflow) near Victoria	08177410	494	T	1980-94
Olmos Creek at Dresden Drive, San Antonio	08177700	21.2	SC, pH, T, DO	1969-99
			S	1973
San Antonio River at San Antonio	08178000	41.8	SC, T	1991-92,
				1996-97
San Antonio River at Mitchell Street, San Antonio	08178050	42.4	SC, pH, T, DO	1992-99
San Antonio River at Loop 410 at San Antonio	08178565	125	SC, pH, T, DO	1987-2000
Medina River near Macdona	08180700	885	SC, pH, T, DO	1998-2000
Medina River at La Coste	08180640	805	SC, pH, T, DO	1987-95
Medio Creek at Pearsall Rd. at San Antonio	08180750	47.9	SC, pH, T, DO	1987-95
Ingram Road Outfall at Leon Creek Tributary at San Antonio	08181410	0.02	SC, pH, T, DO	1994-2000
Leon Creek at Interstate Highway 35 at San Antonio	08181480	219	SC, pH, T, DO	1985-2000
Medina River at San Antonio	08181500	1,317	SC, pH, T, DO	1987-2000
			Cl	1965-2000
San Antonio River near Falls City	08183500	2,113	SC, pH, T, DO	1987-96

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Cibolo Creek near Falls City	08186000	827	SC, T	1969-91
Escondido Creek SWS #1 near Kenedy	08187000	3.29	S	1955-65
Guadalupe River at Tivoli	08188800	10,128	SC, T	1966-82
Mission River at Refugio	08189500	690	SC, T	1961-81
Nueces River at Cotulla	08194000	5,171	SC	1942
Frio River at Calliham	08207000	5,491	SC, T	1968-81
Nueces River at Bluntzer	08211000	16,772	SC, T	1948-91
Los Olmos Creek near Falfurrias	08212400	480	SC, T	1975-81
Rio Grande at El Paso	08364000	29,267	SC, pH, T, DO	1930-2000
Rio Grande at Fort Quitman	08370500	31,944	SC, T	1975-78.
Rio Grande at Foster Ranch near Langtry	08377200	80,742	SC, T	1975-81
Pecos River below Red Bluff Dam near Orla	08410100	20,720	SC	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 Draw near Pecos	08431500	1,882	SC	1940,
				1944
Toyah Creek below Toyah Lake near Pecos	08434000	3,709	SC	1940-50,
			Cl	1940
Pecos River below Grand Falls	08441500	27,820	SC	1939-42,
				1947-56
Pecos River near Girvin	08446500	29,560	SC	1940-41,
				1947,
				1954-82
			T	1954-59,
				1964-82
Pecos River near Sheffield	08447000	31,600	SC	1940-41,
				1947
Pecos River near Langtry	08447410	35,179	SC, T	1971-76,
				1981-85
Devils River at Pafford Crossing near Comstock	08449400	3,961	SC, T	1978-85
Rio Grande at Laredo	08459000	132,578	SC	1975-86,
			T	1974-76
Rio Grande at Roma	08462500	166,464	SC	1942-43
Rio Grande at Fort Ringgold, Rio Grande City	08464700	174,362	SC, pH, T	1959-2000
Rio Grande near Los Ebanos	08466300	N/A	SC, pH, T	1977-2000
Rio Grande at Mission Pumping Plant	08468000	171,800	SC	1945-50
Rio Grande below Anzalduas Dam	08469200	176,112	SC, pH, T	1967-72,
				1959-2000
Rio Grande at Cameron Co. WID #2 near San Benito	08473800	N/A	SC	1942-43
Rio Grande at Los Fresnos Pumping Plant near Brownsville	08474130	N/A	SC	1945-46
Rio Grande near Brownsville	08475000	176,333	SC	1943-44,
			SC, T	1967-83
			S	1966-83

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WATER RESOURCES DATA—TEXAS, 2002

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 91 gaging stations; stage only at 8 gaging stations; stage and contents at 32 lakes and reservoirs; and water quality at 44 gaging stations. Also included are data for 33 partial-record stations comprised of 15 flood-hydrograph, 8 low-flow, and 10 miscellaneous 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-02-3." 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; Orange County; 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 State Department of Highways & Public Transportations; 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.

HYDROLOGIC CONDITIONS

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

Streamflow across the State averaged normal during water year 2002.

Conservation storage in 77 selected reservoirs throughout the State, with a combined conservation capacity of 34,481,000 acre-feet, increased from 76 percent at the end of September 2001 to 77 percent at the end of September 2002. Records from these reservoirs indicate that storage increased in 34, decreased in 39, and remained the same in 4.

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

In the area covered in volume 3, streamflow averaged normal during water year 2002. Streamflow for water year 2002 and for the period of record at six selected stations (fig. 1) for which data are included in volume 3 is presented in table 1.

At the four long-term hydrologic index stations in the State, monthly mean streamflow during water year 2002 averaged normal. Monthly mean discharges for water year 2002 and the median of the long-term monthly means for water years 1961–90 for the four long-term hydrologic index stations in the State are shown in figure 2. Streamflow at the hydrologic index station North Bosque River near Clifton had normal streamflow April through June and August, above normal streamflow during November through March and July, and below normal streamflow in September. The station Neches River near Rockland was normal during November, February, March and June through September, above normal during October, December, January, and April, and below normal during May. The station North Concho River near Carlsbad

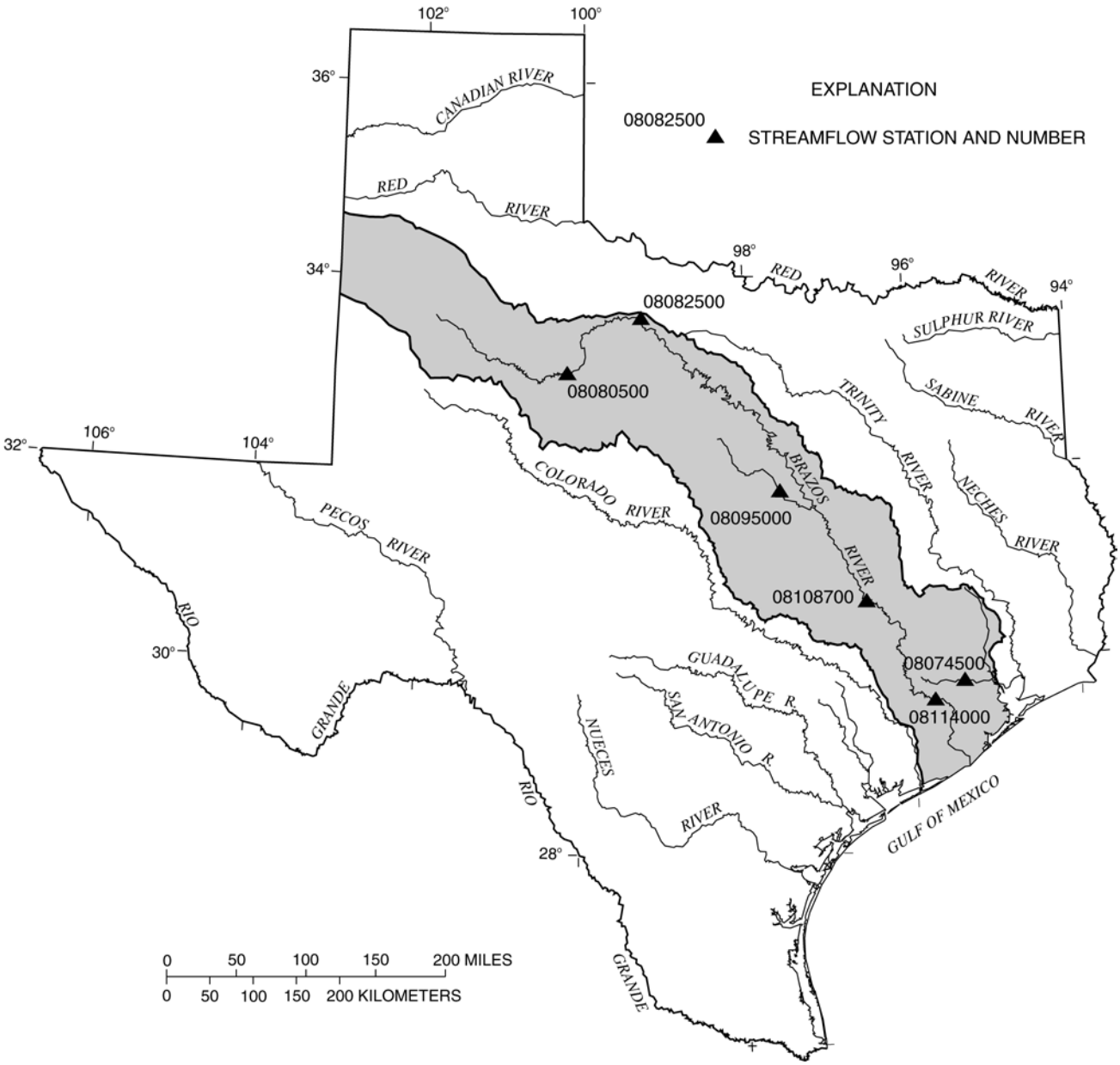
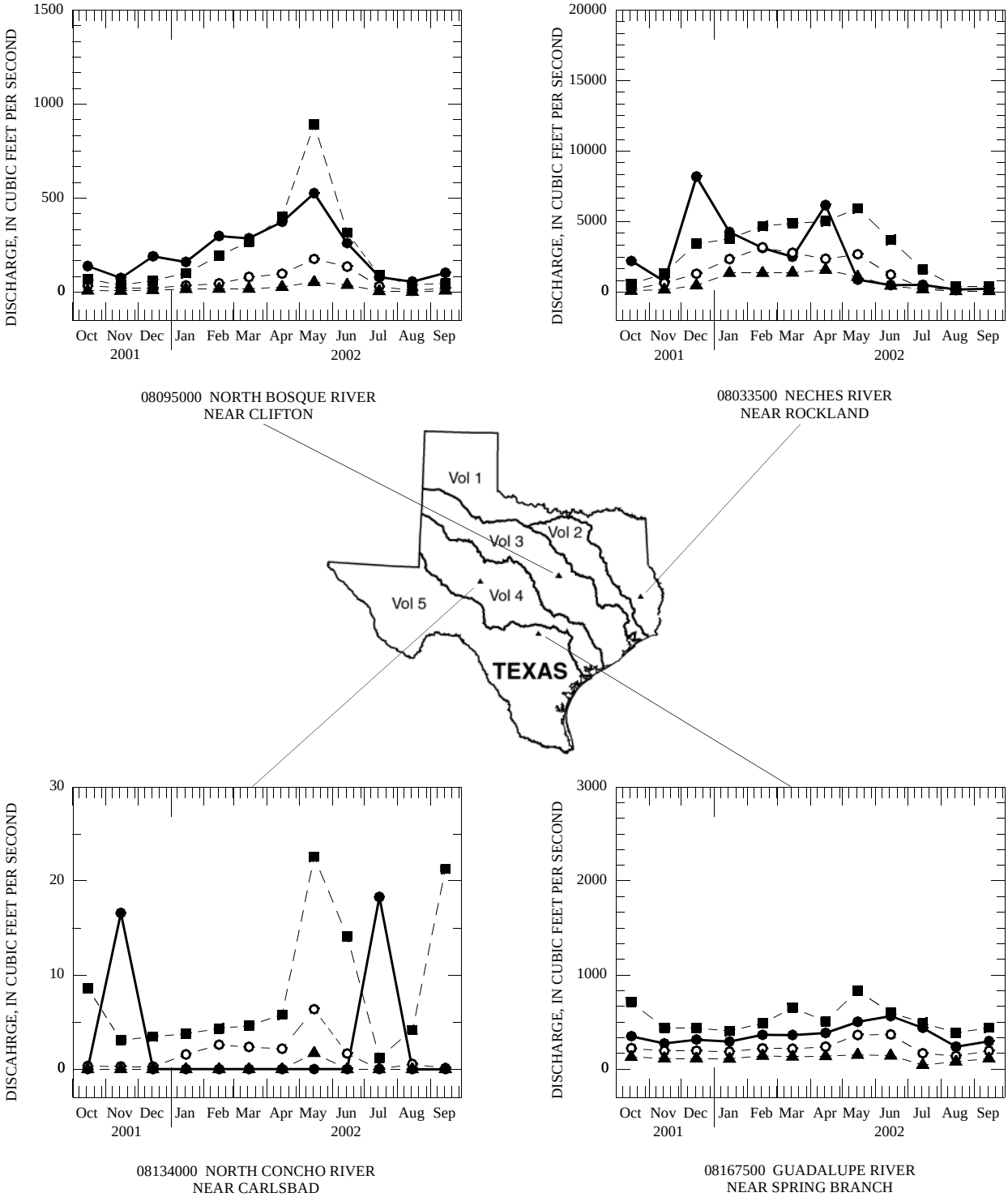


Figure 1. Area of Texas covered by volume 3 (shaded) and location of selected streamflow stations in volume 3.



EXPLANATION

MONTHLY MEAN DISCHARGE FOR 2002 WATER YEAR

MEDIAN OF MONTHLY MEAN DISCHARGE FOR 1961–90 WATER YEARS

25 PERCENT QUARTILE

75 PERCENT QUARTILE

Figure 2. Monthly mean discharges at four long-term hydrologic index stations during 2002 water year and median of the monthly mean discharges for 1961–90 water years.

had normal streamflow for October, December through April, June, August, and September, above normal streamflow during November and July, and below normal streamflow in May. Streamflow for the station Guadalupe River near Spring Branch was normal during October, February through June and September, above normal for November through January, July, and August of water year 2002.

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 2002 to 86 percent at the end of September 2001. Records from these reservoirs indicate that storage increased in 12 reservoirs, decreased in 7, and remained the same in 2 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 2002 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
San Jacinto River Basin							
08074500	Whiteoak Bayou at Houston, TX	10,600	28	154	28,100	0.20	105 (1936-2002)
Brazos River Basin							
08080500	Double Mountain Fork Brazos River nr Aspermont, TX	3,540	0	29	23,000	0	56 (1994-2002)
08082500	Brazos River at Seymour, TX	7,820	0	134	42,700	0	273 (1964-2002)
08095000	North Bosque River near Clifton, TX 1/	19,100	2	175	200,000	0	212 (1968-2002)
08108700	Brazos River at State Hwy. 21 near Bryan, TX	68,400	423	4,118	78,600	125	4,723 (1993-2002)
08114000	Brazos River at Richmond, TX	52,300	699	5,435	119,000	55	7,514 (1941-2002)

1/ Hydrologic index station.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the streamflow representative of undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities. At 10 of these 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 can be found at *http://water.usgs.gov/hbn/*.

National Stream-Quality Accounting Network (NASQAN) monitors 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 basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia 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 Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program can be found at *http://water.usgs.gov/nasqan/*.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides 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 a network of 225 precipitation chemistry monitoring 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 all data from the individual sites, can be found at *http://bqs.usgs.gov/acidrain/*.

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

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

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

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

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

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 2002 water year that began October 1, 2001, and ended September 30, 2002. A calendar of the water year is provided on the inside of the front cover. The records contain stage and streamflow data, stage and content data for lakes and reservoirs, and water-quality data for surface water. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

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

Downstream Order Numbering

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

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

Records of Stage and Water Discharge

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

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

Data Collection and Computation

The data obtained at a complete record gaging station on a stream or canal consist of records of stage (that is recorded every 5, 15, 30, or 60 minutes), measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relation between stage and discharge. These data, together with supplemental information such as weather records, are used to compute daily mean discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relation between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute lake storage.

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

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

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

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

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

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

Data Presentation

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

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

Station Manuscript

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

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

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

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

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

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

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

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

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

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made in the U.S. Geological Survey's distributed data system, NWIS, and subsequently to its web-based National data system, NWISWeb [http://water.usgs.gov/nwis/nwis]. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure the most recent updates. Updates to NWISWeb are currently made on an annual basis.

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

Data table of daily mean values

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

Statistics of monthly mean data

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

Summary statistics

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

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

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

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

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

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

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.
HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

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

ANNUAL SEVEN-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 discharge occurring for the water year or for the 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 stage occurring for the water year or for the designated period. Occasionally the meximum stage for a year may occur at midnight at the beginning or end of 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 for 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 equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

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

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

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

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

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

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

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

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

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

Other Records Available

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

Records of Surface-Water Quality

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

Classification of Records

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

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

Arrangement of Records

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

On-Site Measurements and Sample Collection

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

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

Procedures for on-site measurements and for collecting, treating, and shipping samples are given in publications on “Techniques of Water-Resources Investigations,” Book 1, Chap. D2; Book 3, Chap. A1, A3, and A4; Book 9, Chap. A1-A9. All of these references are listed under “PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS” which appears at the end of the introductory text. Detailed information on collecting, treating, and shipping samples may be obtained from the Texas Office of the Central Region Office.

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

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

Detailed information on sampling methods may be found in the following publications: OFR-90-127 “Guidelines for Col-

lection and Analysis of Water-Quality Samples from Streams in Texas", OFR-94-455 "Field Guide for Collecting and Processing Stream-Water Samples for the National Water-Quality Assessment Program", and OFR-94-539 "U.S. Geological Survey protocol for the collection and processing of surface-water samples for the subsequent determination of inorganic constituents in filtered water". Specific questions pertaining to water-quality sample collection may be directed to the District Water-Quality Specialist in Austin, Texas, or the Regional Water-Quality Specialist in Denver, Colorado.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis.

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

Water Temperature

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

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

Sediment

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

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

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

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

Laboratory Measurements

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

Historical and current (2001) dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If ultraclean techniques were used, then those concentrations are reported in nanograms per liter. If other than ultraclean techniques were used, then those concentrations are reported in micrograms per liter and could reflect contamination introduced during some phase of the procedure.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily.

Tables of chemical, physical, biological, radio-chemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

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

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

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

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

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

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

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

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

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made in the U.S. Geological Survey's distributed data system, NWIS, and subsequently to its web-based National data system, NWISWeb [http://water.usgs.gov/nwis/nwis]. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure the most recent updates. Updates to NWISWeb are currently made on an annual basis.

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

Remarks Codes

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

Printed Output	Remark Code
e or E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
V	Analyte was detected in both the environmental sample and the associated blanks
M	Presence of material verified but not quantified

Printed Output	Value-Qualifier Code
d	Diluted sample: method hi range exceeded
v	Analyte detected in laboratory blank
q	Insufficient sample received
i	Result may be affected by interference
b	Value was extrapolated below
n	Below the NVD
r	Value verified by rerun, same method
p	Value reported is preferred
c	See laboratory coment
e	See field comment
k	Counts outside the acceptable range

Printed Output	Null Value-Qualifier Code
e	Required equipment not functional or available
i	Required sample type not received
r	Sample ruined in preparation
u	Unable to determine - matrix interference

Dissolved Trace-Element Concentrations

***NOTE**:--Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (µg/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Data above the µg/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contami-

nation introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994.

Change in National Trends Network Procedures

***NOTE**:--Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP Program Office, Illinois State Water Survey, 2204 Griffith Drive, Champaign, IL 61820-7495 (217-333-7873).

Water-Quality Control Data

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

Blank Samples

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

Source solution blank – a blank solution that is transferred to a sample bottle in an area of the office laboratory with an atmosphere that is relatively clean and protected with respect to target analytes.

Ambient blank – a blank solution that is put in the same type of bottle used for an environmental sample, kept with the set of sample bottles before sample collection, and opened at the site and exposed to the ambient conditions.

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

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

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

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

Pump blank – a blank solution that is processed through the same pump-and-tubing system used for an environmental sample.

Standpipe blank – a blank solution that is poured from the containment vessel (stand-pipe) before the pump is inserted to obtain the pump blank.

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

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

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

Canister blank – a blank solution that is taken directly from a stainless steel canister just before the VOC sampler is submerged to obtain a field blank sample.

Reference Samples

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

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. There are many types

of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this District are:

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

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

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

Spike Samples

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

Concurrent sample – a type of spike sample that is collected at the same time with the same sampling and compositing devices then spiked with the same spike solution containing laboratory-certified concentrations of selected analytes.

Split sample – a type of spike sample in which a sample is split into subsamples contemporaneous in time and space then spiked with the same spike solution containing laboratory-certified concentrations of selected analytes.

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (www). These data may be accessed at http://tx.usgs.gov

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

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Definitions of common terms such as algae, water level, and precipitation are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting inch/pound units to International System (SI) units on the inside of the back cover.

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

Acre-foot (AC-FT, acre-ft) is 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.

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

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

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

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

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

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

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

Bedload is material in transport that is supported primarily by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to an elevation equal to the top of the bedload sampler nozzle (ranging from 0.25 to 0.5 foot) that 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")

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

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 is also called the Autotrophic Index.

Blue-green algae (*Cyanophyta*) are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

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 lithology and porosity of the rock.

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 are generally reported as cells or units per milliliter (mL) or liter (L).

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

their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

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

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

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

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 presence of microorganisms that are resistant to disinfection and environmental stresses. (See also "Bacteria")

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

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

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

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

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

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

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

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

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

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

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

Daily-record station is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to periodic sample or 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 are usually 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 UTM coordinates. (See also "Gage datum," "Land-surface datum," "National Geodetic Vertical Datum of 1929," and "North American Vertical Datum of 1988")

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

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, etc., within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

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

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

Dissolved-solids concentration in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L $CaCO_3$) 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 are commonly found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus feacalis*, *Streptococcus feacium*, *Streptococcus avium*, and their variants. (See also "Bacteria")

EPT Index is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that are generally 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) concentration value 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 qualitatively identified 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 (<).

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

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

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

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

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

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

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum itself is not an actual physical object, the datum usually is 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 have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

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 are typically made over a wider geographic scale than are measurements of species distribution.

Habitat quality index is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with

higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

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

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA web site:

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

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

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

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

Horizontal datum (See "Datum")

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

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

Inch (IN., in.), 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 uniformly distributed on it. (See also "Annual runoff")

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

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) is generally 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. [Note: In several previous NWQL documents (NWQL Technical Memorandum 98.07, 1998), the LRL was called the nondetection value or NDV—a term that is no longer used.]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be

the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Radioisotopes are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms

of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

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

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

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

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

Return period (See “Recurrence interval”)

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

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

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

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

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

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 pre-cipitation.

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

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

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

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

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

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

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

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

Stage (See “Gage height”)

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

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

Substrate is the physical surface upon which an organism lives.

Substrate embeddedness class is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2mm, 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.

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

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative suspended water-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the “total” amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of “suspended, recoverable” constituents are made either by directly analyzing the suspended mate-rial collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also “Suspended”)

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

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

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

(ft^3/s) x 0.0027. (See also "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

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

Suspended, 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")

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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Vertical datum (See "Datum")

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

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

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

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

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

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

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

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

The USGS publishes a series of manuals titled the "Techniques of Water-Resources Investigations" that describe procedures for planning and conducting specialized work in water-resources investigations. The material in these manuals is grouped under major subject headings called books and is further divided into sections and chapters. For example, section A of book 3 (Applications of Hydraulics) pertains to surface water. Each chapter then is limited to a narrow field of the section subject matter. This publication format permits flexibility when revision or printing is required.

Manuals in the Techniques of Water-Resources Investigations series, which are listed below, are available online at http://water.usgs.gov/pubs/twri/. Printed copies are available for sale from the USGS, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (an authorized agent of the Superintendent of Documents, Government Printing Office). Please telephone "1-888-ASK-USGS" for current prices, and refer to the title, book number, section number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations." Other products can be viewed online at http://www.usgs.gov/sales.html, or ordered by telephone or by FAX to (303)236-4693. Order forms for FAX requests are available online at *http://mac.usgs.gov/isb/pubs/forms/*. Prepayment by major credit card or by a check or money order payable to the "U.S. Geological Survey" is required.

Book 1. Collection of Water Data by Direct Measurement

Section D. Water Quality

1–D1. *Water temperature—Influential factors, field measurement, and data presentation*, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS–TWRI book 1, chap. D1. 1975. 65 p.

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

Book 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

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

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

Section E. Subsurface Geophysical Methods

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

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

Section F. Drilling and Sampling Methods

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

Book 3. Applications of Hydraulics

Section A. Surface-Water Techniques

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

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

3–A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS–TWRI book 3, chap. A3. 1968. 60 p.

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

3–A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS–TWRI book 3, chap. A5. 1967. 29 p.

3–A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS–TWRI book 3, chap. A6. 1968. 13 p.

3–A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A7. 1968. 28 p.

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

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

3–Al0. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS–TWRI book 3, chap. A10. 1984. 59 p.

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

3–A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS–TWRI book 3, chap. A12. 1986. 34 p.

3–A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS–TWRI book 3, chap. A13. 1983. 53 p.

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

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

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

3–A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS–TWRI book 3, chap. A17. 1985. 38 p.

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

3–A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS–TWRI book 3, chap. A19. 1990. 31 p.

3–A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS–TWRI book 3, chap. A20. 1993. 38 p.

3–A21 *Stream-gaging cableways*, by C. Russell Wagner: USGS–TWRI book 3, chap. A21. 1995. 56 p.

Section B. Ground-Water Techniques

3–B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS–TWRI book 3, chap. B1. 1971. 26 p.

3–B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G.D. Bennett: USGS–TWRI book 3, chap. B2. 1976. 172 p.

3–B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS–TWRI book 3, chap. B3. 1980. 106 p.

3–B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS–TWRI book 3, chap. B4. 1990. 232 p.

3–B4. *Supplement 1. Regression modeling of ground-water flow—Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley: USGS–TWRI book 3, chap. B4. 1993. 8 p.

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

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

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

3–B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS–TWRI book 3, chap. B8. 2001. 29 p.

Section C. Sedimentation and Erosion Techniques

3–C1. *Fluvial sediment concepts*, by H.P. Guy: USGS–TWRI book 3, chap. C1. 1970. 55 p.

3–C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS–TWRI book 3, chap. C2. 1999. 89 p.

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

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

4–A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS–TWRI book 4, chap. A1. 1968. 39 p.

4–A2. *Frequency curves*, by H.C. Riggs: USGS–TWRI book 4, chap. A2. 1968. 15 p.

4–A3. *Statistical methods in water resources*, by D.R. Helsel and R.M. Hirsch: USGS–TWRI book 4, chap. A3. 1991. Available only online at http://water.usgs.gov/pubs/twri/twri4a3/. (Accessed August 30, 2002.)

Section B. Surface Water

4–B1. *Low-flow investigations*, by H.C. Riggs: USGS–TWRI book 4, chap. B1. 1972. 18 p.

4–B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS–TWRI book 4, chap. B2. 1973. 20 p.

4–B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS–TWRI book 4, chap. B3. 1973. 15 p.

Section D. Interrelated Phases of the Hydrologic Cycle

4–D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS–TWRI book 4, chap. D1. 1970. 17 p.

Book 5. Laboratory Analysis

Section A. Water Analysis

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

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

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

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

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

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

Section C. Sediment Analysis

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

Book 6. Modeling Techniques

Section A. Ground Water

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

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

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

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

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

6–A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS–TWRI book 6, chap. A6. 1996. 125 p.

6–A7. *User's guide to SEAWAT: A computer program for simulation of three-dimensional variable-density ground-water flow*, by Weixing Guo and Christian D. Langevin: USGS–TWRI book 6, chap. A7. 2002. 77 p.

Book 7. Automated Data Processing and Computations

Section C. Computer Programs

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

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

7–C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI book 7, chap. C3. 1981. 110 p.

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

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

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

Section B. Instruments for Measurement of Discharge

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

Book 9. Handbooks for Water-Resources Investigations

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

9–A1. *National field manual for the collection of water-quality data: Preparations for water sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.

9–A2. *National field manual for the collection of water-quality data: Selection of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.

9–A3. *National field manual for the collection of water-quality data: Cleaning of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A3. 1998. 75 p.

9–A4. *National field manual for the collection of water-quality data: Collection of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.

9–A5. *National field manual for the collection of water-quality data: Processing of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999, 149 p.

9–A6. *National field manual for the collection of water-quality data: Field measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI book 9, chap. A6. 1998. Variously paginated.

9–A7. *National field manual for the collection of water-quality data: Biological indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.

9–A8. *National field manual for the collection of water-quality data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.

9–A9. *National field manual for the collection of water-quality data: Safety in field activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.

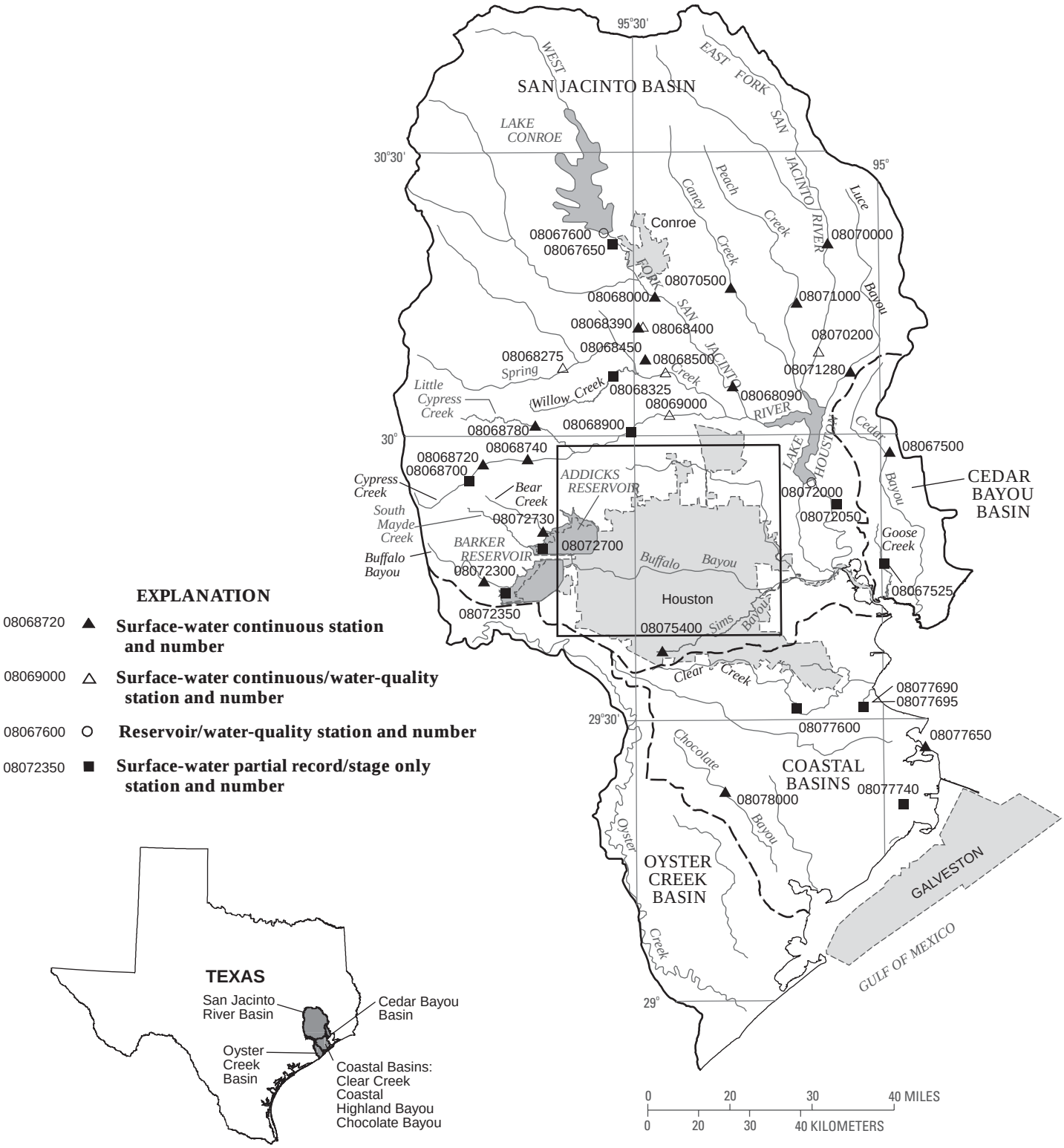
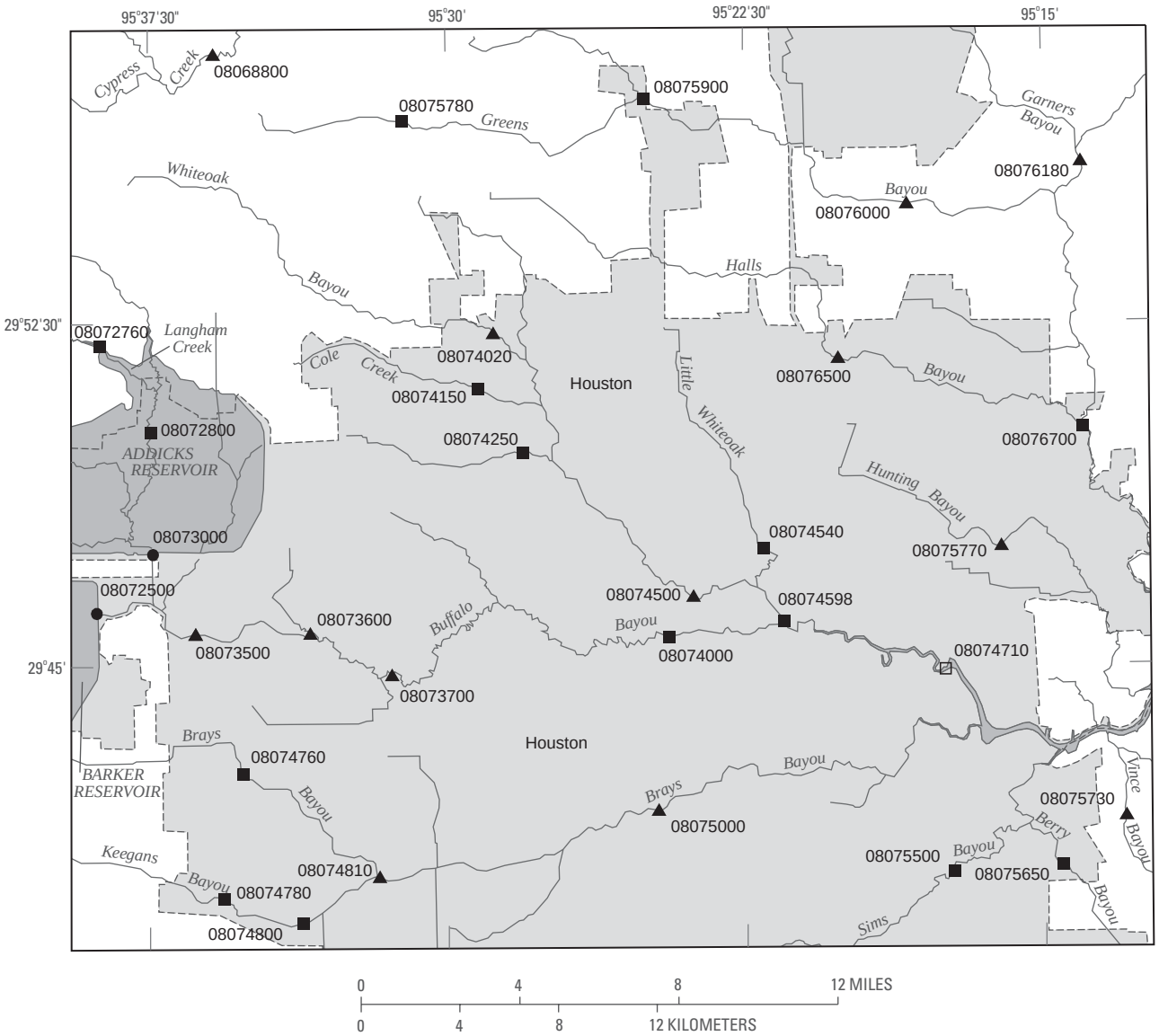


Figure 3.--Map showing location of gaging stations in the San Jacinto and Coastal River Basins



EXPLANATION

08073500	▲	**Surface-water continuous station and number**
08073000	●	**Reservoir station and number**
08074780	■	**Surface-water partial record/stage only station and number**
07301300	□	**Surface-water partial record/stage only/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

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^2.

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 fair. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	6.7	99	12	11	175	89	12	1.7	7.2	10	5.4
2	2.3	6.0	56	10	8.1	322	24	9.3	3.4	12	7.5	4.7
3	2.1	7.2	88	8.9	8.1	56	19	4.6	2.5	3.4	9.8	3.6
4	2.0	12	53	8.0	8.1	22	11	6.7	0.76	3.1	10	7.8
5	2.8	17	31	163	8.1	23	7.3	2.8	1.2	4.4	8.9	8.6
6	285	18	20	209	26	15	5.4	2.1	1.3	2.4	7.7	7.3
7	135	19	22	66	29	12	4.7	1.3	1.5	3.8	4.2	647
8	56	19	24	34	22	11	1810	1.4	0.81	2.0	2.6	2600
9	28	21	79	22	24	13	2200	1.9	1.7	0.71	2.7	2160
10	16	18	42	18	13	17	707	1.7	1.9	0.29	5.6	975
11	546	12	26	14	7.9	12	196	1.3	2.9	0.22	5.0	303
12	1330	7.0	1140	12	6.2	9.5	53	0.97	3.6	13	4.4	105
13	2200	4.3	1140	10	5.4	7.9	21	1.3	0.28	197	53	56
14	2210	3.4	950	9.0	4.8	7.0	14	1.4	0.18	545	61	34
15	1570	3.7	279	8.0	4.3	6.6	10	1.2	0.09	167	413	22
16	572	4.9	147	7.2	4.1	7.1	9.9	2.9	0.20	303	512	20
17	172	4.6	635	6.9	6.7	7.2	9.0	6.5	3.8	384	134	21
18	87	4.9	202	6.8	9.9	6.4	7.3	7.4	2.8	90	47	114
19	40	5.8	72	6.8	12	5.5	5.1	6.7	2.2	37	25	636
20	21	5.1	36	6.4	41	5.7	4.3	8.4	0.87	19	29	3270
21	16	4.6	20	6.1	30	5.9	3.5	5.5	0.30	11	101	2770
22	12	4.1	122	5.8	68	5.1	3.1	2.2	0.31	7.8	52	1940
23	9.7	3.7	314	5.9	28	4.3	3.3	1.6	0.33	6.7	38	802
24	8.4	3.6	103	7.0	11	4.6	3.4	1.2	0.32	5.3	24	258
25	7.6	4.0	45	13	11	4.4	3.4	1.5	0.35	4.2	15	119
26	6.8	6.5	28	10	10	19	5.9	1.2	0.51	13	13	58
27	5.2	41	19	7.5	7.8	8.0	4.3	1.0	0.58	15	16	33
28	4.0	201	49	6.6	9.8	5.3	4.8	1.2	0.83	15	22	18
29	4.7	739	31	12	---	4.6	6.0	2.1	2.8	19	16	13
30	5.4	305	20	14	---	124	6.7	5.7	6.5	17	11	10
31	9.3	---	15	12	---	676	---	4.6	---	14	8.0	---
TOTAL	9368.4	1512.1	5907	737.9	435.3	1602.1	5251.4	109.67	46.52	1922.52	1668.4	17021.4
MEAN	302.2	50.40	190.5	23.80	15.55	51.68	175.0	3.538	1.551	62.02	53.82	567.4
MAX	2210	739	1140	209	68	676	2200	12	6.5	545	512	3270
MIN	2.0	3.4	15	5.8	4.1	4.3	3.1	0.97	0.09	0.22	2.6	3.6
AC-FT	18580	3000	11720	1460	863	3180	10420	218	92	3810	3310	33760

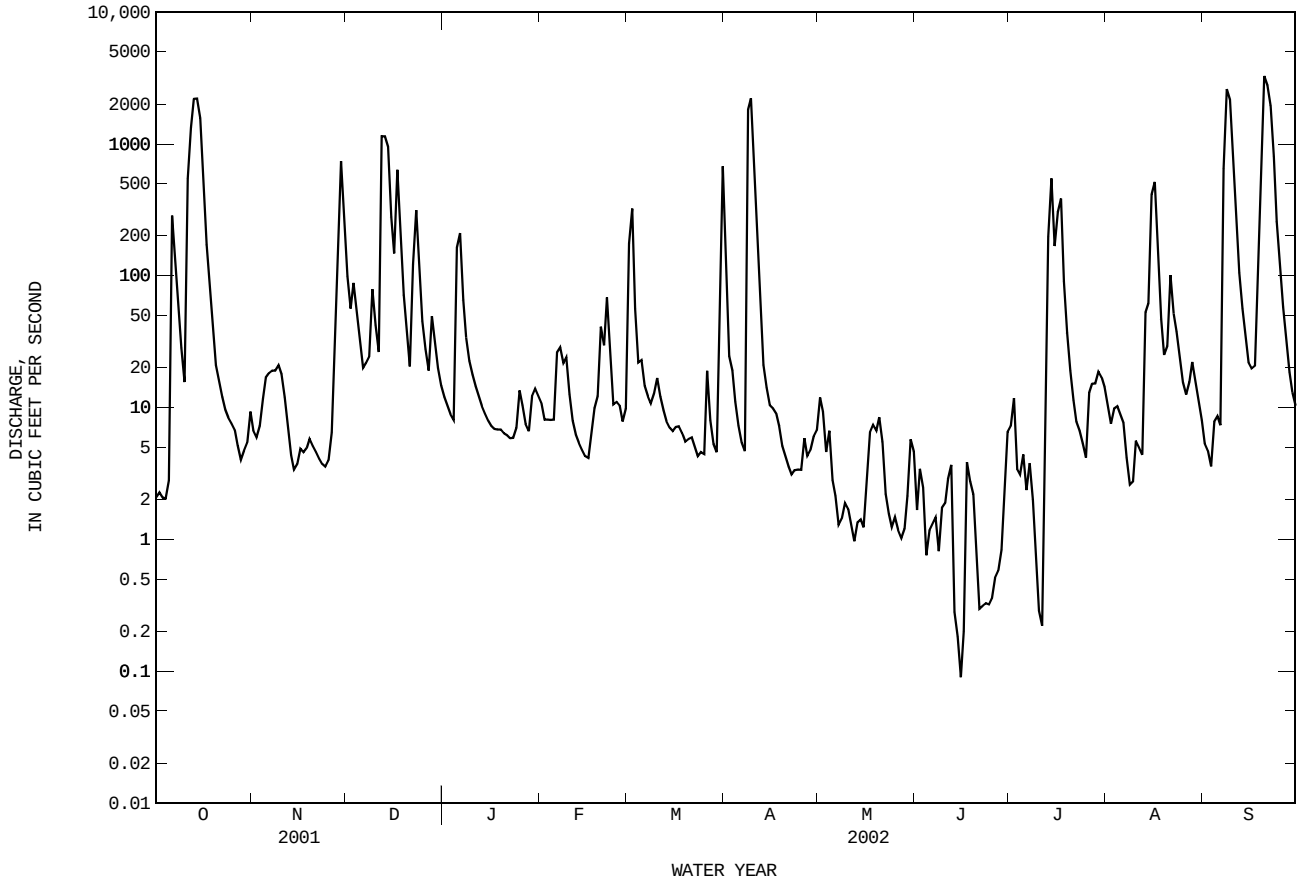
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2002h, BY WATER YEAR (WY)

MEAN	63.69	81.09	87.70	87.97	77.97	45.71	82.21	91.84	161.4	67.71	35.83	89.82
MAX	302	346	272	405	201	187	455	599	697	384	299	567
(WY)	2002	1983	1987	1991	1991	1985	1979	1989	1987	1979	1983	2002
MIN	1.74	0.36	0.41	1.67	4.19	3.29	0.69	3.54	0.92	1.19	0.84	2.38
(WY)	1979	1989	1989	1989	1976	1989	1989	2002	1990	1988	1990	1989

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 1972 - 2002h	
ANNUAL TOTAL	45582.71			
ANNUAL MEAN	124.9		80.86	
HIGHEST ANNUAL MEAN			158	1979
LOWEST ANNUAL MEAN			15.9	1990
HIGHEST DAILY MEAN	3270	Sep 20	4030	May 19 1989
LOWEST DAILY MEAN	0.09	Jun 15	0.00	Mar 8 1979
ANNUAL SEVEN-DAY MINIMUM	0.39	Jun 21	0.00	Jul 13 1988
MAXIMUM PEAK FLOW	3440	Sep 20	7800	Oct 18 1994
MAXIMUM PEAK STAGE	23.65	Sep 20	28.33	Oct 18 1994
ANNUAL RUNOFF (AC-FT)	90410		58580	
10 PERCENT EXCEEDS	229		154	
50 PERCENT EXCEEDS	9.7		10	
90 PERCENT EXCEEDS	1.7		1.0	

h See PERIOD OF RECORD paragraph.

08067500 Cedar Bayou near Crosby, TX--Continued



08067600 Lake Conroe near Conroe, TX

LOCATION.--Lat 30°21′30", long 95°33′39", Montgomery County, Hydrologic Unit 12040101, at service outlet tower at Conroe Dam on West Fork San Jacinto River, 140 ft upstream from centerline of dam, and 7.4 mi west of Conroe.

DRAINAGE AREA.--445 mi^2.

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Jan. 1973 to current year.

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

REMARKS.--Records fair. The lake is formed by an earthfill dam 11,300 ft long, including a controlled spillway. The dam was completed Sept. 1, 1972, and deliberate impoundment began Jan. 9, 1973. Water is used for municipal and industrial purposes in the Houston metropolitan area. A small diversion is also made for cooling purposes at the Gulf State Utilities generating plant on Lewis Creek Reservoir near Conroe. A spillway with five 40- x 30-foot tainter gates is located near the center of dam. Low-flow releases are made through a separate multi-gated inlet tower. The tower has three gated openings and one uncontrolled opening. It is connected to a stilling basin and a concrete weir by a 14 ft diameter conduit through the dam. Conservation pool storage is 416,228 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	212.0
Design flood	205.5
Top of tainter gates	202.5
Top of conservation pool (uncontrolled tower outlet)	201.0
Crest of spillway (sill of tainter gates)	173.0
Lowest gated outlet (invert)	144.5

COOPERATION.--The capacity table, furnished by the Texas Water Development Board dated July 19, 1996, is based on a survey of Apr. 1996.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 534,900 acre-ft, Oct. 17, 1994, elevation, 205.61 ft; minimum since normal operating level was reached, 336,900 acre-ft, Jan. 11, 1989, elevation, 196.17 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 436,400 acre-ft, Dec. 13, elevation, 202.00 ft; minimum contents, 399,100 acre-ft, Sept. 29, 30, elevation, 200.12 ft.

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

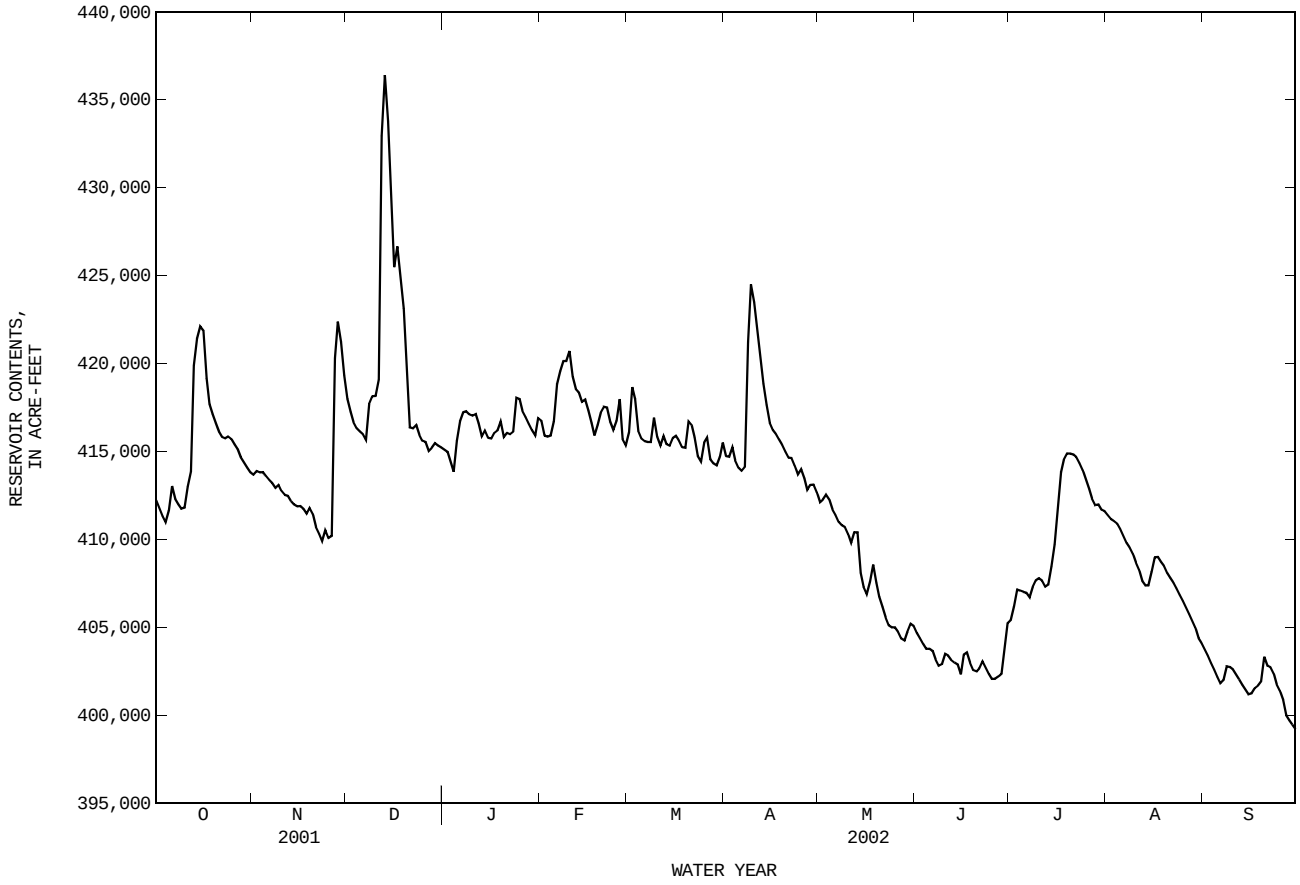
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	412200	413700	418000	415100	416800	416100	414700	412100	404700	405400	411400	403800
2	411800	413900	417200	415000	415900	418700	414700	412300	404400	406200	411200	403400
3	411300	413800	416700	414400	415900	418000	415200	412500	404100	407100	411000	403000
4	411000	413800	416300	413800	415900	416200	414500	412300	403800	407100	410900	402600
5	411600	413600	416100	415600	416700	415700	414100	411700	403800	407000	410600	402200
6	413000	413400	416000	416700	418800	415600	413900	411400	403600	407000	410200	401800
7	412300	413200	415700	417200	419600	415500	414100	411000	403200	406700	409800	402000
8	412000	412900	417700	417300	420100	415500	421200	410800	402800	407300	409500	402800
9	411800	413100	418200	417100	420200	416900	424500	410700	402900	407700	409200	402700
10	411800	412700	418200	417000	420700	415800	423500	410300	403500	407800	408700	402600
11	413000	412500	419100	417100	419200	415300	421800	409800	403400	407700	408300	402300
12	413900	412500	432900	416600	418500	415900	420100	e410400	403100	407300	407600	402000
13	419900	412200	436400	415900	418400	415400	418800	e410400	403000	407400	407400	401700
14	421400	412000	433800	416200	417800	415300	417600	408100	402900	408500	407400	401400
15	422100	411900	429600	415800	417900	415800	416600	407300	402300	409700	408100	401200
16	421900	411900	425500	415700	417300	415900	416200	406900	403400	411700	409000	401200
17	419200	411700	426700	416000	416600	415600	416000	407600	403600	413800	409000	401500
18	417700	411500	424900	416200	415900	415200	415700	408600	403000	414500	408700	401700
19	417100	411800	423100	416700	416500	415200	415400	407500	402600	414900	408500	401900
20	416600	411400	419500	415800	417200	416700	415000	406700	402500	414900	408100	403300
21	416100	410700	416400	416000	417500	416500	414600	406200	402700	414800	407800	402800
22	415800	410300	416300	416000	417500	415800	414600	405600	403100	414700	407500	402700
23	415700	409900	416500	416100	416700	414700	414200	405100	402700	414300	407200	402400
24	415800	410500	415900	418100	416200	414400	413700	405000	402300	413900	406800	401800
25	415700	410100	415600	418000	416700	415500	414000	405000	402100	413400	406500	401400
26	415400	410200	415500	417300	418000	415800	413500	404700	402100	412900	406100	400900
27	415100	420300	415000	417000	415700	414600	412800	404400	402200	412300	405700	400000
28	414700	422400	415200	416600	415400	414300	413100	404200	402400	411900	405400	399700
29	414400	421200	415500	416200	---	414200	413100	404700	403900	412000	405000	399500
30	414100	419300	415300	415900	---	414700	412700	405200	405200	411700	404400	399200
31	413800	---	415200	416900	---	415500	---	405100	---	411600	404100	---
MEAN	415100	413300	419800	416300	417500	415700	416000	408200	403200	410400	408100	401800
MAX	422100	422400	436400	418100	420700	418700	424500	412500	405200	414900	411400	403800
MIN	411000	409900	415000	413800	415400	414200	412700	404200	402100	405400	404100	399200
(+)	200.88	201.15	200.95	201.03	200.95	200.96	200.82	200.43	200.44	200.76	200.38	200.13
(@)	+1100	+5500	-4100	+1700	-1500	+100	-2800	-7600	+100	+6400	-7500	-4900

CAL YR 2001 MAX 472200 MIN 400700 (@) -3000
WTR YR 2002 MAX 436300 MIN 399200 (@) -13500

e Estimated

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

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.

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

302127095335501 -- Lk Conroe Site AC

Date	Time	RESER-VOIR STORAGE (AC-FT) (00054)	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
MAR													
11...	1150	415000	1.00	170	7.9	12.5	760	10.9	103	63	--	22.1	1.83
11...	1152	--	10.0	170	7.8	12.0	760	10.7	100	--	--	--	--
11...	1154	--	20.0	170	7.6	12.0	760	10.2	95	--	--	--	--
11...	1156	--	30.0	185	7.6	12.0	760	10.2	95	--	--	--	--
11...	1158	--	40.0	185	7.5	12.0	760	10.1	94	--	--	--	--
11...	1200	--	52.0	190	7.5	12.0	760	10.0	93	63	1	22.3	1.84
JUN													
19...	0930	403000	1.00	215	8.6	28.0	760	7.4	95	71	2	25.2	2.08
19...	0932	--	10.0	215	8.6	28.0	760	6.6	85	--	--	--	--
19...	0934	--	20.0	215	7.7	28.0	760	4.7	60	--	--	--	--
19...	0936	--	30.0	220	7.1	25.0	760	1.3	16	--	--	--	--
19...	0938	--	40.0	220	7.1	24.0	760	1.6	19	--	--	--	--
19...	0940	--	50.0	240	7.2	22.0	760	2.2	25	71	1	25.2	2.06
AUG													
21...	1120	408000	1.00	225	8.7	30.0	762	7.4	98	71	--	24.9	2.05
21...	1141	--	10.0	225	7.8	29.0	762	4.1	53	--	--	--	--
21...	1204	--	20.0	225	7.7	29.0	762	3.6	47	--	--	--	--
21...	1215	--	30.0	230	7.3	28.5	762	.6	8	--	--	--	--
21...	1218	--	40.0	240	7.2	28.0	762	.3	4	--	--	--	--
21...	1224	--	48.0	275	6.9	28.0	762	.8	10	79	--	27.7	2.27

302127095335501 -- Lk Conroe Site AC

Date	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
MAR													
11...	10.9	.6	26	3.14	64	7.1	16.0	E.1n	7.2	107	<.008	.10	<.04
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	<.008	.11	E.02
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	10.8	.6	26	3.12	62	7.0	15.9	.1	7.4	106	<.008	.11	<.04
JUN													
19...	12.3	.6	26	3.19	69	7.0	19.6	.1	7.4	118	<.008	<.05	<.04
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	<.008	<.05	<.04
19...	--	--	--	--	--	--	--	--	--	--	<.008	<.05	<.04
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	12.6	.6	27	3.18	70	6.9	18.9	.1	7.7	119	<.008	<.05	E.03
AUG													
21...	12.8	.7	27	3.23	71	5.6	19.4	.1	8.8	119	<.008	<.05	<.04
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	<.008	<.05	.11
21...	--	--	--	--	--	--	--	--	--	--	<.008	<.05	.32
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
21...	12.0	.6	24	3.42	104	.7	17.6	.1	15.4	155	<.008	<.05	3.32

08067600 Lake Conroe near Conroe, TX--Continued

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

302127095335501 -- Lk Conroe Site AC

Date	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	ORTHO-PHOSPHATE, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
MAR							
11...	--	.46	<.06	<.02	--	<10	E.9n
11...	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--
11...	--	.41	<.06	<.02	--	E9	<2.0
11...	--	--	--	--	--	--	--
11...	--	.40	<.06	<.02	--	<10	5.7
JUN							
19...	--	.38	<.06	<.02	--	<10	E1.2n
19...	--	--	--	--	--	--	--
19...	--	.34	<.06	<.02	--	<10	<2.0
19...	--	.35	<.06	<.02	--	<10	<2.0
19...	--	--	--	--	--	--	--
19...	--	.40	<.06	<.02	--	14	315
AUG							
21...	--	.39	<.06	<.02	--	<10	E1.2n
21...	--	--	--	--	--	--	--
21...	.38	.49	<.06	<.02	--	<10	<2.0
21...	.41	.73	<.06	<.02	--	<10	240
21...	--	--	--	--	--	--	--
21...	.59	3.9	.72	.58	1.78	1880	5450

302132095333701 -- Lk Conroe Site AL

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
MAR								
11...	1300	1.00	170	7.9	12.0	760	10.6	99
11...	1302	10.0	170	7.8	12.0	760	10.5	98
11...	1304	20.0	170	7.7	12.0	760	10.4	97
11...	1306	30.0	170	7.6	12.0	760	10.2	95
11...	1308	40.0	185	7.6	12.0	760	10.2	95
11...	1310	50.0	185	7.5	12.0	760	10.0	93
11...	1312	56.0	185	7.5	12.0	760	10.0	93
JUN								
19...	1034	1.00	210	8.6	28.0	760	7.4	95
19...	1036	10.0	210	8.6	28.0	760	7.0	90
19...	1038	20.0	210	8.1	28.0	760	5.2	67
19...	1040	30.0	220	7.1	24.5	760	1.2	14
19...	1042	40.0	230	7.1	23.5	760	1.4	17
19...	1044	50.0	240	7.2	22.0	760	1.8	21
19...	1046	60.0	265	8.6	28.0	760	7.4	95
AUG								
21...	1245	1.00	225	8.7	30.0	762	7.1	94
21...	1248	10.0	225	7.6	29.0	762	3.2	42
21...	1252	20.0	225	7.4	28.5	762	1.8	23
21...	1255	30.0	225	7.3	28.5	762	1.0	13
21...	1258	40.0	240	7.2	27.0	762	.3	4
21...	1301	50.0	260	7.0	26.0	762	.4	5

302245095365301 -- Lk Conroe Site BC

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
MAR								
11...	1130	1.00	190	8.0	13.5	761	10.7	103
11...	1132	10.0	195	8.0	13.0	761	10.6	101
11...	1134	20.0	195	7.8	13.0	760	10.2	97
11...	1136	28.0	190	7.2	12.0	761	8.8	82
JUN								
19...	0911	1.00	215	8.8	29.0	760	8.6	112
19...	0913	6.00	215	8.8	29.0	760	8.5	111
19...	0915	16.0	215	8.3	28.5	760	7.0	91
19...	0917	26.0	215	7.2	27.0	760	1.6	20
AUG								
21...	1058	1.00	230	8.6	29.5	762	7.2	95
21...	1108	20.0	230	7.4	29.5	762	1.0	13

302323095341201 -- Lk Conroe Site CC

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
MAR								
11...	1330	1.00	185	8.0	12.5	760	11.1	104
11...	1332	10.0	190	8.0	12.5	760	11.1	104
11...	1334	20.0	190	7.8	12.0	760	10.5	98
11...	1336	30.0	190	7.6	12.0	760	10.0	93
11...	1338	40.0	190	7.6	12.0	760	9.9	92
11...	1340	50.0	190	7.6	12.0	760	10.0	93
JUN								
19...	1054	1.00	205	8.8	29.0	760	8.8	115
19...	1056	10.0	205	8.0	28.5	760	8.1	105
19...	1058	20.0	210	8.7	28.0	760	7.6	98
19...	1100	30.0	210	7.1	26.0	760	1.4	18
19...	1102	40.0	215	7.1	24.0	760	1.4	16
19...	1104	50.0	220	7.2	23.0	760	1.8	21
AUG								
21...	1336	1.00	230	8.9	32.0	762	8.3	114
21...	1339	10.0	225	8.3	29.5	762	5.8	76
21...	1341	20.0	225	7.4	29.0	762	2.2	29
21...	1344	30.0	225	7.3	28.5	762	.8	10
21...	1346	40.0	245	7.0	27.0	762	.3	4
21...	1349	48.0	260	7.0	26.5	762	.4	5

302320095334001 -- Lk Conroe Site CL

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
MAR								
11...	1345	1.00	190	8.0	12.5	760	11.0	104
11...	1347	10.0	190	8.0	12.5	760	11.0	104
11...	1349	20.0	190	8.0	12.5	760	11.0	104
11...	1351	30.0	190	7.8	12.0	760	10.6	99
11...	1353	44.0	190	7.7	12.0	760	10.5	98
JUN								
19...	1107	1.00	215	8.8	29.0	760	8.4	110
19...	1109	13.0	215	8.7	28.0	760	7.7	99
19...	1111	23.0	220	8.4	28.0	760	6.7	86
19...	1113	33.0	210	7.1	24.5	760	1.2	14
19...	1115	43.0	215	7.2	23.5	760	1.4	17
AUG								
21...	1313	1.00	230	8.9	31.5	762	8.8	120
21...	1315	10.0	225	8.1	29.5	762	5.1	67
21...	1317	20.0	225	7.4	29.0	762	2.0	26
21...	1320	30.0	225	7.2	28.5	762	.5	6
21...	1323	40.0	245	7.1	27.5	762	.3	4

302448095374101 -- Lk Conroe Site DC

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
MAR								
11...	1410	1.00	190	8.1	13.5	760	11.0	106
11...	1412	10.0	190	8.1	13.5	760	11.0	106
11...	1414	20.0	190	7.7	13.0	760	10.1	96
11...	1416	27.0	190	7.6	12.5	760	10.0	94
JUN								
19...	1126	1.00	210	8.9	29.5	760	8.7	115
19...	1128	6.00	210	8.9	29.0	760	8.6	112
19...	1130	16.0	215	8.0	28.0	760	5.4	69
19...	1132	26.0	220	7.3	27.0	760	1.3	16
AUG								
21...	1406	1.00	230	9.2	32.0	762	9.3	127
21...	1409	10.0	230	9.0	30.5	762	2.2	29
21...	1412	20.0	230	7.4	30.0	762	1.2	16
21...	1414	25.0	235	7.4	30.0	762	.4	5

08067600 Lake Conroe near Conroe, TX--Continued

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

302607095360901 -- Lk Conroe Site EC

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)
MAR													
11...	1425	1.00	190	8.1	13.0	760	11.1	106	63	8	22.1	1.86	11.1
11...	1427	10.0	190	8.0	13.0	760	11.0	105	--	--	--	--	--
11...	1429	20.0	190	8.0	13.0	760	11.0	105	--	--	--	--	--
11...	1431	30.0	190	7.8	12.0	760	9.8	91	--	--	--	--	--
11...	1433	40.0	190	7.6	12.0	760	9.8	91	63	2	22.2	1.86	11.0
JUN													
19...	1155	1.00	200	8.8	29.0	760	8.2	107	70	6	24.8	2.05	12.5
19...	1157	8.00	210	8.8	28.5	760	8.0	104	--	--	--	--	--
19...	1159	18.0	210	8.6	28.0	760	7.2	92	--	--	--	--	--
19...	1201	28.0	215	8.0	27.5	760	5.9	75	--	--	--	--	--
19...	1203	38.0	210	7.2	25.5	760	1.4	17	71	--	24.9	2.05	12.6
AUG													
21...	1443	1.00	230	9.2	31.0	762	10.0	135	72	4	25.5	2.10	12.9
21...	1453	10.0	225	8.9	30.0	762	8.0	106	--	--	--	--	--
21...	1458	20.0	230	8.4	30.0	762	5.4	72	--	--	--	--	--
21...	1507	30.0	230	7.3	29.5	762	.3	4	--	--	--	--	--
21...	1509	35.0	245	7.3	28.5	762	.5	6	74	--	26.1	2.11	12.5

302607095360901 -- Lk Conroe Site EC

Date	SODIUM ADSORPTION RATIO (00931)	SODIUM PERCENT (00932)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)
MAR													
11...	.6	26	3.18	55	7.2	16.4	E.1n	7.0	102	<.008	.06	<.04	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	.6	26	3.05	61	7.1	16.2	E.1n	7.2	105	<.008	.08	<.04	--
JUN													
19...	.6	27	3.24	64	7.0	19.1	.1	7.4	115	<.008	<.05	<.04	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	<.008	<.05	<.04	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	.6	27	3.16	72	6.9	20.1	.1	7.6	121	<.008	<.05	E.02	--
AUG													
21...	.7	27	3.25	68	5.8	18.8	.2	8.9	118	<.008	<.05	<.04	--
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	<.008	.06	<.04	--
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
21...	.6	26	3.47	84	2.1	19.4	.2	10.8	133	<.008	<.05	1.31	.42

302607095360901 -- Lk Conroe Site EC

Date	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	ORTHO-PHOSPHATE, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
MAR						
11...	.41	<.06	<.02	--	E6	<2.0
11...	--	--	--	--	--	--
11...	--	--	--	--	--	--
11...	--	--	--	--	--	--
11...	.42	<.06	<.02	--	<10	E2.2b
JUN						
19...	.47	<.06	<.02	--	<10	E2.6b
19...	--	--	--	--	--	--
19...	.38	<.06	<.02	--	<10	E.9
19...	--	--	--	--	--	--
19...	.52	<.06	<.02	--	12	74.8
AUG						
21...	.42	<.06	<.02	--	<10	E1.3n
21...	--	--	--	--	--	--
21...	.39	<.06	<.02	--	<10	E1.1
21...	--	--	--	--	--	--
21...	1.7	.16	.17	.515	693	2980

302714095372201 -- Lk Conroe Site FC

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
MAR								
11...	1508	1.00	190	7.8	14.5	758	10.2	101
11...	1510	10.0	190	7.7	14.0	758	9.9	97
11...	1512	20.0	190	7.4	14.0	758	8.3	81
JUN								
19...	1250	1.00	215	8.9	30.0	760	8.6	114
19...	1252	9.00	215	8.7	29.0	760	7.7	101
19...	1254	19.0	220	7.6	28.5	760	3.6	47
AUG								
21...	1533	1.00	235	9.3	32.0	762	9.6	132
21...	1536	10.0	230	8.8	31.0	762	5.5	74
21...	1539	18.0	235	7.4	30.5	762	.7	9

303129095360501 -- Lk Conroe Site GC

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)
MAR													
11...	1544	1.00	210	7.5	14.5	758	9.5	94	65	13	22.6	2.14	14.1
11...	1546	10.0	200	7.6	14.5	758	9.6	95	--	--	--	--	--
11...	1548	20.0	200	7.6	14.0	758	9.8	96	--	--	--	--	--
11...	1550	28.0	200	7.6	14.0	758	9.8	96	65	11	22.5	2.09	13.5
JUN													
19...	1323	1.00	220	8.9	31.0	760	9.2	124	73	0	25.7	2.21	13.6
19...	1325	7.00	225	8.6	29.0	760	7.8	102	--	--	--	--	--
19...	1327	17.0	225	8.0	28.0	760	5.8	74	--	--	--	--	--
19...	1329	27.0	220	7.3	28.0	760	2.6	33	74	2	25.9	2.23	13.7
AUG													
21...	1625	1.00	245	9.2	33.5	762	8.7	122	71	8	25.0	2.12	13.0
21...	1634	10.0	235	8.4	31.0	762	4.2	57	--	--	--	--	--
21...	1638	20.0	240	8.2	31.0	762	3.6	49	--	--	--	--	--
21...	1640	24.0	240	8.2	31.0	762	3.6	49	70	4	24.6	2.17	14.0

303129095360501 -- Lk Conroe Site GC

Date	SODIUM ADSORPTION RATIO (00931)	SODIUM PERCENT (00932)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)
MAR													
11...	.8	30	3.64	52	10.0	23.9	E.1n	7.8	115	<.008	<.05	<.04	.41
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	.7	30	3.55	54	9.6	22.3	E.1n	7.8	114	<.008	<.05	<.04	.41
JUN													
19...	.7	28	3.29	73	7.0	22.3	.1	9.7	128	<.008	<.05	<.04	.51
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	<.008	<.05	<.04	.48
19...	.7	28	3.27	72	6.9	22.6	.2	9.8	128	<.008	<.05	<.04	.51
AUG													
21...	.7	27	3.31	63	6.0	20.1	.2	9.6	117	<.008	<.05	<.04	.44
21...	--	--	--	--	--	--	--	--	--	<.008	<.05	<.04	.49
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
21...	.7	29	3.52	66	6.2	21.2	.2	11.0	122	<.008	<.05	<.04	.44

08067600 Lake Conroe near Conroe, TX--Continued

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

303129095360501 -- Lk Conroe Site GC

Date	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
MAR				
11...	<.06	<.02	18	E1.6n
11...	--	--	--	--
11...	--	--	--	--
11...	<.06	<.02	14	E.9n
JUN				
19...	E.03	E.01	<10	E1.5n
19...	--	--	--	--
19...	<.06	<.02	<10	E3.1b
19...	E.04	E.01	<10	E2.9b
AUG				
21...	<.06	<.02	<10	E2.7b
21...	<.06	<.02	<10	E1.9
21...	--	--	--	--
21...	<.06	<.02	<10	7.6

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

Value qualifier codes used in this report:
b -- Value was extrapolated below
n -- Below the NDV

08067650 West Fork San Jacinto River below Lake Conroe near Conroe, TX
(Partial-record station)

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^2.

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^3/s or greater), Oct. 1993 to Sept. 1994 (daily mean discharges 100 ft^3/s or greater), Oct. 1994 to Sept. 1997 (daily mean discharges 20 ft^3/s or greater), Oct. 1997 to Sept. 2000 (daily mean discharges), Oct. 2000 to current year (daily mean discharges 10 ft^3/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 poor. 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^3/s, Oct. 17, 1994, gage height, 42.68 ft; no flow at times.

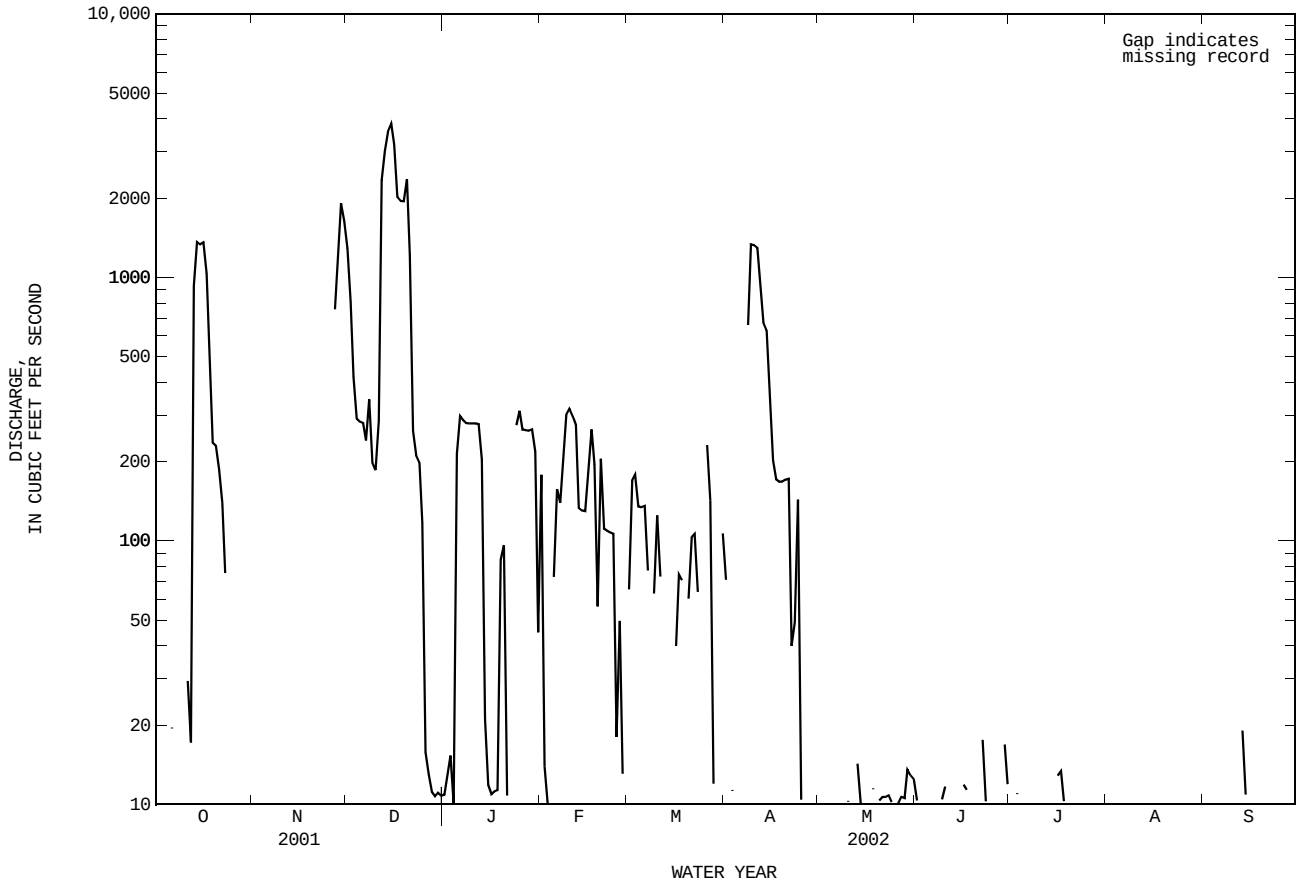
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Nov. 1940 reached a stage of 41.94 ft, from information by the Texas Department of Transportation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,860 ft^3/s, Dec. 15, gage height, 29.61 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	1290	11	178	65	71	---	10	---	---	---
2	---	---	809	13	14	170	---	---	---	---	---	---
3	---	---	419	15	10	179	11	---	---	11	---	---
4	---	---	291	10	---	136	---	---	---	---	---	---
5	---	---	283	214	73	134	---	---	---	---	---	---
6	19	---	280	298	157	136	---	---	---	---	---	---
7	---	---	241	287	140	77	---	---	---	---	---	---
8	---	---	344	280	215	---	658	---	---	---	---	---
9	---	---	198	279	301	63	1330	---	10	---	---	---
10	---	---	186	279	317	125	1320	10	12	---	---	---
11	29	---	286	279	297	73	1290	---	---	---	---	---
12	17	---	2340	277	276	---	928	---	---	---	---	---
13	930	---	3020	204	133	---	674	14	---	---	---	19
14	1360	---	3580	21	131	---	630	10	---	---	---	11
15	1330	---	3830	12	130	---	390	---	---	---	---	---
16	1360	---	3200	11	190	40	202	---	12	13	---	---
17	1030	---	2020	11	265	75	171	---	11	13	---	---
18	541	---	1950	11	195	71	168	11	---	10	---	---
19	236	---	1940	85	56	---	168	---	---	---	---	---
20	230	---	2360	96	205	60	171	10	---	---	---	---
21	187	---	1210	11	111	104	172	11	---	---	---	---
22	140	---	262	---	109	107	40	11	18	---	---	---
23	76	---	211	---	108	64	49	11	10	---	---	---
24	---	---	199	275	107	---	143	10	---	---	---	---
25	---	---	117	311	18	---	10	---	---	---	---	---
26	---	---	16	265	50	231	---	10	---	---	---	---
27	---	755	13	263	13	142	---	11	---	---	---	---
28	---	1110	11	262	---	12	---	11	---	---	---	---
29	---	1910	11	265	---	---	---	14	17	---	---	---
30	---	1640	11	218	---	---	---	13	12	---	---	---
31	---	---	11	45	---	107	---	12	---	---	---	---

08067650 West Fork San Jacinto River below Lake Conroe near Conroe, TX--Continued
(Partial-record station)



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^2.

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.--No estimated daily discharges. Records good. 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^3/s (345,600 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1925-27, 1940-72).--Maximum discharge, 110,000 ft^3/s Nov. 25, 1940 (gage height, 30.85 ft), present datum, from rating curve extended above 43,000 ft^3/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.

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^3/s, from rating curve as explained above.

DISCHARGE FROM DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	68	1770	140	326	104	176	60	41	60	29	21
2	36	68	1160	135	157	230	127	57	38	74	28	20
3	37	68	882	134	122	261	103	56	36	280	31	20
4	33	65	571	134	113	241	87	55	34	365	40	21
5	44	62	445	297	141	234	76	53	34	218	28	20
6	377	61	398	598	388	220	72	51	33	84	27	22
7	154	60	365	582	439	204	88	49	30	59	27	46
8	116	59	480	615	496	117	1480	47	30	47	34	74
9	100	61	562	596	662	104	2820	47	36	46	25	43
10	89	58	457	441	505	192	2890	47	48	41	24	41
11	521	57	491	387	399	185	2400	46	32	37	23	32
12	834	57	5220	362	361	106	1330	43	30	38	23	28
13	2040	56	5380	335	258	92	833	41	37	40	25	25
14	2860	57	4960	190	219	87	667	46	33	38	27	33
15	2290	56	4340	139	212	86	550	41	29	240	52	28
16	2170	59	3780	125	221	85	247	41	73	1220	54	26
17	1930	58	2720	121	302	151	261	64	50	1190	187	31
18	1010	57	2720	121	300	135	221	63	36	1060	171	46
19	444	56	2340	124	154	112	211	48	32	761	76	41
20	344	55	2200	220	297	161	206	42	31	400	49	230
21	309	57	2010	126	251	223	200	41	31	169	39	95
22	242	55	494	112	267	193	149	40	95	94	38	44
23	220	54	434	109	235	170	84	39	41	71	34	38
24	131	53	364	179	213	102	173	39	31	59	33	34
25	102	52	325	551	163	89	102	39	32	49	28	30
26	87	78	204	383	119	199	75	37	33	46	26	27
27	79	1090	176	359	127	284	71	37	39	43	25	26
28	74	2050	174	339	95	127	68	36	40	37	24	25
29	71	2630	163	328	---	90	64	62	152	35	24	25
30	70	2570	152	322	---	84	64	53	137	33	22	23
31	68	---	146	219	---	119	---	49	---	31	21	---
TOTAL	16922	9887	45883	8823	7542	4787	15895	1469	1374	6965	1294	1215
MEAN	545.9	329.6	1480	284.6	269.4	154.4	529.8	47.39	45.80	224.7	41.74	40.50
MAX	2860	2630	5380	615	662	284	2890	64	152	1220	187	230
MIN	33	52	146	109	95	84	64	36	29	31	21	20
AC-FT	33560	19610	91010	17500	14960	9500	31530	2910	2730	13820	2570	2410

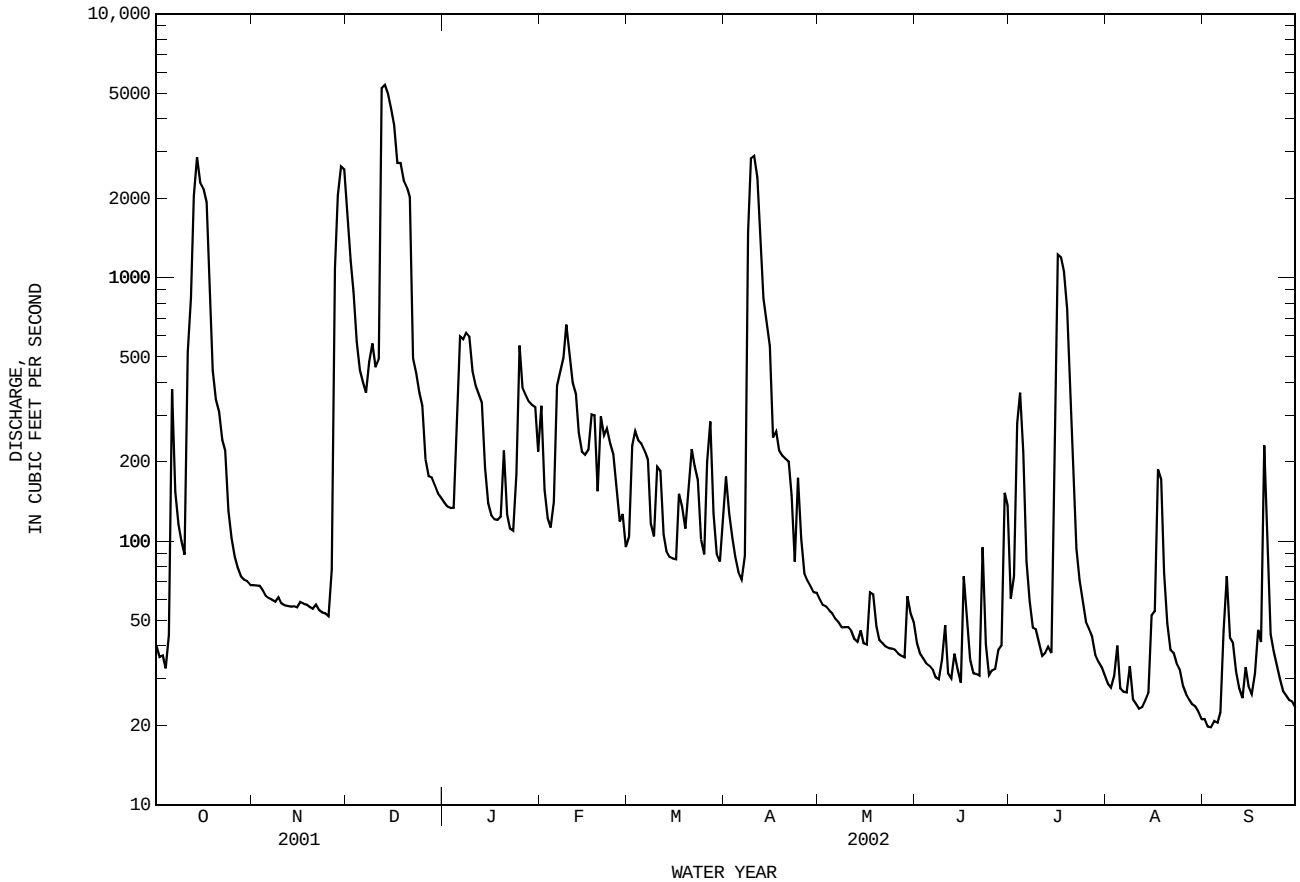
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2002z, BY WATER YEAR (WY)

MEAN	529.3	593.9	675.6	905.1	848.2	676.7	691.8	643.4	693.8	121.5	73.48	223.2
MAX	7836	5757	2064	3360	3258	2138	4185	4153	3897	392	368	1945
(WY)	1995	1999	1977	1998	1992	2001	1979	1983	2001	1989	1983	1979
MIN	18.7	25.7	31.4	33.0	30.8	31.3	34.5	37.6	26.1	19.0	14.7	20.0
(WY)	2000	1991	1981	2000	2000	2000	1996	1978	1996	1996	2000	2000

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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1973 - 2002z	
ANNUAL TOTAL	339884		122056			
ANNUAL MEAN	931.2		334.4		554.2	
HIGHEST ANNUAL MEAN					1444	1995
LOWEST ANNUAL MEAN					39.3	2000
HIGHEST DAILY MEAN	21500	Jun 9	5380	Dec 13	97200	Oct 18 1994
LOWEST DAILY MEAN	22	Jun 3	20	Sep 2	8.9	Oct 3 1998
ANNUAL SEVEN-DAY MINIMUM	24	Aug 20	21	Aug 30	11	Aug 18 1981
MAXIMUM PEAK FLOW			6710	Dec 12	115000	Oct 18 1994
MAXIMUM PEAK STAGE			14.70	Dec 12	32.30	Oct 18 1994
ANNUAL RUNOFF (AC-FT)	674200		242100		401500	
10 PERCENT EXCEEDS	2700		634		1460	
50 PERCENT EXCEEDS	199		87		91	
90 PERCENT EXCEEDS	35		30		24	

z Period of regulated streamflow.



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^2.

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 good. 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 FROM DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

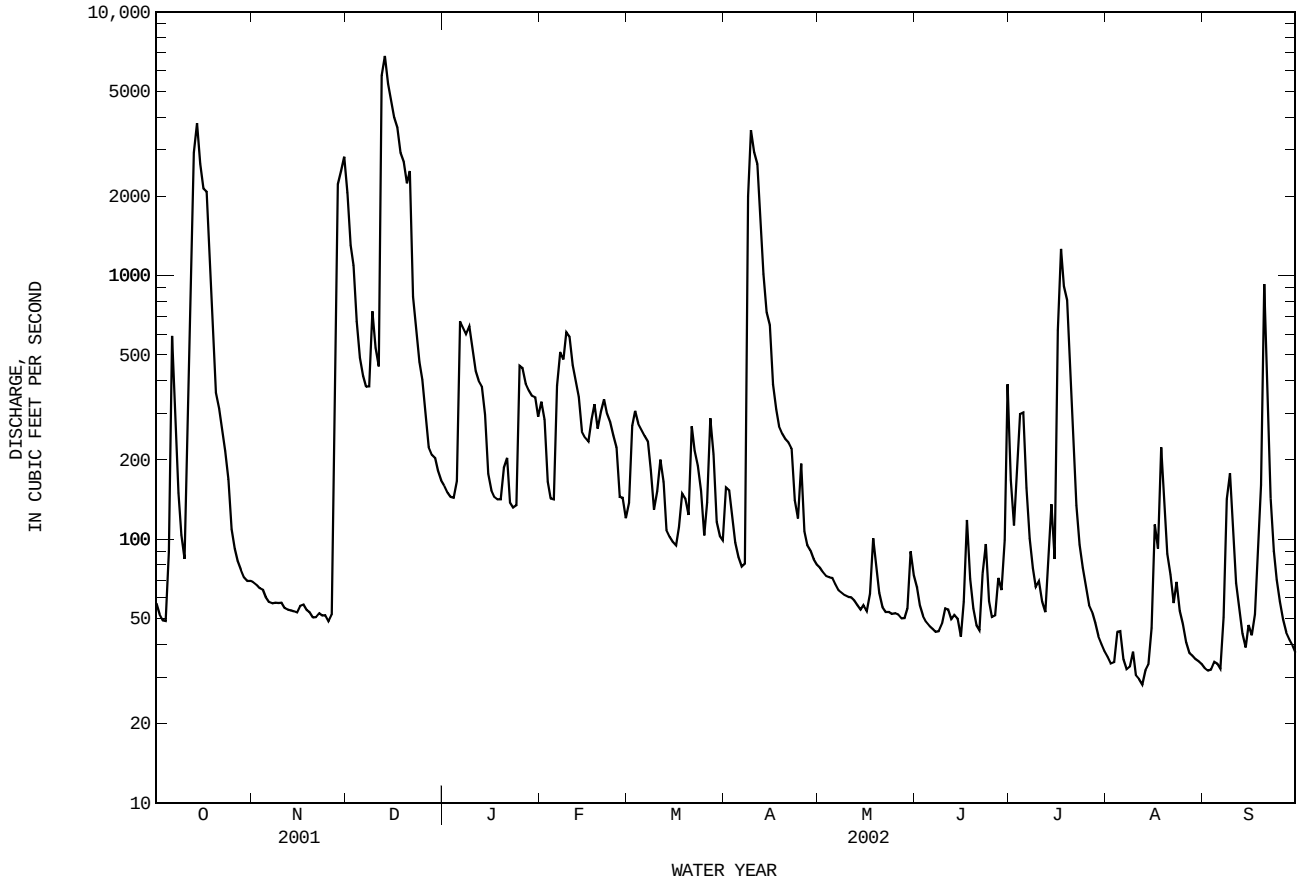
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	69	2060	159	333	138	157	78	66	168	36	32
2	52	67	1310	150	285	270	153	75	56	113	34	32
3	49	65	1100	145	165	307	120	72	51	181	34	32
4	49	64	671	144	143	274	97	72	49	299	45	34
5	90	60	488	166	142	260	85	71	47	302	45	34
6	591	58	416	672	382	246	79	68	46	156	35	32
7	285	57	379	632	513	235	81	64	45	101	32	51
8	150	57	380	600	481	183	2000	63	45	78	33	142
9	104	57	732	642	610	130	3560	61	48	66	37	178
10	84	57	533	523	587	152	2940	61	55	69	30	114
11	385	55	452	434	458	200	2650	60	54	58	29	68
12	1450	54	5750	400	398	165	1680	59	50	53	28	54
13	2930	54	6820	381	347	109	1010	56	52	85	32	44
14	3790	53	5340	297	256	102	725	54	50	136	34	39
15	2660	53	4580	177	243	98	650	56	43	84	46	47
16	2140	56	3980	154	235	95	387	54	58	621	114	43
17	2080	57	3650	145	285	111	311	62	118	1260	92	52
18	1170	54	2920	142	326	149	268	101	71	910	223	101
19	590	53	2700	142	263	142	252	78	55	807	142	160
20	360	51	2240	187	304	124	240	63	47	474	88	928
21	314	51	2490	203	340	268	233	55	45	251	74	338
22	255	52	833	138	300	217	221	53	74	134	57	143
23	217	51	631	132	278	190	141	53	96	95	69	90
24	169	52	470	134	248	153	120	52	58	78	53	70
25	109	49	404	455	222	103	194	52	51	66	48	58
26	92	52	307	447	145	138	107	52	51	56	41	50
27	83	876	224	390	144	288	95	50	71	53	37	44
28	77	2220	209	367	120	210	91	50	64	48	36	42
29	72	2490	204	350	---	116	84	55	99	43	35	40
30	70	2830	182	345	---	103	80	90	386	40	34	37
31	70	---	167	292	---	99	---	73	---	38	34	---
TOTAL	20594	9874	52622	9545	8553	5375	18811	1963	2101	6923	1707	3129
MEAN	664.3	329.1	1697	307.9	305.5	173.4	627.0	63.32	70.03	223.3	55.06	104.3
MAX	3790	2830	6820	672	610	307	3560	101	386	1260	223	928
MIN	49	49	167	132	120	95	79	50	43	38	28	32
AC-FT	40850	19590	104400	18930	16960	10660	37310	3890	4170	13730	3390	6210

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2002, BY WATER YEAR (WY)

MEAN	916.6	854.5	888.6	1151	1010	962.1	641.5	559.4	865.1	139.5	83.45	111.0
MAX	10910	8244	1881	3199	3763	2688	2229	2174	4261	536	223	323
(WY)	1995	1999	1992	1998	1992	2001	1991	1993	2001	1989	1995	1996
MIN	22.2	29.8	42.7	41.5	37.8	34.3	60.7	59.4	31.8	17.6	16.1	23.3
(WY)	1991	1991	1990	2000	2000	2000	2000	1988	1998	2000	2000	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1984 - 2002	
ANNUAL TOTAL	392663		141197			
ANNUAL MEAN	1076		386.8		684.7	
HIGHEST ANNUAL MEAN					1694	1995
LOWEST ANNUAL MEAN					51.6	2000
HIGHEST DAILY MEAN	24400	Jun 9	6820	Dec 13	113000	Oct 19 1994
LOWEST DAILY MEAN	38	Aug 23	28	Aug 12	12	Jul 28 2000
ANNUAL SEVEN-DAY MINIMUM	40	Aug 19	32	Aug 7	12	Sep 1 2000
MAXIMUM PEAK FLOW			8200	Dec 12	130000	Oct 18 1994
MAXIMUM PEAK STAGE			23.32	Dec 12	40.10	Oct 18 1994
ANNUAL RUNOFF (AC-FT)	778800		280100		496000	
10 PERCENT EXCEEDS	3150		728		1860	
50 PERCENT EXCEEDS	226		109		110	
90 PERCENT EXCEEDS	52		45		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", Harris-Montgomery County line, Hydrologic Unit 12040102, near the left bank at downstream side of Highway 249, 2.0 mi northwest of Tomball.

DRAINAGE AREA.--186 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 2.23 ft below NGVD of 1929. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

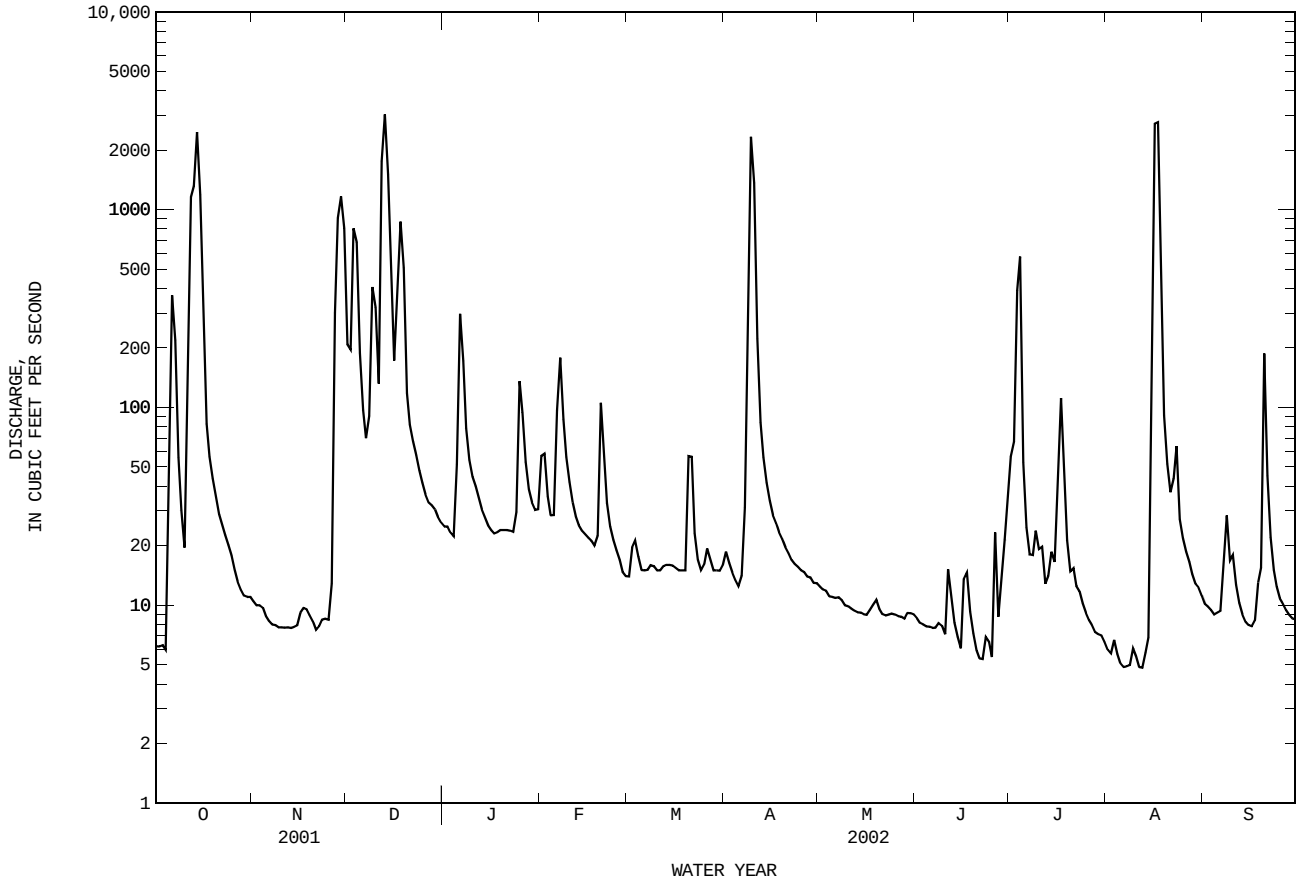
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	10	208	25	57	14	19	12	8.6	57	6.0	10
2	6.2	10	197	25	58	20	16	12	8.1	67	5.7	9.9
3	6.3	10	803	23	35	21	15	12	8.0	391	6.7	9.4
4	6.0	9.7	686	22	28	18	13	11	7.8	579	5.7	9.0
5	28	8.8	188	52	29	15	13	11	7.8	53	5.1	9.2
6	369	8.3	97	297	97	15	14	11	7.7	25	4.9	9.4
7	219	8.0	70	172	178	15	31	11	7.7	18	4.9	17
8	56	7.9	90	79	87	16	703	11	8.1	18	5.0	28
9	30	7.7	406	54	56	16	2340	10	7.9	24	6.0	17
10	20	7.7	322	44	42	15	1360	9.9	7.1	19	5.5	18
11	105	7.7	132	40	33	15	222	9.6	15	20	4.9	13
12	1160	7.7	1760	35	28	16	84	9.4	11	13	4.8	10
13	1310	7.7	3030	31	25	16	56	9.2	8.1	14	5.7	9.0
14	2470	7.8	1510	28	24	16	42	9.2	6.9	19	6.9	8.2
15	1190	7.9	470	25	23	16	34	9.0	6.0	17	264	7.9
16	232	9.1	173	24	22	15	28	8.9	14	48	2720	7.8
17	83	9.7	335	23	21	15	26	9.5	15	111	2770	8.4
18	56	9.5	870	23	20	15	23	10	9.3	48	722	13
19	44	8.9	508	24	22	15	22	11	7.2	21	91	15
20	35	8.3	118	24	106	57	20	9.6	5.9	15	52	187
21	29	7.5	82	24	55	56	18	9.0	5.4	15	37	45
22	25	7.8	68	24	33	23	17	8.9	5.3	13	44	22
23	23	8.5	57	24	25	17	16	9.0	6.9	12	64	15
24	20	8.5	48	30	21	15	16	9.1	6.5	10	27	12
25	18	8.5	42	136	19	16	15	9.0	5.5	9.1	22	11
26	15	13	36	94	17	19	15	8.8	23	8.4	19	10
27	13	300	33	53	15	17	14	8.7	8.7	7.9	17	9.4
28	12	909	32	39	14	15	14	8.5	14	7.3	14	8.9
29	11	1170	31	33	---	15	13	9.1	22	7.1	13	8.6
30	11	807	28	30	---	15	13	9.1	35	7.0	12	8.5
31	11	---	26	31	---	16	---	9.0	---	6.5	11	---
TOTAL	7619.7	3412.2	12456	1588	1190	585	5232	304.5	309.5	1680.3	6976.8	566.6
MEAN	245.8	113.7	401.8	51.23	42.50	18.87	174.4	9.823	10.32	54.20	225.1	18.89
MAX	2470	1170	3030	297	178	57	2340	12	35	579	2770	187
MIN	6.0	7.5	26	22	14	14	13	8.5	5.3	6.5	4.8	7.8
AC-FT	15110	6770	24710	3150	2360	1160	10380	604	614	3330	13840	1120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

MEAN	81.93	113.2	145.8	114.8	31.79	257.9	81.72	81.90	323.2	21.12	76.45	55.76
MAX	246	226	402	293	53.5	745	174	180	946	54.2	225	137
(WY)	2002	2001	2002	2001	2001	2001	2002	2000	2001	2002	2002	2001
MIN	0.000	0.000	0.12	0.74	0.51	9.74	10.3	9.82	10.3	0.24	0.000	11.7
(WY)	2000	2000	2000	2000	2000	2000	2000	2002	2002	2000	2000	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 2000 - 2002	
ANNUAL TOTAL	93608.0		41920.6			
ANNUAL MEAN	256.5		114.9		115.8	
HIGHEST ANNUAL MEAN					214	2001
LOWEST ANNUAL MEAN					19.1	2000
HIGHEST DAILY MEAN	10200	Jun 9	3030	Dec 13	10200	Jun 9 2001
LOWEST DAILY MEAN	1.5	Aug 23	4.8	Aug 12	0.00	Oct 1 1999
ANNUAL SEVEN-DAY MINIMUM	2.2	Aug 22	5.1	Aug 6	0.00	Oct 1 1999
MAXIMUM PEAK FLOW			3530	Aug 16, 17	13300	Jun 9 2001
MAXIMUM PEAK STAGE			146.07	Aug 16, 17	151.65	Jun 9 2001
ANNUAL RUNOFF (AC-FT)	185700		83150		83880	
10 PERCENT EXCEEDS	746		187		141	
50 PERCENT EXCEEDS	29		16		12	
90 PERCENT EXCEEDS	4.5		7.7		0.00	

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 fair. Interuption in the record occurred during several periods when the instrument was out of the water.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 463 microsiemens/cm, June 12, 2002; minimum, 17 microsiemens/cm, June 9, 2001.
pH: Maximum, 8.7 units, Apr. 2, 2000; minimum, 5.3 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, 12.9 mg/L, Jan. 3, 2001; minimum, 0.2 mg/L, Feb. 21, 2000.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 463 microsiemens/cm, June 12; minimum, 32 microsiemens/cm, Aug. 15.
pH: Maximum, 8.3 units, Aug. 15; minimum, 5.9 units, July 4.
WATER TEMPERATURE: Maximum, 30.1°C, Aug. 3; minimum, 4.8°C, Jan. 4.
DISSOLVED OXYGEN: Maximum, 11.3 mg/L, Jan. 4; minimum, 2.1 mg/L, Aug. 30.

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	244	228	238	262	241	254	103	84	93	238	224	230
2	246	236	242	261	250	254	127	96	106	241	228	235
3	249	238	244	271	250	262	111	76	85	248	233	241
4	255	240	247	272	258	266	94	77	85	249	237	242
5	257	38	211	279	261	269	111	92	101	248	189	236
6	236	84	132	281	267	273	129	108	118	250	158	190
7	111	97	102	283	270	276	149	122	132	163	142	153
8	111	100	105	290	265	274	175	137	147	165	147	152
9	133	110	121	277	256	267	179	109	133	175	153	163
10	150	131	140	273	263	269	124	111	117	186	166	176
11	164	63	136	276	263	270	129	92	117	198	177	189
12	77	66	71	279	262	272	111	55	72	210	192	202
13	86	59	73	279	268	274	61	52	57	221	198	211
14	67	55	58	284	264	276	85	58	73	225	215	220
15	92	62	74	286	276	281	108	85	96	234	213	224
16	111	86	99	322	200	276	124	105	114	242	225	232
17	127	109	119	287	268	280	138	101	123	244	228	237
18	145	125	135	293	275	283	101	66	79	249	236	243
19	161	136	152	294	278	288	107	77	92	254	242	248
20	178	155	167	295	282	287	127	105	116	261	242	254
21	188	164	180	297	276	288	148	125	135	265	252	259
22	198	180	190	302	285	294	164	142	151	270	255	261
23	216	191	199	296	283	291	176	156	165	267	255	261
24	220	199	210	296	279	290	186	171	178	269	251	262
25	226	210	219	295	284	290	194	182	186	322	206	249
26	230	216	224	297	120	271	204	183	194	217	175	194
27	235	217	228	303	67	163	207	183	199	192	175	182
28	240	227	235	112	67	81	218	200	208	200	187	193
29	251	234	241	71	58	67	223	208	215	211	187	201
30	256	239	247	87	68	77	228	212	221	224	203	213
31	260	245	252	---	---	---	233	217	226	228	214	222
MONTH	260	38	171	322	58	252	233	52	133	322	142	219

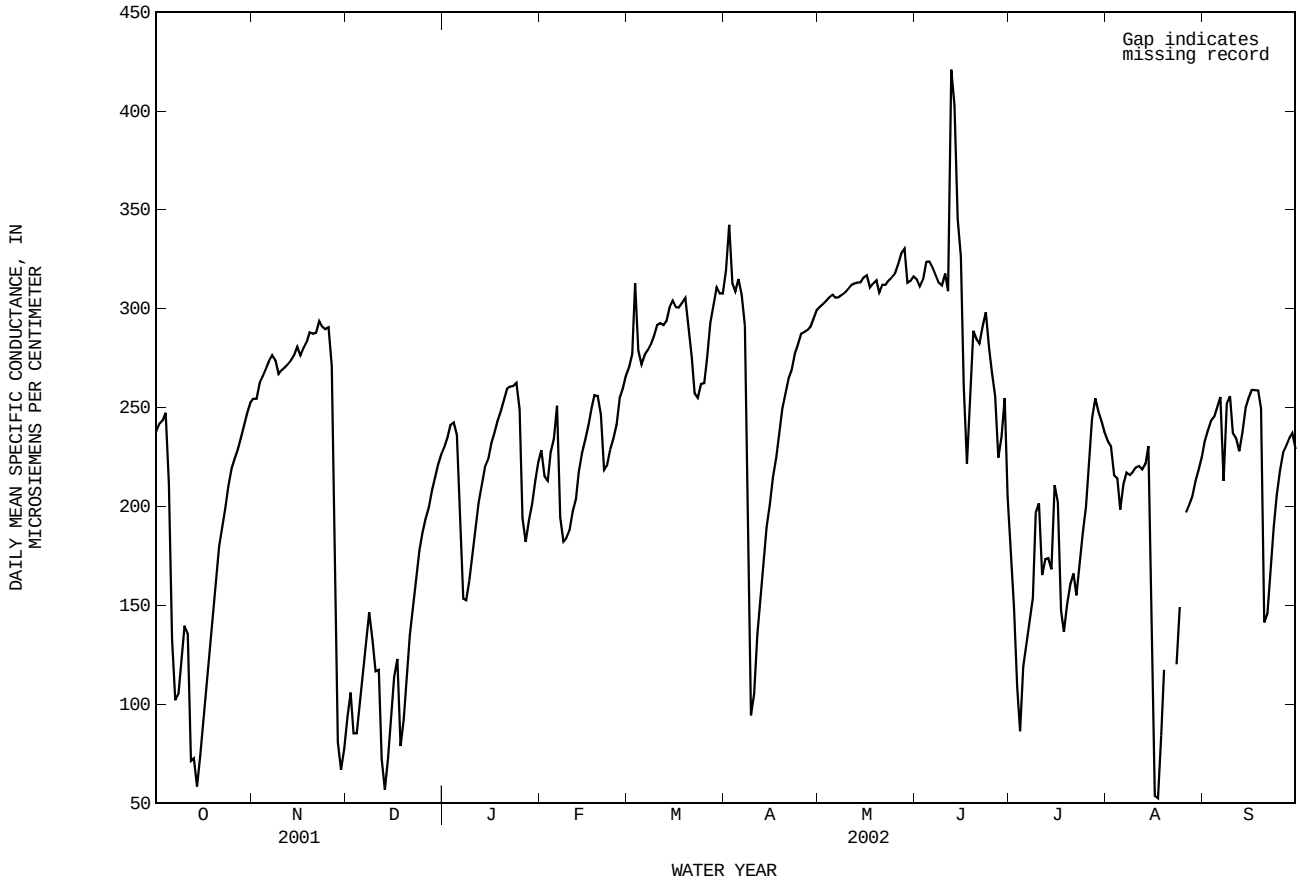
08068275 Spring Creek near Tomball, TX--Continued

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	238	221	228	277	259	270	331	308	319	312	294	301
2	231	196	215	289	265	277	366	319	342	312	290	302
3	229	199	213	346	282	313	327	297	313	319	299	304
4	233	218	227	293	261	279	318	302	309	313	301	306
5	243	228	234	279	262	272	323	307	315	318	299	307
6	315	223	251	284	265	277	321	258	307	314	298	306
7	249	173	194	287	271	279	312	275	292	312	291	306
8	194	175	182	291	272	282	275	96	153	314	300	307
9	192	177	184	293	280	286	102	91	94	314	301	308
10	194	181	188	299	287	292	120	95	105	317	296	310
11	203	189	197	301	280	293	148	119	135	319	303	312
12	212	191	204	300	284	292	165	148	156	323	298	313
13	228	208	217	304	286	294	181	161	172	323	305	313
14	236	217	227	310	287	301	197	180	190	323	307	313
15	239	225	234	313	294	304	208	192	201	321	305	316
16	250	233	241	307	292	301	221	207	215	322	306	317
17	258	242	250	307	294	301	231	220	225	339	217	311
18	264	247	256	309	293	303	242	229	236	318	300	313
19	270	134	256	311	298	305	256	239	249	324	306	314
20	268	212	247	317	92	290	265	250	257	317	299	308
21	258	200	218	285	254	276	273	258	265	321	301	312
22	228	208	221	276	246	257	277	257	269	318	306	312
23	238	220	229	264	247	255	281	267	277	321	303	314
24	242	226	234	271	252	262	293	276	282	325	302	316
25	250	231	241	273	208	262	306	281	287	323	312	318
26	262	244	255	285	264	275	295	280	288	329	310	322
27	269	250	259	301	278	293	297	281	289	335	322	328
28	273	256	266	312	292	302	296	281	291	337	316	330
29	---	---	---	325	300	311	303	288	295	328	228	313
30	---	---	---	316	297	308	305	291	299	321	295	314
31	---	---	---	316	297	308	---	---	---	323	310	316
MONTH	315	134	227	346	92	288	366	91	248	339	217	312

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	319	307	315	197	150	175	236	230	233	237	230	233
2	322	304	311	180	49	149	233	228	230	240	236	238
3	330	301	315	172	66	109	231	63	216	248	239	243
4	334	312	324	109	68	86	226	194	214	250	242	245
5	331	314	324	127	106	119	207	193	198	259	247	251
6	327	311	321	141	123	132	218	206	211	258	238	255
7	325	302	317	151	127	143	224	213	217	252	41	213
8	323	302	313	162	148	154	219	213	216	273	176	252
9	325	303	312	276	157	197	221	214	217	283	167	256
10	324	307	318	276	132	202	222	218	220	255	225	237
11	323	293	309	173	158	165	225	215	220	240	222	234
12	463	323	421	187	158	173	230	203	219	235	219	228
13	453	362	403	185	40	174	231	156	221	246	233	238
14	363	325	345	191	119	168	234	226	230	254	245	250
15	337	314	326	234	190	211	240	32	138	257	239	255
16	331	54	260	253	93	202	58	47	54	262	249	259
17	249	202	222	204	135	147	63	47	52	272	254	259
18	277	231	256	145	128	137	105	63	84	262	257	259
19	298	273	289	159	141	150	127	105	117	290	44	250
20	291	272	284	167	155	160	---	---	---	275	44	141
21	306	265	282	178	161	166	---	---	---	155	142	146
22	307	265	291	166	144	155	---	---	---	179	153	166
23	309	288	298	187	156	170	133	107	120	201	176	190
24	295	223	280	194	175	187	160	133	149	211	200	206
25	280	256	268	210	190	200	---	---	---	224	211	218
26	291	217	256	235	206	221	201	189	197	230	223	227
27	235	216	225	257	232	245	203	199	201	233	229	231
28	257	225	235	268	245	255	209	201	205	237	232	234
29	292	162	255	253	238	248	216	209	213	242	234	237
30	226	189	205	247	239	243	276	140	218	235	223	229
31	---	---	---	240	234	237	231	221	225	---	---	---
MONTH	463	54	296	276	40	177	---	---	---	290	41	229

08068275 Spring Creek near Tomball, TX--Continued



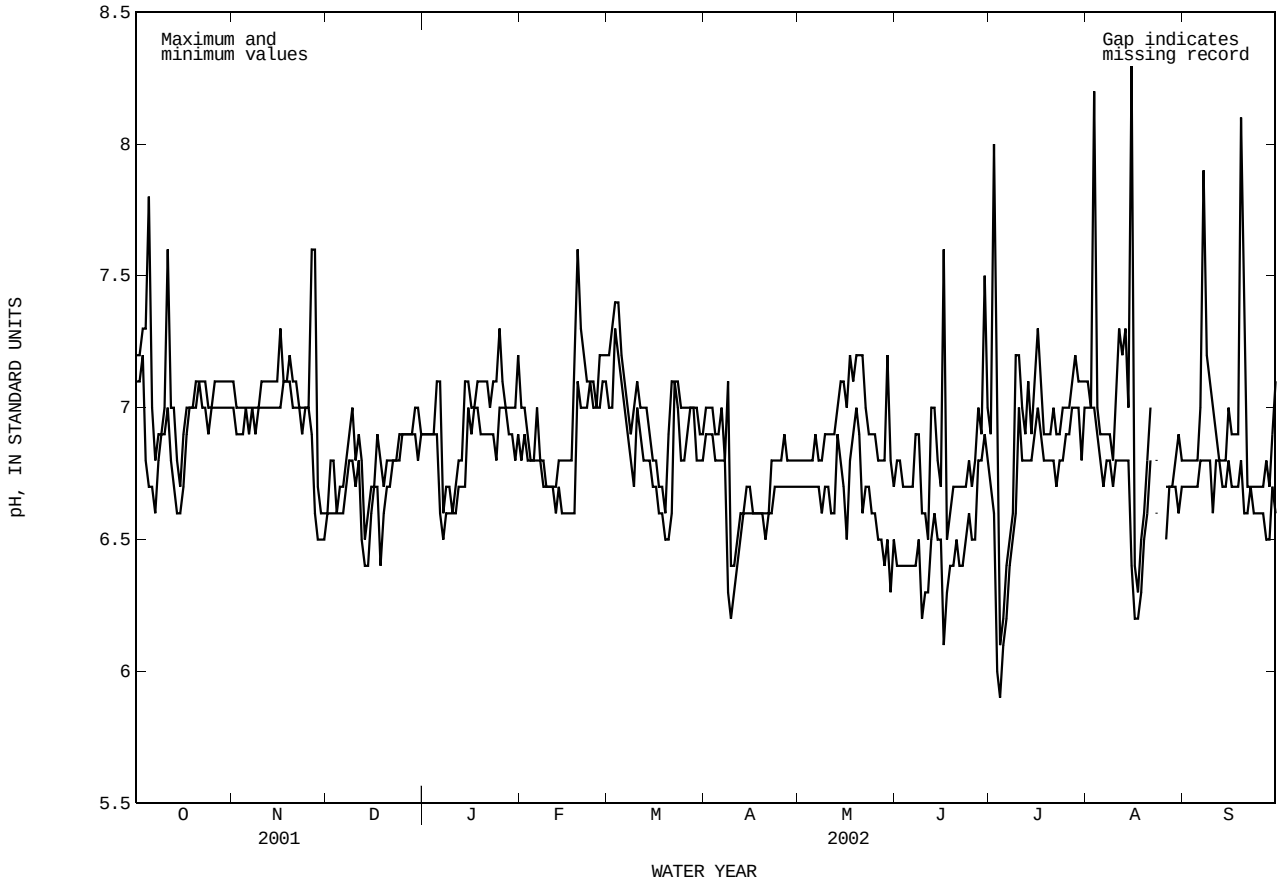
PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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

08068275 Spring Creek near Tomball, TX--Continued

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	6.9	6.8	6.7	6.8	6.4	6.9	6.7	7.1	7.0	6.8	6.7
2	7.0	6.9	6.8	6.7	6.8	6.4	8.0	6.6	7.0	7.0	6.8	6.7
3	7.0	6.9	6.8	6.7	6.7	6.4	6.7	6.0	8.2	7.0	6.8	6.7
4	6.9	6.8	6.8	6.7	6.7	6.4	6.1	5.9	7.0	6.9	6.8	6.7
5	6.9	6.8	6.8	6.7	6.7	6.4	6.2	6.1	6.9	6.8	6.8	6.7
6	7.0	6.8	6.9	6.7	6.7	6.4	6.4	6.2	6.9	6.7	7.0	6.8
7	6.8	6.8	6.8	6.7	6.9	6.4	6.5	6.4	6.9	6.8	7.9	6.8
8	7.1	6.3	6.8	6.6	6.9	6.5	6.6	6.5	6.9	6.8	7.2	6.8
9	6.4	6.2	6.9	6.7	6.6	6.2	7.2	6.6	6.8	6.7	7.1	6.8
10	6.4	6.3	6.9	6.7	6.6	6.3	7.2	7.0	7.0	6.8	7.0	6.6
11	6.5	6.4	6.9	6.6	6.5	6.3	7.0	6.8	7.3	6.8	6.9	6.8
12	6.6	6.5	6.9	6.6	7.0	6.5	6.9	6.8	7.2	6.8	6.8	6.8
13	6.6	6.6	7.0	6.9	7.0	6.6	7.1	6.8	7.3	6.8	6.8	6.7
14	6.7	6.6	7.1	6.8	6.8	6.5	6.9	6.8	7.0	6.8	6.8	6.7
15	6.7	6.6	7.1	6.7	6.7	6.5	7.1	6.9	8.3	6.4	7.0	6.8
16	6.6	6.6	7.0	6.5	7.6	6.1	7.3	7.0	6.4	6.2	6.9	6.7
17	6.6	6.6	7.2	6.8	6.5	6.3	7.1	6.9	6.3	6.2	6.9	6.7
18	6.6	6.6	7.1	6.9	6.6	6.4	6.9	6.8	6.5	6.3	6.9	6.7
19	6.6	6.6	7.2	7.0	6.7	6.4	6.9	6.8	6.6	6.5	8.1	6.8
20	6.6	6.5	7.2	6.9	6.7	6.5	6.9	6.8	6.8	6.6	7.5	6.6
21	6.6	6.6	7.2	6.6	6.7	6.4	7.0	6.8	7.0	6.8	6.7	6.6
22	6.8	6.6	7.0	6.7	6.7	6.4	6.9	6.7	---	---	6.7	6.7
23	6.8	6.7	6.9	6.7	6.7	6.5	6.9	6.8	6.8	6.6	6.7	6.6
24	6.8	6.7	6.9	6.6	6.8	6.6	7.0	6.8	---	---	6.7	6.6
25	6.8	6.7	6.9	6.6	6.7	6.5	7.0	6.9	---	---	6.7	6.6
26	6.9	6.7	6.8	6.5	6.8	6.5	7.0	6.9	6.7	6.5	6.7	6.6
27	6.8	6.7	6.8	6.5	7.0	6.8	7.1	7.0	6.7	6.7	6.8	6.5
28	6.8	6.7	6.8	6.4	6.9	6.8	7.2	7.0	6.7	6.7	6.7	6.5
29	6.8	6.7	7.2	6.5	7.5	6.9	7.1	7.0	6.8	6.7	6.9	6.7
30	6.8	6.7	6.8	6.3	7.0	6.8	7.1	6.8	6.9	6.6	7.1	6.6
31	---	---	6.7	6.5	---	---	7.1	7.0	6.8	6.7	---	---
MONTH	7.1	6.2	7.2	6.3	7.6	6.1	8.0	5.9	---	---	8.1	6.5



08068275 Spring Creek near Tomball, TX--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

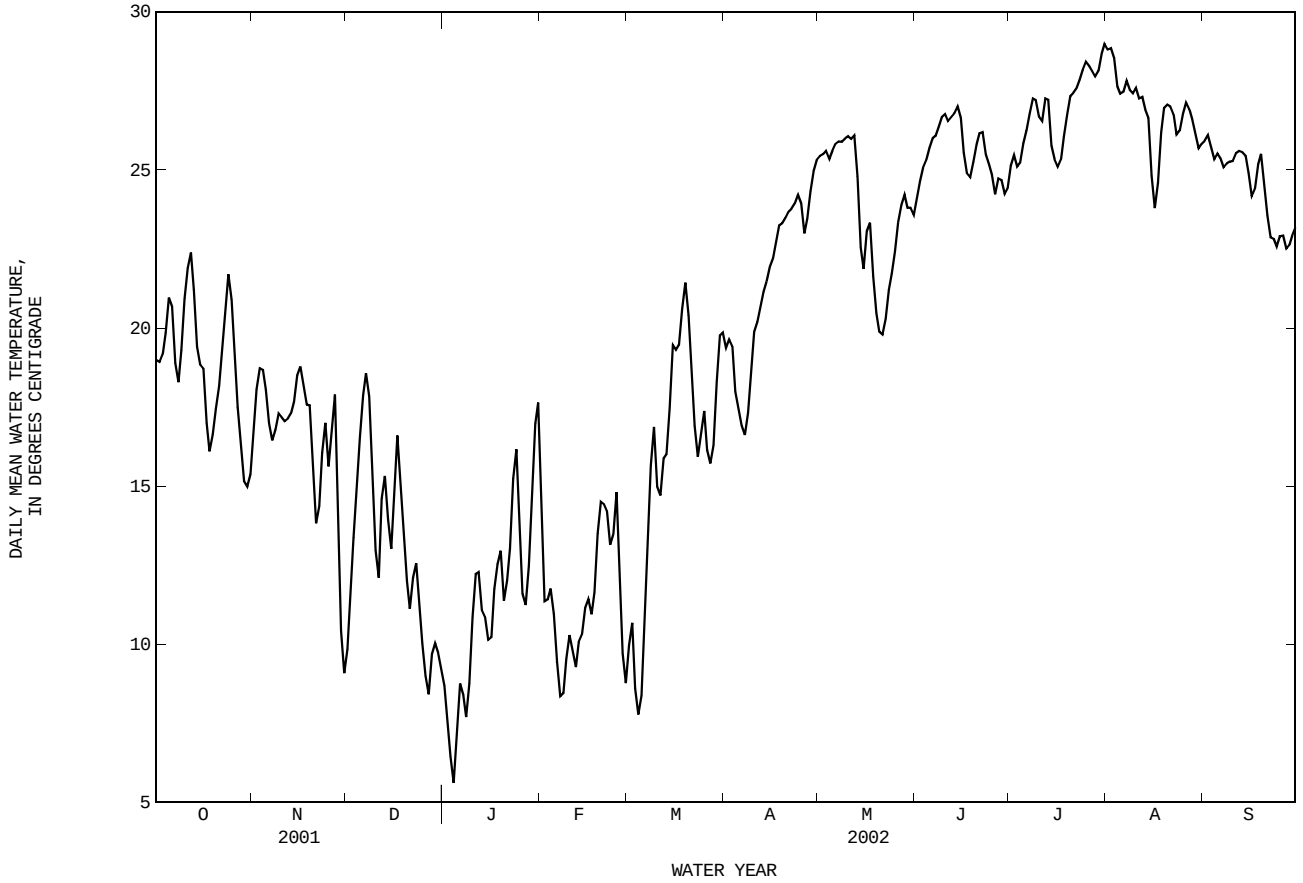
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.8	18.2	19.0	17.6	16.0	16.8	10.6	9.4	9.9	9.0	8.3	8.7
2	19.7	18.0	18.9	18.8	17.4	18.1	12.8	10.6	11.6	8.1	7.2	7.6
3	20.0	18.3	19.2	19.3	18.2	18.7	14.0	12.8	13.4	7.2	5.9	6.5
4	20.6	19.1	19.8	19.1	18.2	18.7	15.7	14.0	14.8	6.4	4.8	5.6
5	25.0	20.1	21.0	18.7	17.6	18.1	17.3	15.7	16.6	8.4	6.4	7.3
6	21.6	19.8	20.7	17.8	16.4	17.0	18.3	17.3	17.9	9.0	8.4	8.8
7	19.8	18.5	18.9	17.0	15.8	16.4	19.0	18.2	18.6	8.9	8.0	8.4
8	18.7	17.7	18.3	17.4	16.1	16.8	18.9	16.2	17.8	8.2	7.1	7.7
9	20.1	18.6	19.3	17.8	16.8	17.3	16.2	13.9	14.9	9.8	7.9	8.8
10	21.8	20.1	20.9	17.6	16.7	17.2	13.9	12.2	13.0	11.9	9.8	10.9
11	22.8	21.6	21.9	17.5	16.5	17.1	13.2	11.8	12.1	12.5	11.9	12.2
12	23.0	22.1	22.4	17.7	16.6	17.1	15.4	13.0	14.6	12.8	11.8	12.3
13	22.5	19.9	21.2	17.7	16.8	17.3	15.6	14.8	15.3	11.8	10.5	11.1
14	19.9	19.1	19.4	18.4	17.1	17.7	14.8	13.2	13.9	11.6	10.3	10.9
15	19.4	18.2	18.8	18.9	18.1	18.5	13.5	12.8	13.0	10.9	9.4	10.1
16	19.3	18.1	18.7	19.5	18.6	18.8	16.2	13.5	14.8	11.2	9.2	10.2
17	18.1	16.4	17.0	18.6	17.8	18.2	17.1	16.0	16.6	12.7	11.0	11.8
18	16.5	15.5	16.1	18.0	17.0	17.6	16.2	14.2	15.0	12.9	12.2	12.5
19	17.2	16.2	16.6	18.0	17.2	17.6	14.2	12.7	13.4	13.4	12.2	13.0
20	18.1	17.0	17.5	17.2	15.0	15.9	12.7	11.5	12.0	12.2	10.8	11.4
21	18.8	17.6	18.2	15.0	13.2	13.8	11.5	10.6	11.1	12.9	11.4	12.0
22	20.3	18.7	19.4	15.3	13.7	14.4	12.8	11.4	12.1	14.2	12.3	13.0
23	21.4	20.0	20.6	17.2	15.3	16.0	12.9	12.1	12.6	16.4	14.2	15.2
24	22.5	21.1	21.7	17.3	16.5	17.0	12.1	10.4	11.2	16.7	15.2	16.2
25	22.0	20.1	20.9	16.5	15.1	15.6	10.4	9.4	10.0	15.2	12.5	13.7
26	20.1	18.4	19.0	21.3	15.6	16.7	9.4	8.6	9.0	12.5	11.2	11.6
27	18.4	16.9	17.5	20.3	16.7	17.9	9.0	7.7	8.4	12.0	10.4	11.2
28	17.2	15.6	16.3	16.7	12.3	14.6	10.6	9.0	9.7	13.7	11.6	12.5
29	15.7	14.6	15.2	12.3	9.3	10.4	10.8	9.4	10.0	16.0	13.7	14.9
30	15.6	14.4	15.0	9.5	8.6	9.1	10.1	9.4	9.7	18.0	16.0	17.0
31	16.2	14.6	15.4	---	---	---	9.6	8.9	9.2	18.3	16.1	17.6
MONTH	25.0	14.4	18.9	21.3	8.6	16.5	19.0	7.7	13.0	18.3	4.8	11.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	16.1	12.2	14.0	10.6	9.2	10	20.5	18.4	19.4	26.2	24.8	25.4
2	12.2	10.8	11.4	11.2	9.4	10.7	20.7	18.8	19.6	26.2	24.8	25.5
3	11.8	10.9	11.4	9.6	7.8	8.6	20.1	18.6	19.4	26.1	25.2	25.6
4	12.0	11.6	11.8	9.3	6.4	7.8	18.6	17.4	18.0	25.9	24.8	25.3
5	11.6	10.2	11.0	10.0	6.9	8.4	18.4	16.6	17.5	26.6	24.8	25.6
6	10.2	8.8	9.5	12.2	9.5	10.7	17.7	16.3	16.9	26.7	25.1	25.8
7	8.8	7.9	8.4	14.9	12.1	13.4	17.2	16.2	16.6	26.5	25.3	25.9
8	9.2	7.8	8.5	16.7	14.7	15.7	18.1	16.7	17.3	26.6	25.2	25.9
9	10.7	8.4	9.5	17.7	15.7	16.9	19.6	17.6	18.5	26.5	25.4	26.0
10	10.6	9.9	10.3	15.9	14.0	15.0	20.6	19.3	19.9	26.5	25.6	26.1
11	10.6	9.1	9.8	15.2	14.3	14.7	20.7	19.6	20.2	26.6	25.4	26.0
12	10.1	8.4	9.3	17.4	15.0	15.9	21.3	20.2	20.7	26.8	25.5	26.1
13	11.5	9.0	10.1	17.7	14.7	16.0	21.8	20.5	21.1	26.4	23.6	24.8
14	11.5	9.2	10.3	18.6	16.4	17.5	22.0	21.0	21.5	23.6	22.0	22.5
15	12.6	9.9	11.2	20.6	18.3	19.5	22.6	21.5	21.9	22.6	21.0	21.9
16	12.3	10.5	11.4	19.9	19.0	19.3	22.7	21.9	22.2	24.1	22.2	23.1
17	11.9	9.8	10.9	20.0	18.9	19.5	23.7	22.1	22.7	23.9	22.5	23.3
18	12.6	10.8	11.6	21.7	19.8	20.6	24.2	22.5	23.2	22.5	21.1	21.6
19	15.2	12.6	13.5	22.1	20.9	21.4	24.0	22.6	23.3	21.3	19.7	20.5
20	15.3	13.7	14.5	21.5	19.1	20.4	24.2	22.9	23.5	20.6	19.2	19.9
21	15.5	13.4	14.4	19.7	18.1	18.8	24.4	23.1	23.7	20.7	19.0	19.8
22	15.0	13.6	14.2	18.3	15.9	16.9	24.4	23.2	23.8	20.9	19.6	20.3
23	14.3	12.1	13.1	17.4	14.5	15.9	24.7	23.3	23.9	22.1	20.5	21.2
24	15.0	12.0	13.5	17.6	16.0	16.7	25.2	23.5	24.2	22.2	21.2	21.7
25	15.9	13.8	14.8	18.2	16.5	17.4	24.5	23.5	23.9	23.2	21.6	22.4
26	15.1	10.7	12.6	17.4	15.1	16.1	23.6	22.3	23.0	24.0	22.6	23.3
27	10.7	8.7	9.7	17.1	14.4	15.7	24.4	22.8	23.5	24.4	23.1	23.9
28	9.5	7.9	8.8	17.2	15.6	16.3	25.2	23.6	24.3	24.7	23.6	24.2
29	---	---	---	19.2	17.1	18.3	26.0	24.2	25.0	24.5	23.3	23.8
30	---	---	---	20.7	19.1	19.8	26.4	24.5	25.3	24.4	23.1	23.8
31	---	---	---	20.8	19.3	19.9	---	---	---	24.1	23.0	23.6
MONTH	16.1	7.8	11.4	22.1	6.4	15.9	26.4	16.2	21.5	26.8	19.0	23.7

08068275 Spring Creek near Tomball, TX--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.0	23.2	24.1	25.6	24.7	25.1	29.7	27.7	28.8	26.6	25.2	25.9
2	25.3	23.7	24.6	26.3	25.0	25.5	29.7	27.7	28.8	26.8	25.4	26.1
3	25.7	24.4	25.1	26.1	24.7	25.1	30.1	27.7	28.5	26.5	25.3	25.7
4	25.9	24.6	25.3	26.1	24.6	25.2	28.8	26.9	27.6	25.7	25.0	25.3
5	26.5	24.8	25.7	26.2	25.4	25.8	28.2	26.5	27.4	26.2	25.0	25.5
6	26.6	25.4	26.0	27.3	25.4	26.2	28.5	26.2	27.5	25.9	25.0	25.4
7	26.8	25.3	26.1	27.7	25.9	26.8	29.3	26.7	27.8	26.8	24.5	25.1
8	27.1	25.6	26.4	28.2	26.5	27.3	28.2	27.0	27.5	26.3	24.9	25.2
9	27.6	26.1	26.7	27.8	26.8	27.2	28.0	26.8	27.4	26.6	24.9	25.3
10	27.5	26.2	26.8	27.7	26.0	26.7	28.3	26.8	27.6	26.1	24.6	25.3
11	26.9	26.0	26.5	27.5	25.6	26.5	29.0	26.1	27.3	26.2	24.9	25.5
12	27.6	25.9	26.7	28.3	26.4	27.2	28.3	26.3	27.3	26.3	24.9	25.6
13	27.3	26.2	26.8	27.8	25.9	27.2	27.4	26.5	26.9	26.3	24.8	25.6
14	27.7	26.3	27.0	26.6	25.3	25.8	27.2	26.2	26.6	26.0	24.8	25.4
15	27.5	25.9	26.6	25.7	24.9	25.3	26.6	22.3	24.8	25.7	24.4	24.9
16	26.5	22.8	25.5	25.5	24.8	25.1	24.5	23.2	23.8	24.5	24.0	24.2
17	25.6	24.2	24.9	25.9	24.8	25.3	25.7	23.9	24.6	25.2	24.0	24.4
18	25.7	23.9	24.8	26.8	25.4	26.1	26.9	25.7	26.2	25.8	24.7	25.2
19	25.8	24.6	25.2	27.9	25.8	26.7	27.4	26.5	27.0	26.4	24.3	25.5
20	26.4	25.1	25.8	28.3	26.6	27.3	27.4	26.6	27.1	24.9	24.3	24.6
21	26.9	25.4	26.2	28.2	26.8	27.4	27.6	26.5	27.0	24.3	22.9	23.5
22	26.8	25.5	26.2	28.6	26.8	27.6	28.2	26.0	26.7	23.4	22.2	22.9
23	26.2	25.0	25.5	28.8	27.0	27.8	26.7	25.3	26.1	23.4	22.3	22.8
24	25.8	24.9	25.2	29.0	27.4	28.2	27.1	25.6	26.2	23.3	21.9	22.6
25	25.4	24.4	24.8	29.1	27.7	28.4	27.5	26.1	26.8	23.5	22.4	22.9
26	24.6	23.8	24.2	28.7	27.7	28.3	27.7	26.6	27.1	23.5	22.4	22.9
27	25.4	24.1	24.7	28.5	27.6	28.1	27.3	26.4	26.9	23.1	22.0	22.5
28	25.0	24.5	24.7	28.4	27.4	28.0	27.2	26.1	26.6	23.1	22.2	22.6
29	24.5	24.1	24.2	28.9	27.4	28.1	26.8	25.5	26.1	23.3	22.5	22.9
30	25.0	23.9	24.4	29.7	27.5	28.7	28.6	24.9	25.7	23.8	22.7	23.2
31	---	---	---	29.6	28.2	29.0	26.8	25.1	25.8	---	---	---
MONTH	27.7	22.8	25.6	29.7	24.6	26.9	30.1	22.3	26.8	26.8	21.9	24.5
YEAR	30.1	4.8	19.7									



08068275 Spring Creek near Tomball, TX--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

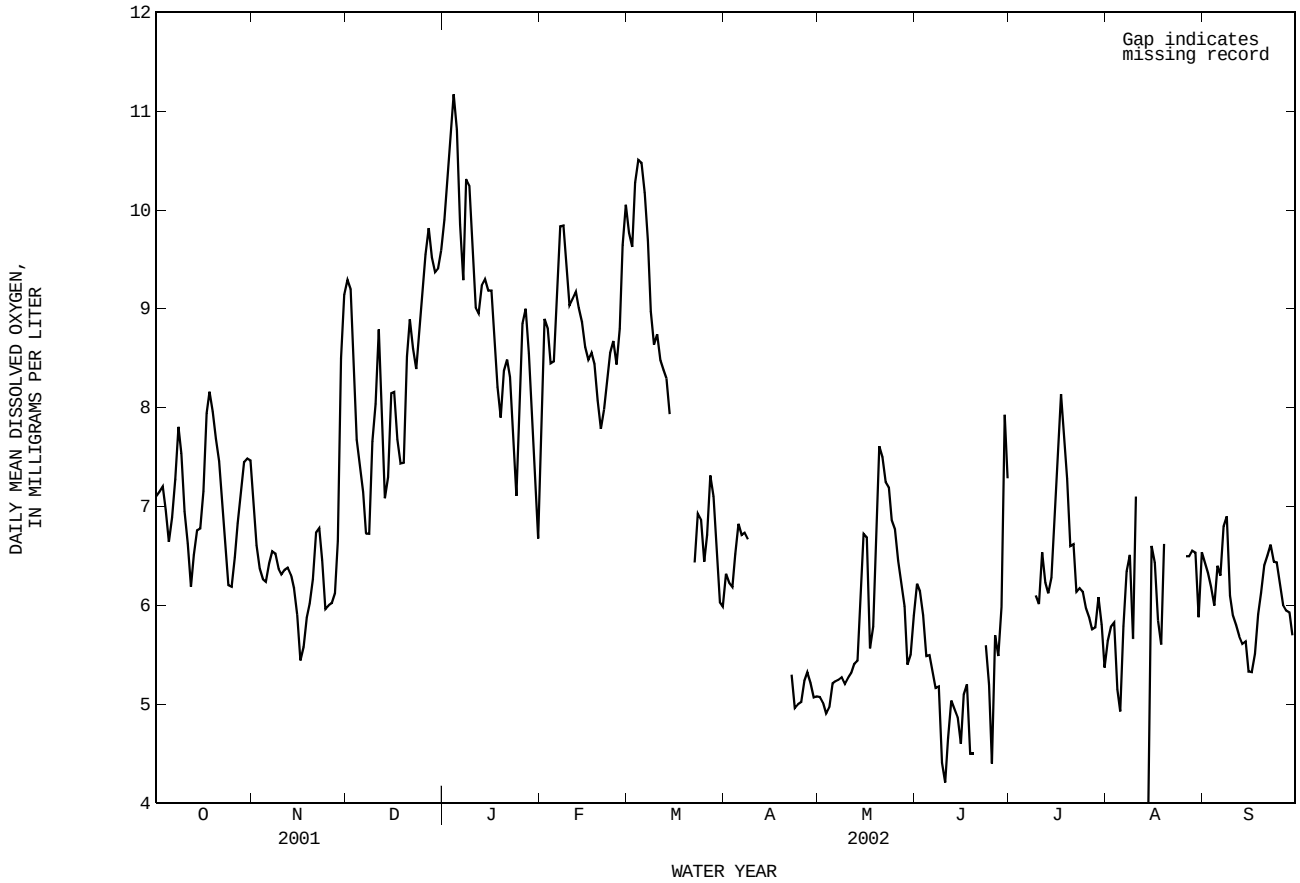
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.4	6.8	7.1	7.3	6.7	7.1	9.5	9.1	9.3	10.0	9.7	9.9
2	7.5	6.7	7.2	6.8	6.4	6.6	9.5	8.9	9.2	10.4	10.1	10.3
3	7.6	6.8	7.2	6.5	6.2	6.4	8.9	8.0	8.4	10.9	10.4	10.7
4	7.3	6.5	7.0	6.4	6.1	6.3	8.0	7.4	7.7	11.3	10.9	11.2
5	8.4	6.2	6.6	6.4	6.0	6.2	7.5	7.3	7.4	11.1	10.4	10.8
6	7.5	6.6	6.9	6.7	6.2	6.4	7.4	6.9	7.1	10.4	9.2	9.9
7	7.7	7.0	7.3	6.8	6.3	6.5	6.9	6.5	6.7	10.0	8.8	9.3
8	7.9	7.7	7.8	7.1	6.3	6.5	7.3	6.5	6.7	10.5	10.0	10.3
9	7.8	7.3	7.5	6.6	6.2	6.4	7.9	7.1	7.7	10.4	9.9	10.2
10	7.3	6.6	7.0	6.5	6.1	6.3	8.6	7.8	8.0	9.9	9.2	9.6
11	7.7	6.3	6.6	6.6	6.1	6.4	9.1	8.6	8.8	9.2	8.9	9.0
12	6.9	5.8	6.2	6.6	6.2	6.4	8.8	7.0	7.8	9.0	8.9	9.0
13	6.8	5.6	6.5	6.6	6.1	6.3	7.2	6.9	7.1	9.4	9.0	9.2
14	6.8	6.7	6.8	6.4	6.0	6.2	7.8	7.0	7.3	9.4	9.0	9.3
15	6.8	6.7	6.8	6.1	5.6	5.9	8.4	7.8	8.1	9.3	9.0	9.2
16	7.7	6.7	7.2	6.9	5.2	5.4	8.4	7.6	8.2	9.3	8.9	9.2
17	8.1	7.7	7.9	6.0	5.2	5.6	8.0	7.4	7.7	8.9	8.3	8.7
18	8.3	8.1	8.2	6.2	5.6	5.9	7.7	7.3	7.4	8.3	7.9	8.2
19	8.1	7.8	8.0	6.3	5.8	6.0	8.0	7.3	7.4	8.0	7.7	7.9
20	7.8	7.6	7.7	6.6	5.9	6.3	8.8	8.0	8.5	8.6	8.0	8.4
21	7.6	7.3	7.5	7.1	6.4	6.7	9.0	8.8	8.9	8.7	8.4	8.5
22	7.3	6.8	7.0	7.0	6.6	6.8	8.9	8.3	8.6	8.4	8.0	8.3
23	6.8	6.4	6.6	6.7	6.1	6.5	8.5	8.3	8.4	8.0	7.2	7.7
24	6.4	6.0	6.2	6.2	5.8	6.0	9.0	8.5	8.8	7.4	7.0	7.1
25	6.4	6.0	6.2	6.3	5.7	6.0	9.3	9.0	9.2	8.6	7.4	8.1
26	6.6	6.3	6.5	7.3	5.3	6.0	9.7	9.3	9.6	9.0	8.6	8.9
27	7.0	6.6	6.8	8.5	5.0	6.1	9.9	9.7	9.8	9.1	8.8	9.0
28	7.3	6.9	7.1	7.5	6.0	6.7	9.8	9.3	9.5	8.8	8.1	8.5
29	7.6	7.3	7.5	9.1	7.5	8.5	9.5	9.3	9.4	8.1	7.4	7.8
30	7.6	7.3	7.5	9.2	9.0	9.1	9.5	9.3	9.4	7.4	6.6	7.1
31	7.6	7.3	7.5	---	---	---	9.7	9.5	9.6	6.9	6.4	6.7
MONTH	8.4	5.6	7.1	9.2	5.0	6.5	9.9	6.5	8.3	11.3	6.4	9.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.6	6.8	7.6	10.1	9.5	9.8	7.0	5.9	6.3	5.7	4.5	5.1
2	9.1	8.6	8.9	10.1	9.3	9.6	6.8	5.9	6.2	5.5	4.7	5.0
3	8.9	8.6	8.8	10.8	9.8	10.3	6.8	5.8	6.2	5.3	4.5	4.9
4	8.6	8.3	8.4	10.9	10.2	10.5	7.1	6.1	6.5	5.5	4.5	5.0
5	8.6	8.4	8.5	10.9	10.2	10.5	7.4	6.2	6.8	5.9	4.7	5.2
6	9.6	8.6	9.2	10.6	9.8	10.2	7.3	6.4	6.7	5.9	4.7	5.2
7	10.0	9.5	9.8	10.3	9.3	9.7	7.0	6.3	6.7	6.0	4.8	5.2
8	9.9	9.6	9.8	9.3	8.5	9.0	8.1	5.8	6.7	6.0	4.7	5.3
9	9.6	8.6	9.4	9.4	8.1	8.6	---	---	---	5.8	4.7	5.2
10	9.1	8.6	9.0	9.5	8.2	8.7	---	---	---	6.0	4.6	5.3
11	9.2	9.0	9.1	8.8	8.2	8.5	---	---	---	6.1	4.5	5.3
12	9.2	9.0	9.2	9.2	7.9	8.4	---	---	---	6.3	4.7	5.4
13	9.1	8.8	9.0	9.0	7.9	8.3	---	---	---	6.2	4.6	5.4
14	9.0	8.7	8.9	8.5	7.4	7.9	---	---	---	7.0	5.3	6.2
15	8.8	8.4	8.6	---	---	---	---	---	---	7.6	5.8	6.7
16	8.7	8.3	8.5	---	---	---	---	---	---	7.5	5.8	6.7
17	8.8	8.4	8.6	---	---	---	---	---	---	6.8	4.9	5.6
18	8.9	8.2	8.4	---	---	---	---	---	---	6.9	4.6	5.8
19	8.3	7.8	8.1	---	---	---	---	---	---	8.0	5.9	7.0
20	8.1	7.5	7.8	---	---	---	---	---	---	8.6	6.6	7.6
21	8.2	7.8	8.0	---	---	---	---	---	---	8.1	6.8	7.5
22	8.5	8.0	8.3	7.0	5.9	6.4	5.6	4.9	5.3	7.7	6.5	7.2
23	8.8	8.3	8.6	7.5	6.6	6.9	5.2	4.8	5.0	7.7	6.5	7.2
24	8.9	8.4	8.7	7.4	6.5	6.9	5.3	4.8	5.0	7.3	6.3	6.9
25	8.7	8.3	8.4	7.2	6.2	6.4	5.3	4.8	5.0	7.5	6.1	6.8
26	9.4	8.2	8.8	7.4	6.1	6.7	5.6	5.0	5.2	6.9	5.8	6.5
27	10.2	9.2	9.6	8.0	6.9	7.3	5.8	5.1	5.3	6.8	5.5	6.2
28	10.5	9.7	10.1	7.6	6.8	7.1	5.6	5.0	5.2	6.8	5.4	6.0
29	---	---	---	7.1	6.3	6.6	5.5	4.8	5.1	7.3	4.9	5.4
30	---	---	---	6.4	5.7	6.0	5.6	4.8	5.1	6.3	4.7	5.5
31	---	---	---	6.7	5.6	6.0	---	---	---	6.6	5.3	5.9
MONTH	10.5	6.8	8.8	---	---	---	---	---	---	8.6	4.5	5.9

08068275 Spring Creek near Tomball, TX--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.1	5.5	6.2	---	---	---	6.6	4.8	5.6	6.7	6.2	6.4
2	7.2	5.4	6.1	---	---	---	6.8	4.9	5.8	6.7	6.1	6.3
3	6.9	5.4	5.9	---	---	---	10.3	4.8	5.8	6.5	5.8	6.2
4	6.6	4.6	5.5	---	---	---	6.1	4.2	5.2	6.7	4.4	6.0
5	6.9	4.5	5.5	---	---	---	6.2	3.8	4.9	6.8	4.7	6.4
6	6.6	4.6	5.3	---	---	---	7.3	4.4	5.8	7.0	5.2	6.3
7	6.4	3.8	5.2	---	---	---	8.4	4.5	6.3	9.0	4.4	6.8
8	6.5	4.4	5.2	---	---	---	8.6	5.2	6.5	7.4	6.6	6.9
9	5.3	3.9	4.4	6.6	5.2	6.1	6.8	3.8	5.7	7.5	3.7	6.1
10	5.3	3.4	4.2	6.8	5.7	6.0	8.9	5.8	7.1	6.2	5.1	5.9
11	5.5	3.0	4.7	7.0	6.1	6.5	---	---	---	6.1	5.6	5.8
12	5.8	4.2	5.0	6.7	5.9	6.2	---	---	---	6.0	5.4	5.7
13	5.7	4.1	5.0	9.5	5.5	6.1	---	---	---	6.0	5.2	5.6
14	5.4	3.8	4.9	7.0	5.5	6.3	5.1	3.0	4.0	6.2	5.2	5.6
15	5.6	3.5	4.6	7.3	6.0	7.0	9.2	4.4	6.6	6.0	5.0	5.3
16	7.4	4.2	5.1	8.6	6.9	7.6	7.1	6.0	6.4	5.9	4.9	5.3
17	5.6	4.8	5.2	8.4	7.9	8.1	6.0	5.2	5.9	6.2	5.1	5.5
18	5.2	3.8	4.5	8.2	7.2	7.8	6.2	5.4	5.6	6.5	5.3	5.9
19	5.3	3.6	4.5	7.5	6.8	7.3	6.8	6.2	6.6	8.2	5.7	6.1
20	---	---	---	7.0	6.0	6.6	---	---	---	8.1	6.1	6.4
21	---	---	---	7.1	6.3	6.6	---	---	---	6.7	6.3	6.5
22	---	---	---	6.5	5.9	6.1	---	---	---	6.7	6.4	6.6
23	6.0	3.9	5.6	6.9	5.8	6.2	---	---	---	6.6	6.3	6.4
24	6.3	4.7	5.2	6.8	5.6	6.1	---	---	---	6.7	6.2	6.4
25	5.1	3.4	4.4	6.6	5.3	6.0	---	---	---	6.4	6.0	6.2
26	6.2	4.1	5.7	6.6	5.2	5.9	6.6	6.2	6.5	6.3	5.3	6.0
27	6.2	4.9	5.5	6.5	5.1	5.8	6.6	6.4	6.5	6.2	5.6	5.9
28	7.3	5.0	6.0	6.8	5.0	5.8	6.7	6.3	6.6	6.2	5.6	5.9
29	9.6	7.2	7.9	7.5	5.1	6.1	6.8	6.3	6.5	5.9	5.4	5.7
30	8.4	5.7	7.3	7.1	5.1	5.8	8.0	2.1	5.9	---	---	---
31	---	---	---	6.2	4.6	5.4	6.9	6.4	6.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



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^2.

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.--Records good. No known regulation or diversion. No flow at times.

DISCHARGE FROM DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	0.94	30	1.0	11	22	8.2	1.6	1.7	33	3.9	e0.79
2	0.91	1.00	61	0.93	6.3	13	6.5	1.6	1.7	81	4.7	e0.75
3	0.80	0.77	53	1.0	3.8	6.2	5.0	1.6	1.7	130	6.1	1.9
4	0.64	0.67	35	1.3	2.4	3.8	3.4	1.6	1.6	63	8.9	3.1
5	51	0.72	19	38	25	3.5	2.7	1.5	1.4	31	5.8	1.2
6	128	0.79	9.6	22	34	3.3	6.2	1.4	2.8	13	2.2	2.1
7	69	0.88	5.9	15	16	3.5	7.2	1.4	1.8	8.4	4.6	40
8	40	0.57	61	10	8.9	3.8	260	1.4	1.3	6.3	5.7	28
9	15	0.52	44	7.5	5.9	3.6	139	1.3	1.3	5.0	2.4	22
10	7.6	0.39	26	5.8	3.5	1.6	81	1.3	1.2	4.2	2.0	20
11	90	0.33	136	4.3	1.9	1.4	47	1.3	1.1	3.9	1.7	8.7
12	167	0.30	318	2.9	1.6	4.5	28	1.3	1.2	4.6	4.9	5.2
13	272	0.32	231	2.3	1.3	1.2	18	1.2	1.1	37	2.1	3.5
14	177	0.48	124	1.7	1.1	1.3	13	1.2	1.1	16	1.9	2.6
15	100	1.1	73	1.3	1.1	1.4	10	1.1	0.97	43	23	2.8
16	62	5.4	69	1.1	1.5	1.5	9.2	1.4	42	62	24	2.9
17	29	1.3	82	1.1	1.1	1.3	8.9	9.7	7.1	65	13	12
18	13	0.61	64	1.2	1.0	1.4	8.2	3.2	4.7	29	4.9	13
19	8.3	0.49	46	1.3	22	5.4	7.6	1.7	4.0	19	3.7	82
20	4.4	0.35	25	1.1	40	36	7.3	1.3	3.4	15	2.8	271
21	2.5	0.34	14	1.0	22	12	6.9	1.2	2.9	11	2.2	82
22	1.9	0.27	26	0.93	14	10	6.9	1.2	2.7	9.4	28	42
23	1.5	0.29	13	0.90	9.1	8.7	6.5	1.4	1.9	7.0	25	17
24	1.4	0.29	8.8	13	5.4	7.7	5.9	1.2	1.7	5.2	4.5	7.9
25	0.89	0.26	5.8	4.3	3.4	14	3.9	1.3	12	4.3	3.4	4.7
26	0.79	29	2.9	1.8	3.6	27	3.0	1.2	10	3.8	2.6	3.5
27	0.70	114	2.1	1.6	5.0	16	2.3	1.2	16	3.6	2.1	2.3
28	0.60	106	1.9	1.4	1.9	13	2.0	1.2	12	4.1	1.7	1.9
29	0.50	73	1.6	1.4	---	12	1.8	5.3	55	4.9	1.3	1.5
30	1.4	52	1.4	1.8	---	10	1.7	5.5	72	4.2	1.0	1.2
31	1.2	---	1.2	19	---	9.6	---	5.7	---	3.8	0.91	---
TOTAL	1250.03	393.38	1591.2	167.96	253.8	259.7	717.3	64.5	269.37	730.7	201.01	687.54
MEAN	40.32	13.11	51.33	5.418	9.064	8.377	23.91	2.081	8.979	23.57	6.484	22.92
MAX	272	114	318	38	40	36	260	9.7	72	130	28	271
MIN	0.50	0.26	1.2	0.90	1.0	1.2	1.7	1.1	0.97	3.6	0.91	0.75
AC-FT	2480	780	3160	333	503	515	1420	128	534	1450	399	1360

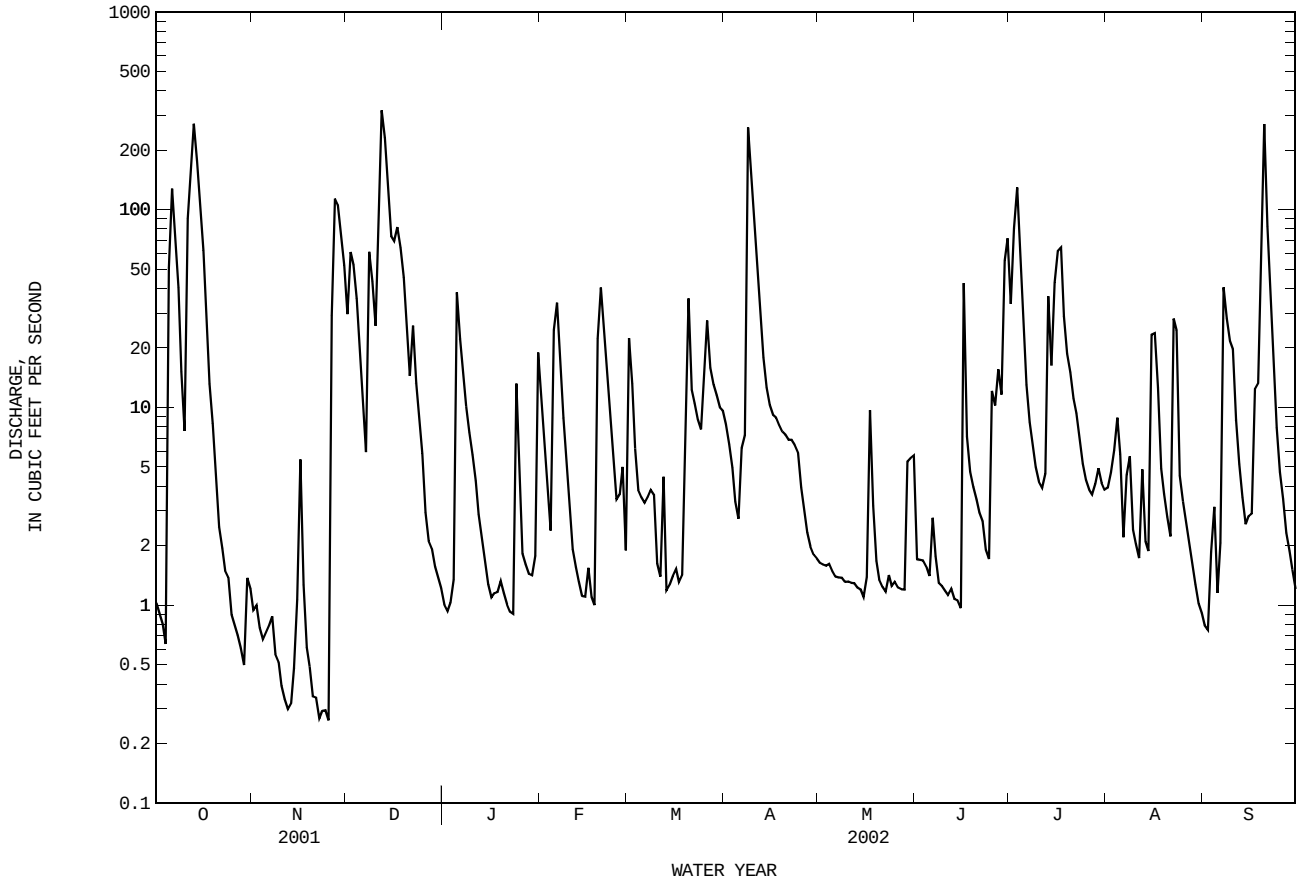
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

MEAN	14.25	20.06	21.99	11.46	4.395	26.99	14.28	27.19	67.63	12.35	2.425	14.58
MAX	40.3	43.3	51.3	26.9	9.06	88.5	23.9	62.7	243	23.6	6.48	27.6
(WY)	2002	2001	2002	2001	2002	2001	2002	2000	2001	2002	2002	2001
MIN	0.77	3.74	3.67	2.06	1.44	1.12	2.13	2.08	4.29	2.47	0.17	2.18
(WY)	2000	2000	2000	2000	2000	2000	1999	2002	2000	2000	2000	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1999 - 2002	
ANNUAL TOTAL	16399.20		6586.49			
ANNUAL MEAN	44.93		18.05		22.54	
HIGHEST ANNUAL MEAN					40.7	2001
LOWEST ANNUAL MEAN					8.91	2000
HIGHEST DAILY MEAN	3240	Jun 9	318	Dec 12	3240	Jun 9 2001
LOWEST DAILY MEAN	0.26	Nov 25	0.26	Nov 25	0.00	Aug 20 2000
ANNUAL SEVEN-DAY MINIMUM	0.33	Nov 19	0.33	Nov 19	0.00	Aug 23 2000
MAXIMUM PEAK FLOW			1200	Dec 11	4980	Jun 8 2001
MAXIMUM PEAK STAGE			12.80	Dec 11	17.28	Jun 8 2001
ANNUAL RUNOFF (AC-FT)	32530		13060		16330	
10 PERCENT EXCEEDS	101		51		48	
50 PERCENT EXCEEDS	3.5		3.9		2.0	
90 PERCENT EXCEEDS	0.58		0.99		0.35	

e Estimated

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^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Aug. 1974 to Sept. 1976, 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 dicharges, which are fair. No known regulation or diversions. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	4.5	32	7.9	20	32	5.9	7.6	7.2	53	4.8	3.6
2	3.9	4.7	113	7.5	12	17	5.9	7.7	6.6	107	4.7	4.3
3	3.9	4.3	83	7.7	8.9	8.3	5.6	7.7	6.4	240	5.6	6.2
4	4.2	3.8	46	7.8	7.3	6.7	5.1	7.3	6.0	116	12	11
5	56	4.3	29	61	30	6.1	5.1	7.0	5.7	51	12	6.1
6	201	4.3	22	32	46	6.0	6.6	7.0	7.7	21	5.4	7.8
7	66	4.2	18	20	21	6.0	8.0	7.0	6.9	14	12	105
8	34	4.1	126	16	14	6.3	460	6.9	5.6	11	20	69
9	17	4.1	88	14	11	7.0	266	7.0	5.5	8.4	7.0	42
10	11	3.7	47	13	8.8	5.4	163	7.0	5.8	6.9	5.3	35
11	169	3.5	205	12	7.2	5.4	77	6.6	5.6	6.3	4.8	18
12	237	3.7	683	11	6.3	7.9	34	6.3	5.6	6.3	12	12
13	433	3.7	283	9.3	5.9	5.3	18	6.5	6.0	105	6.4	9.4
14	208	3.6	152	8.7	5.7	5.2	14	6.3	5.2	36	6.6	7.2
15	116	4.3	88	7.9	5.8	5.2	12	5.9	5.1	97	64	7.7
16	57	14	79	7.1	5.9	5.4	11	6.5	106	150	71	9.4
17	27	5.3	136	7.2	6.0	4.9	10	25	17	152	41	47
18	16	3.8	74	6.9	6.2	5.1	9.3	14	9.3	47	12	59
19	12	3.7	43	6.7	45	7.3	9.2	7.1	8.7	26	8.6	81
20	9.4	3.6	26	6.0	66	61	8.9	6.1	7.2	22	6.9	e420
21	7.8	3.5	20	6.1	21	11	8.7	6.0	6.6	15	5.7	239
22	7.3	3.5	33	5.8	15	7.6	8.9	5.7	5.7	13	68	149
23	6.7	3.7	21	5.9	11	6.2	9.2	6.3	6.0	9.8	87	78
24	6.6	3.5	16	21	8.8	5.9	9.1	6.2	6.1	8.2	11	30
25	5.6	3.2	13	11	7.7	14	9.0	6.1	30	7.3	8.3	15
26	5.2	63	12	6.9	7.4	36	8.7	5.8	23	6.4	6.8	10
27	5.1	228	11	6.3	8.0	11	8.4	5.7	30	5.7	5.9	8.6
28	4.4	181	9.9	6.2	6.2	8.6	8.0	6.0	26	5.5	5.1	6.4
29	3.9	114	9.1	6.0	---	7.8	7.9	16	100	6.2	4.6	5.1
30	5.0	55	8.5	6.4	---	6.9	7.8	14	148	5.5	3.6	3.9
31	5.3	---	7.8	31	---	6.5	---	20	---	5.1	3.8	---
TOTAL	1748.2	749.6	2534.3	382.3	424.1	335.0	1220.3	260.3	620.5	1363.6	531.9	1505.7
MEAN	56.39	24.99	81.75	12.33	15.15	10.81	40.68	8.397	20.68	43.99	17.16	50.19
MAX	433	228	683	61	66	61	460	25	148	240	87	420
MIN	3.9	3.2	7.8	5.8	5.7	4.9	5.1	5.7	5.1	5.1	3.6	3.6
AC-FT	3470	1490	5030	758	841	664	2420	516	1230	2700	1060	2990

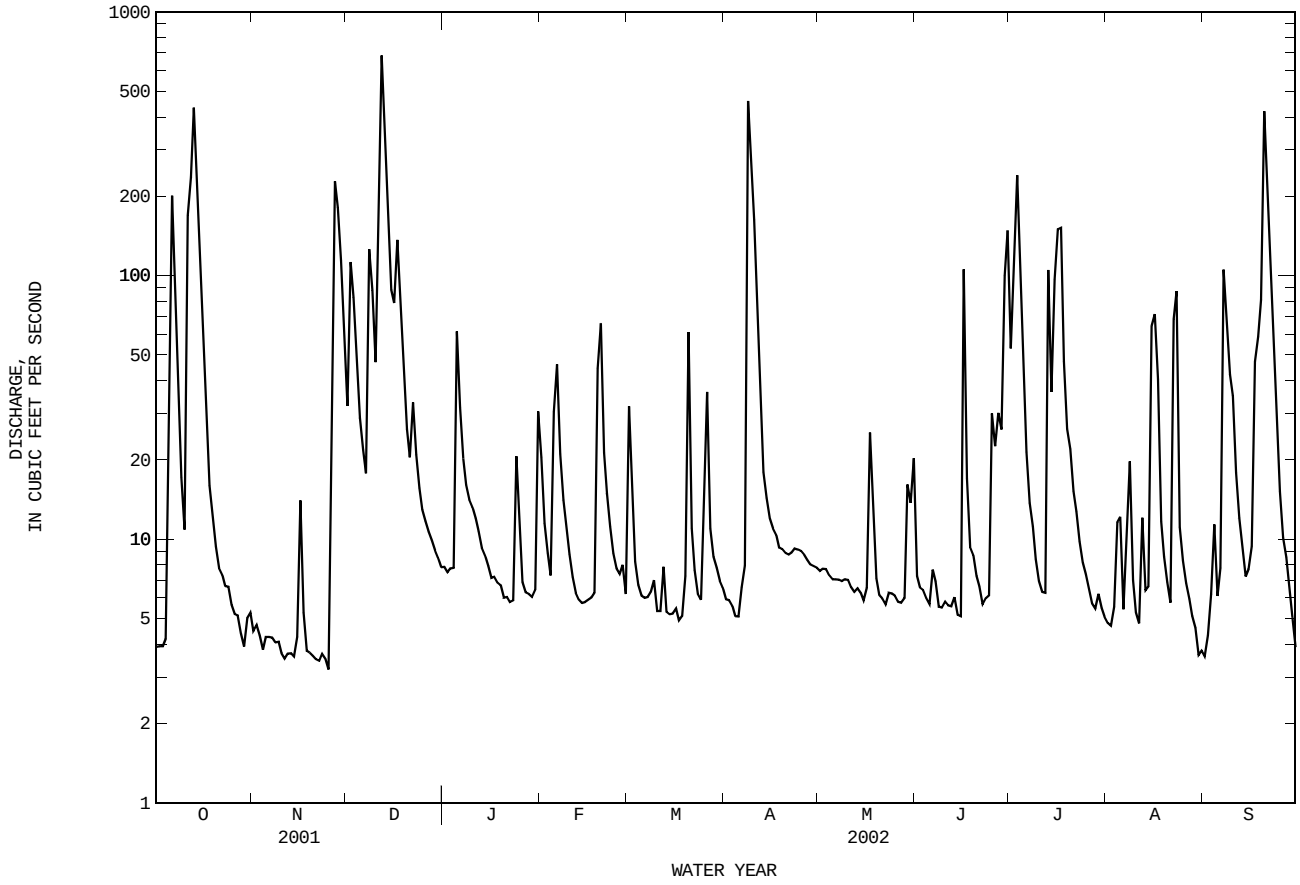
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2002h, BY WATER YEAR (WY)

MEAN	17.03	39.10	36.57	16.59	13.79	28.69	32.10	37.54	73.28	16.73	6.146	17.06
MAX	56.4	96.1	81.8	41.9	42.6	124	80.5	109	343	44.0	17.2	50.2
(WY)	2002	1975	2002	2001	1975	2001	1975	2000	2001	2002	2002	2002
MIN	1.04	1.70	6.50	0.81	0.27	1.36	1.50	7.43	10.5	2.85	1.78	0.15
(WY)	1976	1976	1976	1976	1976	1976	1976	1976	1975	1976	1975	1975

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1974 - 2002h		
ANNUAL TOTAL	24397.6		11675.8				
ANNUAL MEAN	66.84		31.99		35.62		
HIGHEST ANNUAL MEAN					60.3		2001
LOWEST ANNUAL MEAN					19.4		2000
HIGHEST DAILY MEAN	4590	Jun 9	683	Dec 12	4590	Jun 9	2001
LOWEST DAILY MEAN	3.2	Nov 25	3.2	Nov 25	0.00	Aug 1	1974
ANNUAL SEVEN-DAY MINIMUM	3.5	Nov 19	3.5	Nov 19	0.00	Aug 17	1974
MAXIMUM PEAK FLOW			1440	Dec 12	9040	Jun 9	2001
MAXIMUM PEAK STAGE			9.61	Dec 12	15.35	Jun 9	2001
ANNUAL RUNOFF (AC-FT)	48390		23160		25800		
10 PERCENT EXCEEDS	153		85		79		
50 PERCENT EXCEEDS	10		7.9		6.3		
90 PERCENT EXCEEDS	4.3		4.8		0.98		

e Estimated
h See PERIOD OF RECORD paragraph.

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



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 good. Interruption in the record was 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 units, Sept. 1, 2000; minimum, 6.2 units, Aug. 22, 23, 2002.
WATER TEMPERATURES: Maximum, 32.1°C, July 28, 1999; minimum, 5.9°C, Jan. 20, 2001.
DISSOLVED OXYGEN: Maximum, 12.0 mg/L, Jan. 2, 2001; minimum, 0.0 mg/L, Aug. 28, 29, Sept. 12, 2000.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 931 microsiemens/cm, May 15; minimum, 87 microsiemens/cm, Dec. 12.
pH: Maximum, 8.5 units, Sept. 30; minimum, 6.2 units, Aug. 22, 23.
WATER TEMPERATURE: Maximum, 31.9°C, July 22; minimum, 8.6°C, Jan. 8, Feb. 7.
DISSOLVED OXYGEN: Maximum, 10.8 mg/L, Jan. 8; minimum, 0.5 mg/L, Mar. 30.

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	828	596	725	775	536	717	326	237	291	698	527	640
2	798	592	749	791	577	733	347	189	245	714	533	666
3	802	595	760	819	612	764	248	201	223	708	587	678
4	866	549	782	832	612	738	304	236	271	739	577	671
5	851	131	566	834	642	781	365	264	322	719	203	437
6	192	111	143	836	643	778	415	260	368	283	204	244
7	240	185	210	820	615	770	465	342	421	345	244	304
8	295	205	253	855	635	787	482	195	298	395	290	347
9	343	238	303	821	623	778	269	207	238	448	259	379
10	356	278	328	842	640	773	326	245	290	497	337	440
11	361	89	220	850	649	789	375	88	291	523	370	470
12	146	103	126	861	655	808	108	87	97	559	379	479
13	141	111	120	871	691	810	103	93	96	599	420	531
14	117	107	112	867	704	820	128	103	114	632	464	581
15	149	113	129	838	621	757	167	124	140	717	513	630
16	214	139	173	836	419	620	212	155	179	698	506	639
17	295	166	235	709	519	627	156	137	146	718	540	658
18	377	191	321	776	577	709	180	141	158	730	531	668
19	442	248	374	802	633	757	228	169	199	709	528	639
20	514	294	435	858	653	787	279	204	248	683	543	644
21	575	338	492	845	669	802	334	245	297	724	571	676
22	642	380	553	897	704	828	362	237	301	723	601	686
23	651	448	587	872	677	820	361	257	311	731	555	673
24	680	462	622	869	671	807	416	284	365	707	369	541
25	733	496	654	869	691	820	476	340	424	529	283	407
26	762	476	693	864	143	638	524	385	477	621	287	529
27	798	514	710	172	133	150	566	413	514	628	448	564
28	810	564	737	193	157	173	574	439	530	649	484	599
29	810	582	754	235	190	213	643	443	536	651	526	602
30	819	588	711	277	215	251	654	462	581	642	443	587
31	768	534	665	---	---	---	670	497	588	618	285	478
MONTH	866	89	459	897	133	687	670	87	308	739	203	551

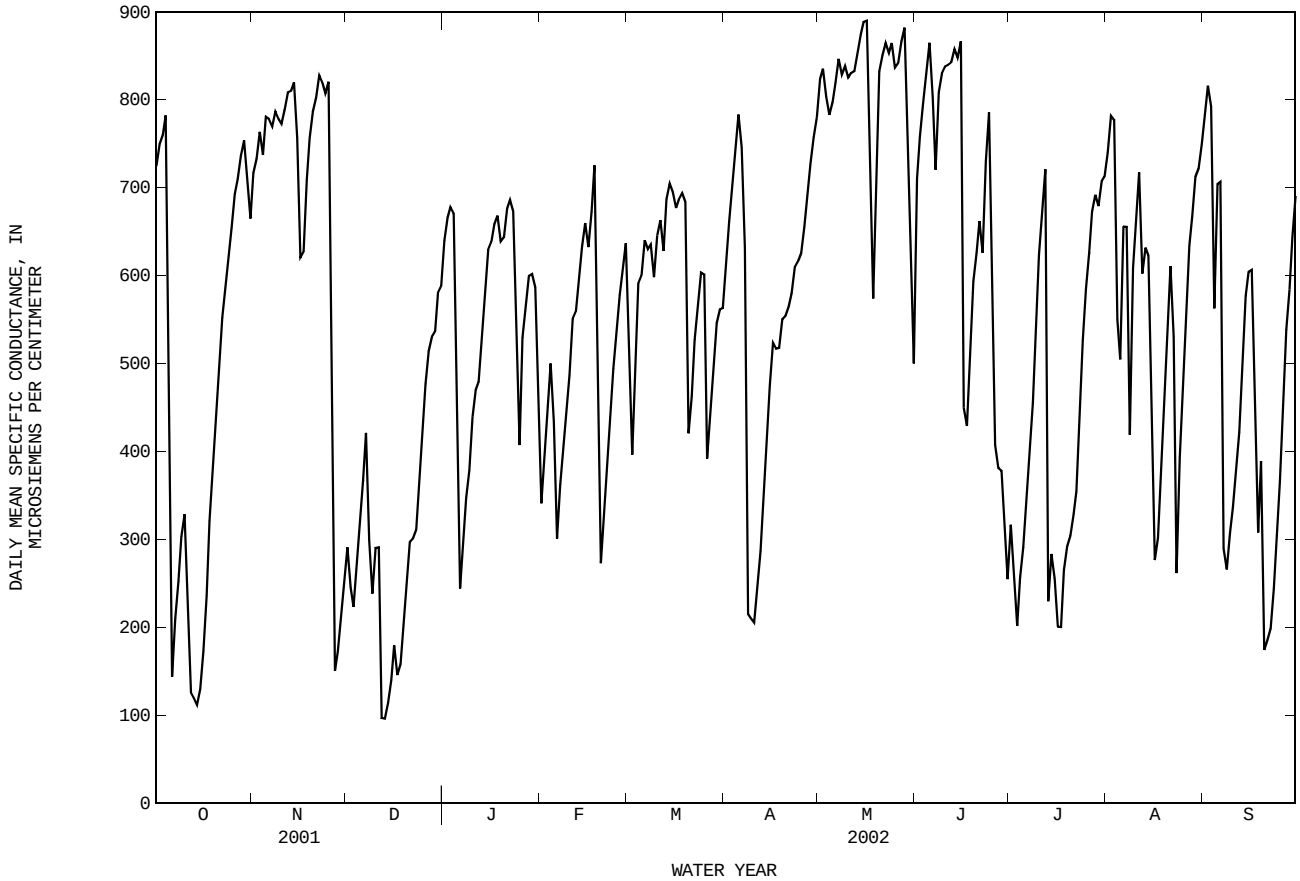
08068400 Panther Branch at Gosling Road, The Woodlands, TX--Continued

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	400	276	341	730	294	545	654	500	609	880	695	824
2	467	322	403	484	317	396	723	546	662	877	681	835
3	512	360	457	587	414	506	767	578	700	859	682	804
4	555	420	500	624	501	591	797	594	741	828	673	783
5	559	287	434	644	506	600	860	645	783	846	680	797
6	338	257	301	672	541	640	840	560	746	853	726	819
7	473	301	362	685	415	630	708	538	632	879	754	847
8	455	331	406	675	522	635	702	152	215	861	732	829
9	488	365	446	655	511	598	222	198	210	871	748	838
10	551	399	487	716	528	646	218	193	205	863	715	825
11	603	438	551	706	550	663	283	208	243	884	723	830
12	618	497	559	702	523	628	344	236	287	870	733	833
13	677	515	592	752	582	687	401	277	348	895	725	854
14	681	488	633	739	581	705	466	315	404	912	764	874
15	699	541	660	748	592	695	541	373	476	931	781	889
16	685	509	633	737	588	677	568	422	524	922	791	890
17	797	524	673	745	576	687	585	339	517	874	422	709
18	832	577	725	740	586	694	568	443	518	745	452	574
19	799	207	573	748	541	684	618	451	551	843	596	730
20	324	211	273	733	275	421	605	448	554	886	707	832
21	382	293	342	536	324	463	618	456	565	900	726	851
22	436	324	394	581	419	527	619	482	580	916	738	865
23	541	350	440	626	455	564	657	500	610	906	722	853
24	556	387	495	661	486	603	656	487	616	902	737	865
25	591	440	538	677	360	601	673	499	626	886	717	837
26	658	486	578	448	335	392	718	511	656	890	734	842
27	688	473	608	496	377	446	758	545	691	905	740	866
28	706	468	637	550	375	500	787	592	728	912	768	882
29	---	---	---	586	449	546	801	636	758	922	499	727
30	---	---	---	606	471	561	826	665	780	777	346	625
31	---	---	---	618	484	563	---	---	---	692	346	500
MONTH	832	207	501	752	275	584	860	152	551	931	346	804

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	790	570	711	359	291	316	801	612	741	831	724	784
2	828	615	758	343	142	265	826	660	782	864	718	816
3	847	664	796	254	143	201	830	574	777	871	276	792
4	873	694	828	274	237	256	680	397	550	691	305	563
5	907	736	865	341	254	291	666	388	505	801	444	704
6	915	485	803	404	279	344	722	564	656	811	494	707
7	830	570	720	441	317	399	778	290	655	515	204	290
8	843	697	809	503	367	455	586	292	419	306	221	266
9	871	729	830	603	418	530	692	483	609	331	272	307
10	867	726	838	698	511	624	719	519	658	371	278	336
11	867	733	840	722	532	674	807	564	718	425	325	382
12	875	748	843	808	366	721	828	325	602	471	319	422
13	909	763	858	461	155	230	746	517	632	592	378	506
14	900	777	848	376	213	283	760	505	623	648	444	577
15	909	805	867	413	145	256	762	247	467	683	524	604
16	906	208	450	249	136	201	379	190	276	717	476	606
17	533	312	429	245	150	200	404	215	302	606	188	434
18	575	427	504	302	223	265	481	329	397	401	203	308
19	657	471	594	311	254	292	549	360	466	441	297	389
20	667	518	625	349	255	304	604	438	544	201	131	174
21	704	553	662	350	279	328	684	516	611	201	177	185
22	727	459	626	404	285	355	767	137	531	224	178	198
23	791	607	730	500	336	441	362	156	261	282	209	244
24	835	665	786	607	413	526	456	322	393	359	243	309
25	805	297	588	646	452	585	541	361	468	445	289	366
26	549	302	407	692	492	626	632	420	555	612	297	469
27	532	216	381	733	541	673	699	486	635	629	405	539
28	488	243	378	752	547	692	735	538	667	645	447	584
29	467	173	314	735	530	679	781	583	713	723	499	644
30	308	188	254	752	607	707	794	643	722	778	211	691
31	---	---	---	785	586	713	807	654	750	---	---	---
MONTH	915	173	665	808	136	433	830	137	570	871	131	473
YEAR	931	87	549									

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



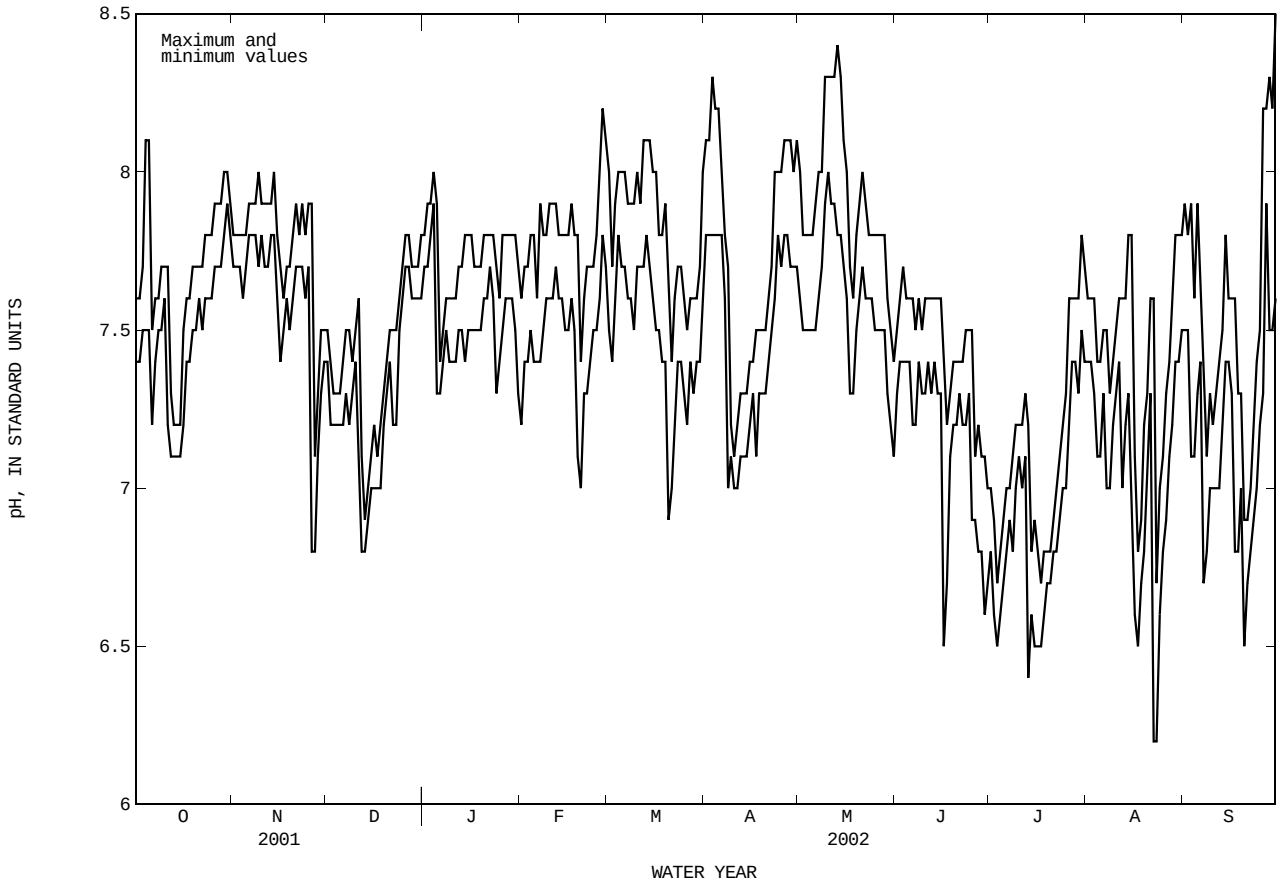
PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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

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

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.1	7.8	8.0	7.6	7.5	7.3	7.0	6.8	7.6	7.4	7.9	7.5
2	8.1	7.8	7.8	7.5	7.6	7.4	6.9	6.6	7.6	7.4	7.8	7.5
3	8.3	7.8	7.8	7.5	7.7	7.4	6.7	6.5	7.6	7.3	7.9	7.1
4	8.2	7.8	7.8	7.5	7.6	7.4	6.8	6.6	7.4	7.1	7.6	7.1
5	8.2	7.8	7.8	7.5	7.6	7.4	6.9	6.7	7.4	7.1	7.9	7.3
6	8.0	7.8	7.9	7.5	7.6	7.2	7.0	6.8	7.5	7.3	7.7	7.4
7	7.8	7.6	8.0	7.6	7.5	7.2	7.0	6.9	7.5	7.0	7.4	6.7
8	7.7	7.0	8.0	7.7	7.6	7.4	7.1	6.8	7.3	7.0	7.1	6.8
9	7.2	7.1	8.3	7.9	7.5	7.3	7.2	7.0	7.4	7.2	7.3	7.0
10	7.1	7.0	8.3	8.0	7.6	7.3	7.2	7.1	7.5	7.3	7.2	7.0
11	7.2	7.0	8.3	7.9	7.6	7.4	7.2	7.0	7.6	7.4	7.3	7.0
12	7.3	7.1	8.3	7.9	7.6	7.3	7.3	7.1	7.6	7.0	7.4	7.0
13	7.3	7.1	8.4	7.8	7.6	7.4	7.2	6.4	7.6	7.2	7.5	7.2
14	7.3	7.1	8.3	7.8	7.6	7.3	6.8	6.6	7.8	7.3	7.8	7.4
15	7.4	7.2	8.1	7.7	7.6	7.3	6.9	6.5	7.8	6.9	7.6	7.4
16	7.4	7.3	8.0	7.6	7.4	6.5	6.8	6.5	7.1	6.6	7.6	7.3
17	7.5	7.1	7.7	7.3	7.2	6.7	6.7	6.5	6.8	6.5	7.6	6.8
18	7.5	7.3	7.6	7.3	7.3	7.1	6.8	6.6	6.9	6.7	7.3	6.8
19	7.5	7.3	7.8	7.5	7.4	7.2	6.8	6.7	7.2	6.8	7.3	7.0
20	7.5	7.3	7.9	7.6	7.4	7.2	6.8	6.7	7.3	7.0	6.9	6.5
21	7.6	7.4	8.0	7.7	7.4	7.3	6.9	6.8	7.6	7.3	6.9	6.7
22	7.7	7.5	7.9	7.6	7.4	7.2	7.0	6.8	7.6	6.2	7.0	6.8
23	8.0	7.6	7.8	7.6	7.5	7.2	7.1	6.9	6.7	6.2	7.2	6.9
24	8.0	7.8	7.8	7.6	7.5	7.3	7.2	7.0	7.0	6.6	7.4	7.0
25	8.0	7.7	7.8	7.5	7.5	6.9	7.3	7.0	7.1	6.8	7.5	7.2
26	8.1	7.8	7.8	7.5	7.1	6.9	7.6	7.2	7.3	6.9	8.2	7.3
27	8.1	7.8	7.8	7.5	7.2	6.8	7.6	7.4	7.4	7.1	8.2	7.9
28	8.1	7.7	7.8	7.5	7.1	6.8	7.6	7.4	7.6	7.2	8.3	7.5
29	8.0	7.7	7.6	7.3	7.1	6.6	7.6	7.3	7.8	7.4	8.2	7.5
30	8.1	7.7	7.5	7.2	7.0	6.7	7.8	7.5	7.8	7.4	8.5	7.6
31	---	---	7.4	7.1	---	---	7.7	7.4	7.8	7.5	---	---
MONTH	8.3	7.0	8.4	7.1	7.7	6.5	7.8	6.4	7.8	6.2	8.5	6.5
YEAR	8.5	6.2										



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

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

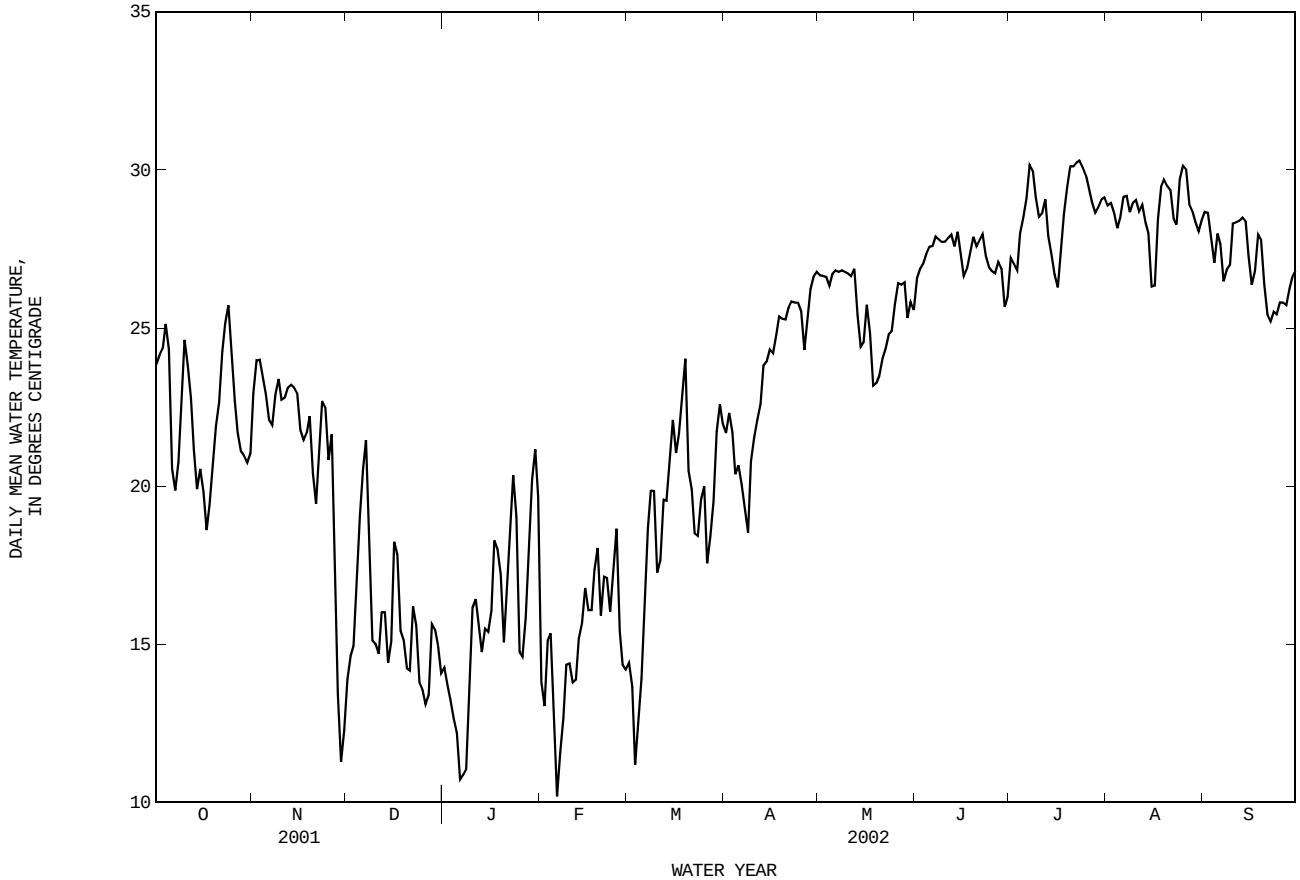
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	26.3	22.3	23.8	24.6	21.4	22.9	15.6	11.9	13.9	15.3	12.6	14.3
2	26.1	22.3	24.2	25.3	22.8	24.0	15.5	14.0	14.6	15.3	11.5	13.7
3	26.0	22.8	24.4	25.5	22.8	24.0	16.2	13.7	15.0	14.4	11.2	13.2
4	26.8	23.5	25.1	25.2	21.7	23.4	18.7	15.7	17.0	13.9	10.3	12.7
5	25.7	22.2	24.3	24.5	21.4	22.9	20.5	17.7	19.1	14.6	10.0	12.2
6	22.2	19.9	20.6	24.2	20.3	22.1	21.7	19.1	20.6	12.2	8.9	10.7
7	21.7	18.0	19.9	23.6	19.8	21.9	22.3	20.3	21.5	12.2	8.9	10.9
8	23.0	18.7	20.8	24.7	21.4	22.9	22.1	15.4	18.3	13.2	8.6	11.0
9	24.3	21.1	22.7	24.7	22.0	23.4	15.9	14.1	15.1	15.8	10.2	13.3
10	26.1	23.3	24.6	23.9	21.5	22.7	16.1	13.6	15.0	17.6	14.2	16.2
11	25.7	22.4	23.8	24.1	21.7	22.8	15.3	13.8	14.7	17.5	15.3	16.4
12	23.8	22.0	22.8	24.4	21.8	23.1	17.0	14.7	16.0	16.6	14.1	15.7
13	23.3	19.6	21.2	24.2	21.8	23.2	16.7	14.3	16.0	15.9	12.7	14.8
14	21.8	18.1	19.9	24.4	22.1	23.1	16.2	12.8	14.4	16.6	13.4	15.5
15	22.6	18.4	20.5	23.7	21.9	22.9	16.9	14.0	15.1	17.5	13.0	15.4
16	21.7	18.5	19.8	23.4	20.5	21.8	20.0	16.9	18.2	17.5	13.6	16.1
17	20.2	16.6	18.6	22.6	20.2	21.5	19.7	15.9	17.8	20.0	16.7	18.3
18	21.0	16.4	19.4	23.3	20.4	21.7	17.0	13.7	15.4	19.2	16.6	18.0
19	22.2	18.3	20.6	23.5	21.4	22.2	16.1	14.0	15.1	18.4	15.8	17.2
20	23.7	19.7	21.9	21.4	19.1	20.4	15.6	12.6	14.2	15.9	13.6	15.1
21	24.1	20.6	22.7	21.1	17.9	19.4	15.6	12.2	14.2	18.5	15.3	17.0
22	25.4	22.6	24.3	22.9	19.7	21.1	17.7	14.9	16.2	19.6	17.0	18.3
23	26.1	23.9	25.2	24.0	21.8	22.7	17.0	14.3	15.6	21.4	19.3	20.3
24	26.6	24.7	25.7	23.7	21.2	22.5	15.2	12.1	13.8	21.2	15.6	19.0
25	25.6	22.7	24.2	22.3	19.9	20.8	14.5	12.1	13.6	16.2	13.2	14.8
26	24.2	20.2	22.7	23.5	20.9	21.6	13.9	11.3	13.1	15.9	12.7	14.6
27	23.7	19.4	21.7	21.2	16.0	18.7	15.3	11.0	13.4	17.4	13.7	15.8
28	22.9	19.2	21.1	16.0	12.2	13.4	17.0	14.0	15.7	19.4	16.2	17.9
29	23.0	18.8	21.0	12.2	10.4	11.3	16.3	14.1	15.5	21.7	19.1	20.2
30	23.4	19.2	20.8	14.3	10.0	12.3	16.4	13.4	15.0	22.0	20.0	21.2
31	23.1	18.9	21.0	---	---	---	15.1	12.8	14.1	21.8	15.7	19.7
MONTH	26.8	16.4	22.2	25.5	10.0	21.2	22.3	11.0	15.7	22.0	8.6	15.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	15.7	13.1	13.8	15.6	13.3	14.4	23.6	20.0	21.7	28.6	25.4	26.7
2	15.0	10.8	13.1	14.5	12.5	13.7	23.6	21.3	22.3	28.3	25.5	26.6
3	16.2	13.5	15.1	12.5	8.7	11.2	22.6	20.7	21.7	27.8	25.8	26.6
4	15.9	14.3	15.3	14.3	9.7	12.6	21.7	19.1	20.4	27.8	25.4	26.3
5	15.5	10.3	12.8	15.9	11.3	13.9	22.9	18.9	20.7	28.4	25.6	26.7
6	10.9	9.4	10.2	18.4	14.7	16.5	21.0	18.7	20.0	28.8	25.6	26.8
7	17.4	8.6	11.6	20.3	16.9	18.7	20.8	18.1	19.3	28.2	25.8	26.8
8	14.9	9.9	12.7	20.5	18.9	19.9	20.8	17.1	18.5	28.8	25.6	26.8
9	16.8	11.5	14.4	20.8	18.1	19.8	23.6	18.5	20.8	28.2	25.7	26.8
10	16.4	12.9	14.4	18.8	15.4	17.3	23.9	19.6	21.5	28.6	25.5	26.7
11	15.3	11.2	13.8	18.6	16.5	17.7	24.6	20.1	22.1	28.4	25.5	26.6
12	15.6	11.7	13.9	23.8	17.1	19.6	25.5	21.2	22.6	28.8	25.6	26.9
13	16.6	13.2	15.2	21.7	17.7	19.5	25.7	21.5	23.8	26.8	24.1	25.4
14	17.2	13.4	15.7	22.4	19.3	20.7	25.2	22.3	23.9	26.7	22.6	24.4
15	18.6	14.9	16.8	23.4	21.2	22.1	25.4	23.2	24.3	27.2	22.3	24.5
16	17.1	14.4	16.1	21.9	20.4	21.1	24.7	23.6	24.2	27.9	24.2	25.7
17	18.2	14.0	16.1	22.7	20.8	21.7	26.1	23.7	24.8	26.1	23.3	24.8
18	19.5	15.2	17.4	24.3	21.9	22.9	26.7	24.1	25.4	24.8	21.9	23.2
19	19.5	15.7	18.0	27.7	22.3	24.0	26.3	24.2	25.3	25.7	21.2	23.3
20	18.1	13.6	15.9	23.5	19.1	20.5	26.2	24.4	25.3	25.9	21.5	23.5
21	19.0	14.9	17.1	21.7	17.5	19.9	27.1	24.6	25.7	26.9	21.9	24.0
22	18.3	15.4	17.1	20.6	16.3	18.5	26.8	24.9	25.8	26.4	22.6	24.4
23	17.9	13.4	16.0	20.2	16.3	18.4	27.2	24.6	25.8	26.5	23.5	24.8
24	19.3	14.7	17.2	20.6	18.6	19.6	26.9	24.8	25.8	26.3	23.7	24.9
25	19.8	17.2	18.7	20.9	17.6	20.0	26.1	24.7	25.5	27.9	24.2	25.8
26	18.3	13.5	15.4	19.6	15.2	17.6	25.4	23.1	24.3	28.5	25.0	26.4
27	20.7	10.7	14.4	20.5	15.6	18.4	26.8	24.1	25.2	28.1	25.0	26.4
28	15.2	11.2	14.2	21.0	17.6	19.5	27.9	25.0	26.2	28.0	25.3	26.4
29	---	---	---	22.7	20.7	21.7	28.4	25.4	26.6	26.4	24.3	25.3
30	---	---	---	23.6	21.8	22.6	28.7	25.4	26.8	28.0	24.2	25.8
31	---	---	---	22.9	21.0	22.0	---	---	---	27.3	23.9	25.6
MONTH	20.7	8.6	15.1	27.7	8.7	18.9	28.7	17.1	23.5	28.8	21.2	25.6

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

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.7	24.9	26.6	28.4	26.3	27.2	30.7	27.4	28.9	30.5	27.1	28.7
2	28.8	25.2	26.8	28.6	25.3	27.0	31.0	27.4	28.9	30.1	27.4	28.6
3	28.8	25.7	27.0	29.2	25.0	26.8	30.4	27.7	28.6	28.9	26.8	27.8
4	29.1	26.0	27.3	29.9	26.4	28.0	29.9	26.6	28.2	28.2	26.0	27.1
5	29.6	26.0	27.6	29.9	27.1	28.5	30.2	26.8	28.5	30.0	26.7	28.0
6	28.8	26.2	27.6	31.3	27.1	29.1	30.8	27.7	29.1	28.6	27.0	27.6
7	29.7	26.5	27.9	31.6	28.9	30.2	31.1	27.8	29.2	27.7	25.3	26.5
8	29.6	26.5	27.8	31.1	28.8	30.0	29.5	27.7	28.7	27.7	26.0	26.8
9	29.3	26.5	27.7	30.3	28.4	29.1	30.3	27.9	29.0	27.9	26.2	27.0
10	29.5	26.4	27.7	29.7	27.4	28.5	30.5	28.1	29.0	29.7	25.9	28.3
11	29.6	26.4	27.8	30.2	27.4	28.6	30.8	27.2	28.7	30.1	26.5	28.3
12	29.8	26.4	27.9	30.6	27.2	29.1	30.3	27.7	28.9	29.7	26.8	28.4
13	29.4	26.1	27.6	29.3	26.9	27.9	29.1	27.8	28.3	30.2	26.7	28.5
14	30.0	26.5	28.0	28.3	26.3	27.3	29.5	26.8	28.0	29.9	26.7	28.4
15	29.1	25.6	27.3	28.1	25.3	26.7	27.9	24.9	26.3	28.5	26.2	27.3
16	28.5	23.8	26.6	26.9	26.0	26.3	28.2	24.7	26.3	27.2	25.3	26.4
17	28.0	25.6	26.9	29.6	25.9	27.5	30.3	26.8	28.5	28.3	25.5	26.8
18	28.9	25.7	27.4	30.1	27.2	28.6	31.1	27.8	29.5	29.3	26.8	28.0
19	28.8	26.9	27.9	31.4	28.0	29.4	31.1	28.2	29.7	28.6	27.3	27.8
20	28.2	26.9	27.6	31.6	28.5	30.1	30.3	28.5	29.5	27.4	24.2	26.4
21	29.4	26.5	27.8	31.3	28.6	30.1	31.2	27.9	29.4	28.2	22.9	25.4
22	29.7	26.4	28.0	31.9	28.6	30.2	30.1	26.9	28.5	26.7	23.6	25.2
23	28.7	26.0	27.3	31.2	29.1	30.3	30.8	26.2	28.3	27.3	23.9	25.5
24	27.8	26.1	26.9	31.3	28.9	30.1	31.3	28.1	29.7	27.0	23.7	25.4
25	27.5	26.0	26.8	31.1	28.8	29.8	31.7	28.6	30.1	27.2	24.2	25.8
26	27.9	25.8	26.7	30.5	28.5	29.4	31.0	28.9	30.0	28.1	23.7	25.8
27	28.7	26.0	27.1	30.3	28.0	29.0	29.8	27.9	28.9	27.6	23.5	25.7
28	27.4	26.3	26.9	29.3	27.9	28.6	30.5	27.3	28.7	28.0	24.4	26.2
29	26.9	25.0	25.7	30.1	27.9	28.8	30.3	26.9	28.4	28.3	25.2	26.6
30	27.4	24.9	26.0	30.5	27.9	29.1	30.1	26.5	28.1	28.8	25.0	26.8
31	---	---	---	30.9	27.8	29.1	30.1	27.1	28.4	---	---	---
MONTH	30.0	23.8	27.3	31.9	25.0	28.7	31.7	24.7	28.7	30.5	22.9	27.0
YEAR	31.9	8.6	22.5									



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

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

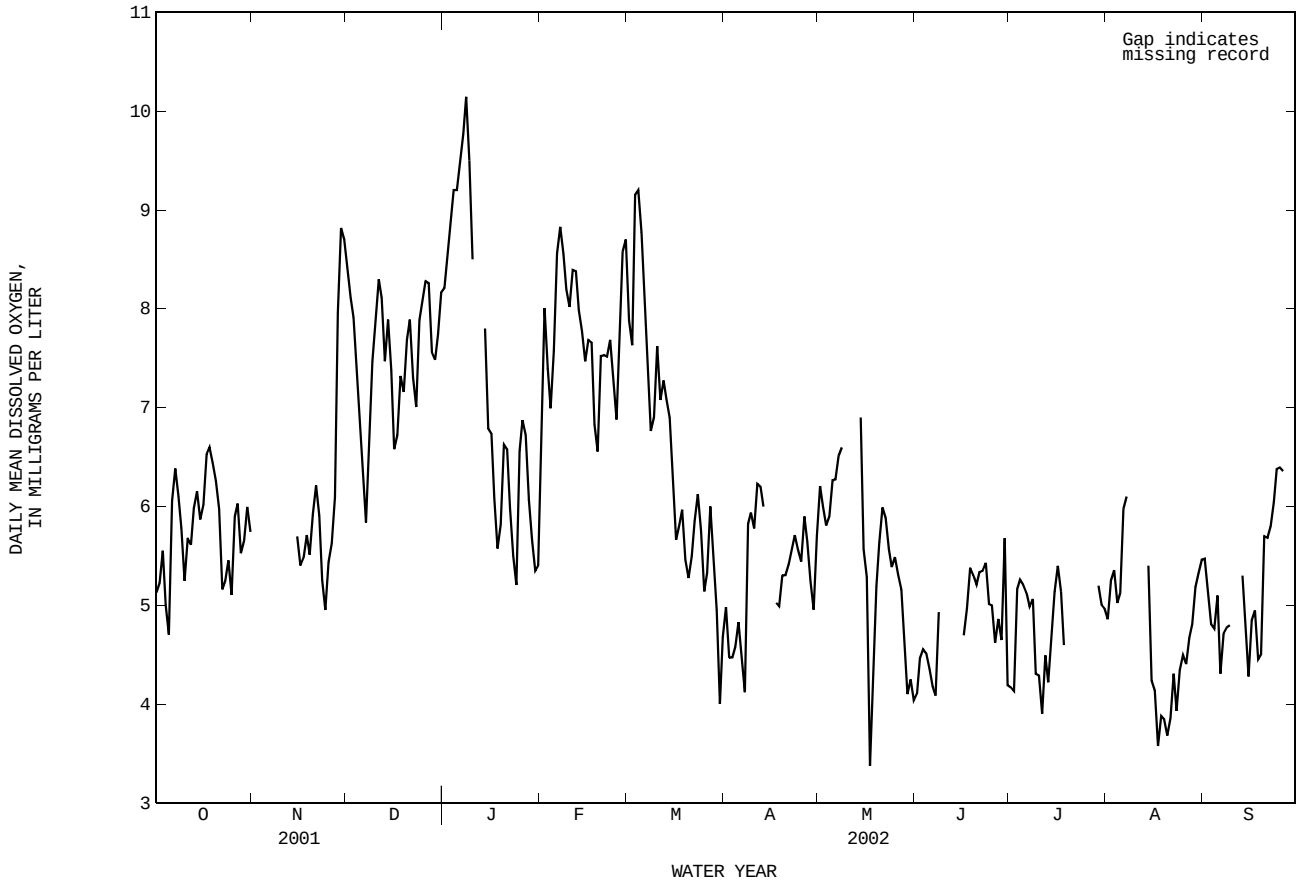
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.6	4.5	5.1	---	---	---	8.7	7.9	8.4	9.0	7.9	8.2
2	6.6	4.4	5.2	---	---	---	8.6	7.8	8.1	9.3	7.8	8.5
3	7.0	4.6	5.6	---	---	---	8.3	7.7	7.9	9.6	8.2	8.8
4	6.5	3.8	5.0	---	---	---	7.7	7.0	7.4	10.3	8.4	9.2
5	6.3	3.5	4.7	---	---	---	7.1	6.5	6.8	10.4	8.1	9.2
6	6.4	5.7	6.1	---	---	---	6.5	6.0	6.3	10.0	9.0	9.5
7	7.0	5.7	6.4	---	---	---	6.0	5.6	5.8	10.3	9.2	9.8
8	6.7	5.7	6.1	---	---	---	7.6	5.5	6.6	10.8	9.4	10.1
9	6.0	5.3	5.8	---	---	---	8.0	6.9	7.5	10.3	8.5	9.5
10	5.5	4.8	5.3	---	---	---	8.2	7.4	7.9	9.3	7.9	8.5
11	6.7	4.3	5.7	---	---	---	9.6	7.7	8.3	---	---	---
12	6.2	5.0	5.6	---	---	---	9.4	7.5	8.1	---	---	---
13	6.4	4.7	6.0	---	---	---	7.7	7.3	7.5	---	---	---
14	6.6	5.6	6.2	---	---	---	8.4	7.3	7.9	8.8	6.7	7.8
15	6.4	5.4	5.9	7.4	4.9	5.7	7.7	6.8	7.4	7.5	6.3	6.8
16	6.6	5.3	6.0	5.7	5.0	5.4	6.8	6.1	6.6	7.6	6.3	6.7
17	6.8	6.3	6.5	6.6	4.9	5.5	7.4	5.9	6.7	6.8	5.4	6.1
18	6.8	6.4	6.6	7.1	4.9	5.7	7.8	6.9	7.3	6.1	5.3	5.6
19	6.8	6.0	6.4	6.8	4.9	5.5	7.4	6.9	7.2	6.6	5.3	5.8
20	6.6	5.7	6.3	7.5	5.1	5.9	8.0	7.3	7.7	7.5	6.0	6.6
21	6.5	5.4	6.0	8.3	5.3	6.2	8.3	7.5	7.9	7.5	5.9	6.6
22	5.6	4.5	5.2	7.8	4.7	5.9	7.7	6.4	7.3	6.7	5.3	6.0
23	6.2	4.4	5.2	7.2	4.1	5.3	7.5	6.4	7.0	6.4	4.7	5.5
24	6.4	4.7	5.5	7.1	4.0	5.0	8.3	7.4	7.9	6.2	4.3	5.2
25	6.1	4.4	5.1	7.5	4.4	5.4	8.5	7.8	8.1	7.3	5.9	6.6
26	6.7	5.2	5.9	7.0	4.6	5.6	8.8	7.9	8.3	7.6	6.3	6.9
27	6.9	5.1	6.0	6.9	4.8	6.1	9.0	5.7	8.3	7.5	6.2	6.7
28	6.6	4.7	5.5	8.3	6.7	8.0	8.0	7.3	7.6	6.7	5.5	6.1
29	6.6	4.8	5.7	9.3	8.2	8.8	7.9	7.1	7.5	6.4	4.9	5.7
30	6.6	5.5	6.0	9.0	8.3	8.7	8.4	7.3	7.7	6.1	4.6	5.3
31	6.3	5.2	5.7	---	---	---	8.9	7.8	8.2	6.4	4.5	5.4
MONTH	7.0	3.5	5.8	---	---	---	9.6	5.5	7.5	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.7	5.9	7.0	8.6	7.0	7.9	6.5	4.2	5.0	8.3	5.1	6.2
2	8.7	7.5	8.0	8.3	7.0	7.6	6.1	3.2	4.5	8.1	5.1	6.0
3	8.0	7.1	7.4	10.1	8.3	9.2	6.5	3.1	4.5	7.9	4.8	5.8
4	7.4	6.6	7.0	10.2	8.6	9.2	7.2	3.1	4.6	8.0	4.9	5.9
5	8.4	6.9	7.6	9.9	8.1	8.8	7.2	3.4	4.8	8.2	5.1	6.3
6	9.0	8.3	8.6	9.1	7.3	8.1	5.7	3.5	4.5	8.6	4.9	6.3
7	9.4	8.2	8.8	8.8	6.5	7.5	5.2	2.1	4.1	8.6	5.3	6.5
8	9.2	8.0	8.6	7.7	6.1	6.8	6.9	1.4	5.8	9.1	5.1	6.6
9	9.0	7.4	8.2	8.5	5.5	6.9	6.7	5.2	5.9	---	---	---
10	8.9	7.2	8.0	9.5	6.6	7.6	6.7	5.1	5.8	---	---	---
11	9.2	7.8	8.4	7.9	6.6	7.1	6.8	5.7	6.2	---	---	---
12	9.2	7.8	8.4	9.1	5.2	7.3	6.6	5.9	6.2	---	---	---
13	8.9	7.3	8.0	9.4	5.8	7.1	6.5	5.3	6.0	---	---	---
14	9.2	6.9	7.8	8.9	5.7	6.9	---	---	---	9.4	4.2	6.9
15	8.7	6.7	7.5	8.3	5.2	6.2	---	---	---	8.9	4.0	5.6
16	9.2	6.7	7.7	7.8	4.3	5.7	---	---	---	8.6	3.9	5.3
17	9.4	6.8	7.7	7.4	5.1	5.8	5.7	4.5	5.0	5.1	1.4	3.4
18	7.9	6.1	6.8	8.1	4.7	6.0	6.0	4.2	5.0	6.2	3.2	4.4
19	7.7	5.7	6.6	6.8	4.5	5.5	6.4	4.7	5.3	7.4	4.1	5.2
20	8.3	6.9	7.5	6.1	4.3	5.3	6.3	4.7	5.3	8.3	4.2	5.6
21	8.4	7.1	7.5	6.6	4.8	5.5	6.4	4.9	5.4	8.9	4.6	6.0
22	8.4	6.9	7.5	7.1	4.9	5.9	6.6	4.9	5.6	8.2	4.5	5.9
23	8.5	7.1	7.7	7.4	5.4	6.1	7.2	5.0	5.7	7.5	4.4	5.6
24	8.2	6.7	7.3	6.8	5.1	5.8	6.8	4.8	5.6	7.3	4.3	5.4
25	7.7	6.3	6.9	5.6	4.7	5.1	6.8	4.0	5.4	7.9	4.3	5.5
26	9.3	6.8	7.7	6.0	4.7	5.3	7.3	4.8	5.9	7.7	4.2	5.3
27	10.2	8.0	8.6	7.0	5.2	6.0	7.6	4.8	5.6	7.2	3.6	5.2
28	9.8	7.9	8.7	6.5	4.8	5.4	7.4	4.1	5.2	7.1	2.9	4.6
29	---	---	---	5.9	4.3	5.0	6.9	3.9	5.0	5.4	1.7	4.1
30	---	---	---	5.5	0.5	4.0	8.3	4.3	5.7	5.5	3.5	4.3
31	---	---	---	6.2	3.9	4.7	---	---	---	5.3	3.2	4.0
MONTH	10.2	5.7	7.8	10.2	0.5	6.5	---	---	---	---	---	---

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

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5.6	3.2	4.1	4.6	3.6	4.2	6.4	4.1	4.9	8.6	3.9	5.5
2	6.1	3.6	4.5	5.1	3.6	4.1	7.1	4.4	5.3	7.8	3.9	5.1
3	6.5	3.8	4.6	7.3	3.8	5.2	6.9	4.4	5.4	8.0	3.8	4.8
4	6.1	3.5	4.5	5.9	4.5	5.3	7.0	3.7	5.0	6.3	3.8	4.8
5	6.5	3.3	4.4	5.8	4.3	5.2	6.1	4.0	5.1	7.8	3.7	5.1
6	5.9	3.2	4.2	5.7	3.8	5.1	7.1	5.1	6.0	6.4	3.0	4.3
7	6.6	3.0	4.1	5.5	3.9	5.0	7.7	5.3	6.1	5.6	4.0	4.7
8	6.7	4.0	4.9	5.7	3.7	5.1	---	---	---	5.8	3.9	4.8
9	---	---	---	5.1	3.3	4.3	---	---	---	6.0	3.9	4.8
10	---	---	---	5.2	2.5	4.3	---	---	---	---	---	---
11	---	---	---	4.9	2.8	3.9	---	---	---	---	---	---
12	---	---	---	5.8	2.5	4.5	---	---	---	---	---	---
13	---	---	---	6.4	2.1	4.2	---	---	---	6.2	4.1	5.3
14	---	---	---	5.4	4.0	4.7	6.9	4.4	5.4	6.6	3.9	4.8
15	---	---	---	6.3	3.1	5.1	5.0	4.0	4.2	5.0	3.7	4.3
16	6.0	3.2	4.7	6.5	4.7	5.4	5.3	3.5	4.1	6.0	4.0	4.9
17	6.3	3.9	5.0	5.7	4.5	5.1	4.4	2.9	3.6	6.2	4.3	4.9
18	6.5	4.7	5.4	5.1	4.3	4.6	4.9	3.4	3.9	5.4	3.6	4.5
19	6.3	4.6	5.3	---	---	---	5.0	3.2	3.8	5.1	4.3	4.5
20	5.8	4.8	5.2	---	---	---	4.8	3.0	3.7	6.2	4.9	5.7
21	6.6	4.1	5.3	---	---	---	5.6	3.0	3.9	6.8	4.9	5.7
22	6.5	4.4	5.4	---	---	---	5.9	3.1	4.3	6.9	5.1	5.8
23	6.8	4.5	5.4	---	---	---	4.9	3.1	3.9	7.2	5.3	6.0
24	6.5	4.1	5.0	---	---	---	5.5	3.7	4.3	7.6	5.6	6.4
25	6.1	3.9	5.0	---	---	---	5.6	3.8	4.5	7.4	5.9	6.4
26	5.8	3.8	4.6	---	---	---	5.7	3.6	4.4	7.9	5.0	6.4
27	5.8	4.1	4.9	---	---	---	5.9	3.7	4.7	---	---	---
28	5.5	3.7	4.7	---	---	---	6.4	3.8	4.8	---	---	---
29	6.5	4.9	5.7	6.7	4.8	5.2	7.5	4.0	5.2	---	---	---
30	6.4	3.8	4.2	6.3	4.3	5.0	7.8	3.9	5.3	---	---	---
31	---	---	---	6.7	4.1	5.0	7.9	4.0	5.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



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^2.

PERIOD OF RECORD.--Apr. 1972 to Sept. 1976, 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.--Records good. No known regulation or diversions. No flow at times.

DISCHARGE FROM DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	14	42	11	26	19	15	18	23	77	13	8.0
2	14	14	63	10	18	38	15	18	17	147	12	8.1
3	13	15	82	9.7	15	20	15	18	15	202	27	e11
4	14	15	51	10	13	13	12	18	15	97	36	15
5	89	14	35	36	20	12	12	19	15	68	37	12
6	329	13	28	61	51	13	12	17	16	41	22	10
7	97	13	23	29	32	13	18	17	20	28	16	78
8	56	13	77	21	22	13	516	17	17	22	18	95
9	37	13	92	18	18	17	290	17	15	19	17	60
10	30	14	47	16	16	12	113	16	15	16	14	52
11	145	14	107	15	13	11	79	16	14	16	12	28
12	408	13	1050	14	12	15	55	16	14	26	13	19
13	806	14	520	13	12	15	36	17	13	103	22	15
14	339	14	212	13	11	13	31	14	14	77	26	12
15	128	13	103	11	11	14	28	14	13	64	40	12
16	74	27	77	11	12	14	26	15	61	102	86	16
17	45	36	162	11	11	15	26	28	66	112	69	48
18	30	29	84	11	11	15	25	45	26	72	28	69
19	24	24	50	12	15	15	23	23	19	41	20	90
20	20	18	31	11	62	38	23	16	18	33	19	782
21	18	14	23	11	36	36	23	13	18	27	14	212
22	17	13	60	11	23	20	22	13	18	23	54	82
23	17	13	51	12	18	16	22	13	14	20	97	44
24	16	14	24	15	16	15	21	14	15	17	34	25
25	15	13	17	22	15	16	22	15	23	16	18	18
26	13	13	15	14	16	35	21	15	43	15	13	13
27	12	145	13	12	11	26	20	16	55	14	11	12
28	13	210	13	12	12	21	20	16	71	14	9.9	12
29	13	113	12	12	---	19	20	30	58	14	9.6	13
30	13	65	12	12	---	18	19	36	113	14	8.8	11
31	13	---	12	15	---	18	---	35	---	14	8.5	---
TOTAL	2872	953	3188	491.7	548	575	1580	595	854	1551	824.8	1882.1
MEAN	92.65	31.77	102.8	15.86	19.57	18.55	52.67	19.19	28.47	50.03	26.61	62.74
MAX	806	210	1050	61	62	38	516	45	113	202	97	782
MIN	12	13	12	9.7	11	11	12	13	13	14	8.5	8.0
AC-FT	5700	1890	6320	975	1090	1140	3130	1180	1690	3080	1640	3730

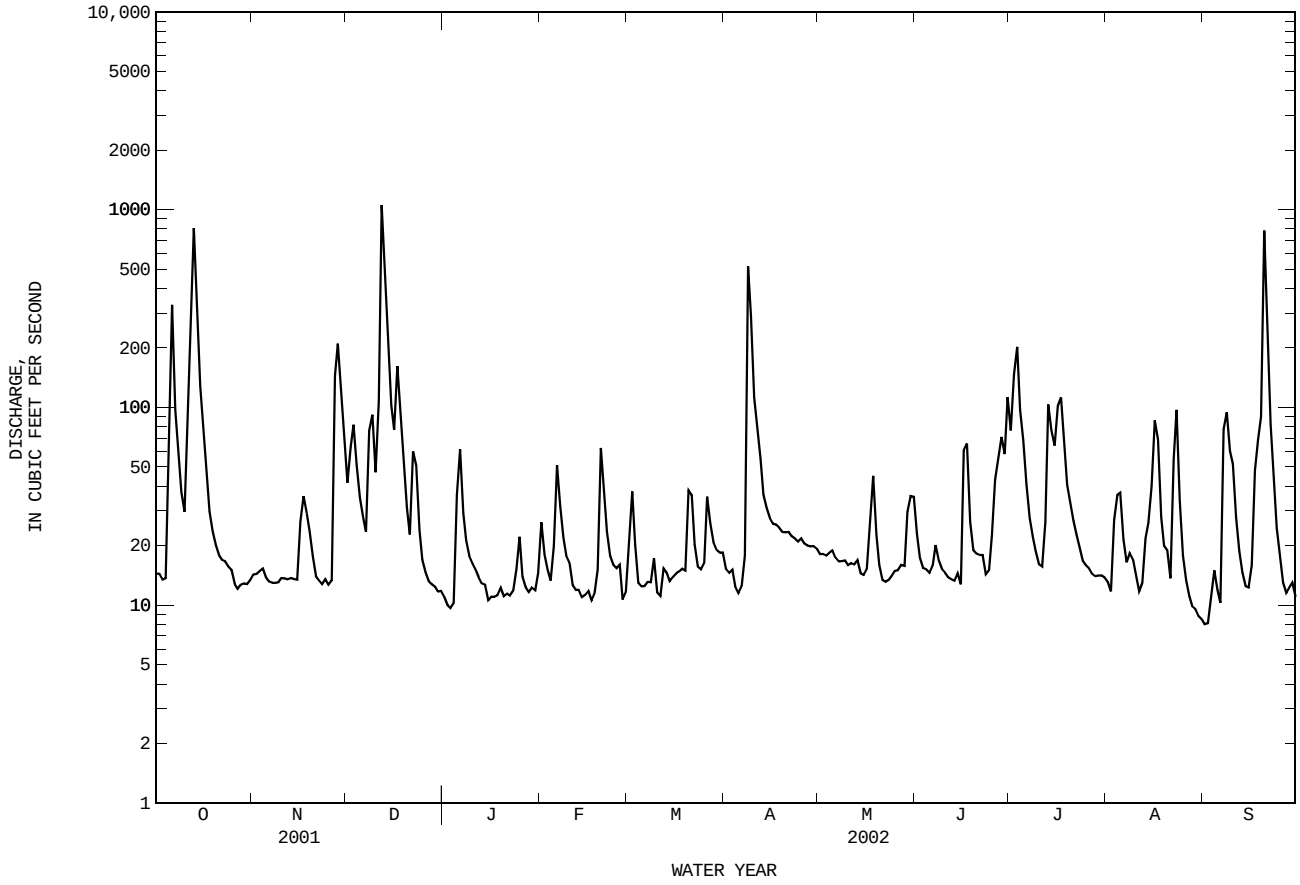
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2002h, BY WATER YEAR (WY)

MEAN	37.74	44.88	42.75	46.63	23.66	51.42	49.70	40.99	94.94	14.34	7.906	36.77
MAX	126	132	103	165	59.3	217	133	110	539	50.0	26.6	92.0
(WY)	1974	1975	2002	1974	1975	2001	1973	1972	2001	2002	2002	1973
MIN	2.13	3.43	1.70	1.34	0.45	2.44	0.85	1.35	1.04	0.000	0.17	0.15
(WY)	1973	1976	1973	1976	1976	1976	1974	1974	1974	1974	1976	1972

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1972 - 2002h	
ANNUAL TOTAL	39075.8		15914.6			
ANNUAL MEAN	107.1		43.60		42.32	
HIGHEST ANNUAL MEAN					102	2001
LOWEST ANNUAL MEAN					7.04	1976
HIGHEST DAILY MEAN	9660	Jun 9	1050	Dec 12	9660	Jun 9 2001
LOWEST DAILY MEAN	8.3	Aug 12	8.0	Sep 1	0.00	Jun 10 1972
ANNUAL SEVEN-DAY MINIMUM	9.4	Aug 8	9.1	Aug 27	0.00	Jun 28 1972
MAXIMUM PEAK FLOW			1650	Dec 12	15900	Jun 9 2001
MAXIMUM PEAK STAGE			111.35	Dec 12	119.17	Jun 9 2001
ANNUAL RUNOFF (AC-FT)	77510		31570		30660	
10 PERCENT EXCEEDS	214		82		72	
50 PERCENT EXCEEDS	23		17		10	
90 PERCENT EXCEEDS	11		12		0.10	

e Estimated
h See PERIOD OF RECORD paragraph.

08068450 Panther Branch near Spring, TX--Continued



08068500 Spring Creek near Spring, TX

LOCATION.--Lat 30°06′37", long 95°26′10", Harris-Montgomery County line, 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^2.

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. 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.--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^3/s.

DISCHARGE From DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	56	1880	76	138	77	45	36	34	160	12	18
2	50	56	874	72	138	121	47	35	26	514	13	17
3	46	54	875	69	126	90	50	34	22	1140	14	17
4	40	53	1200	69	92	75	41	34	21	790	37	20
5	516	52	1240	160	98	66	36	34	19	763	42	19
6	1860	49	447	348	214	60	34	33	20	184	20	16
7	1050	48	222	551	311	58	51	30	33	89	14	513
8	487	48	478	354	351	58	2250	29	25	61	17	444
9	225	47	726	182	194	64	2790	29	19	51	15	423
10	152	46	762	135	136	56	2940	28	20	e66	13	226
11	646	46	883	121	105	50	2720	27	18	71	11	80
12	1630	47	4130	102	88	56	761	26	20	51	12	40
13	4070	45	4800	91	78	52	227	27	32	163	20	26
14	4440	44	5400	84	72	51	150	25	25	e200	28	19
15	4580	44	3820	76	68	48	114	23	20	250	231	16
16	3480	75	1660	71	66	48	97	24	143	394	1040	24
17	1070	87	1630	68	62	46	87	54	148	704	2130	66
18	329	71	1070	68	61	54	78	82	56	455	3720	113
19	214	60	1320	69	65	44	70	44	32	291	1990	439
20	165	50	976	68	229	101	65	31	27	102	244	2700
21	135	39	296	66	256	189	60	27	24	58	104	1290
22	119	38	513	65	157	133	58	26	26	47	166	296
23	106	36	420	65	107	74	53	25	19	35	651	127
24	99	36	216	70	86	56	50	25	24	27	168	74
25	88	34	158	113	76	54	49	24	26	21	67	56
26	78	34	130	248	77	109	46	24	67	19	44	43
27	70	395	113	176	64	95	44	24	89	16	34	34
28	63	1160	104	117	58	70	42	24	119	14	28	32
29	61	1650	97	94	---	58	41	40	245	13	25	29
30	58	2030	89	85	---	53	38	56	315	12	22	29
31	56	---	84	85	---	50	---	52	---	12	20	---
TOTAL	26037	6530	36613	4018	3573	2216	13134	1032	1714	6773	10952	7246
MEAN	839.9	217.7	1181	129.6	127.6	71.48	437.8	33.29	57.13	218.5	353.3	241.5
MAX	4580	2030	5400	551	351	189	2940	82	315	1140	3720	2700
MIN	40	34	84	65	58	44	34	23	18	12	11	16
AC-FT	51640	12950	72620	7970	7090	4400	26050	2050	3400	13430	21720	14370

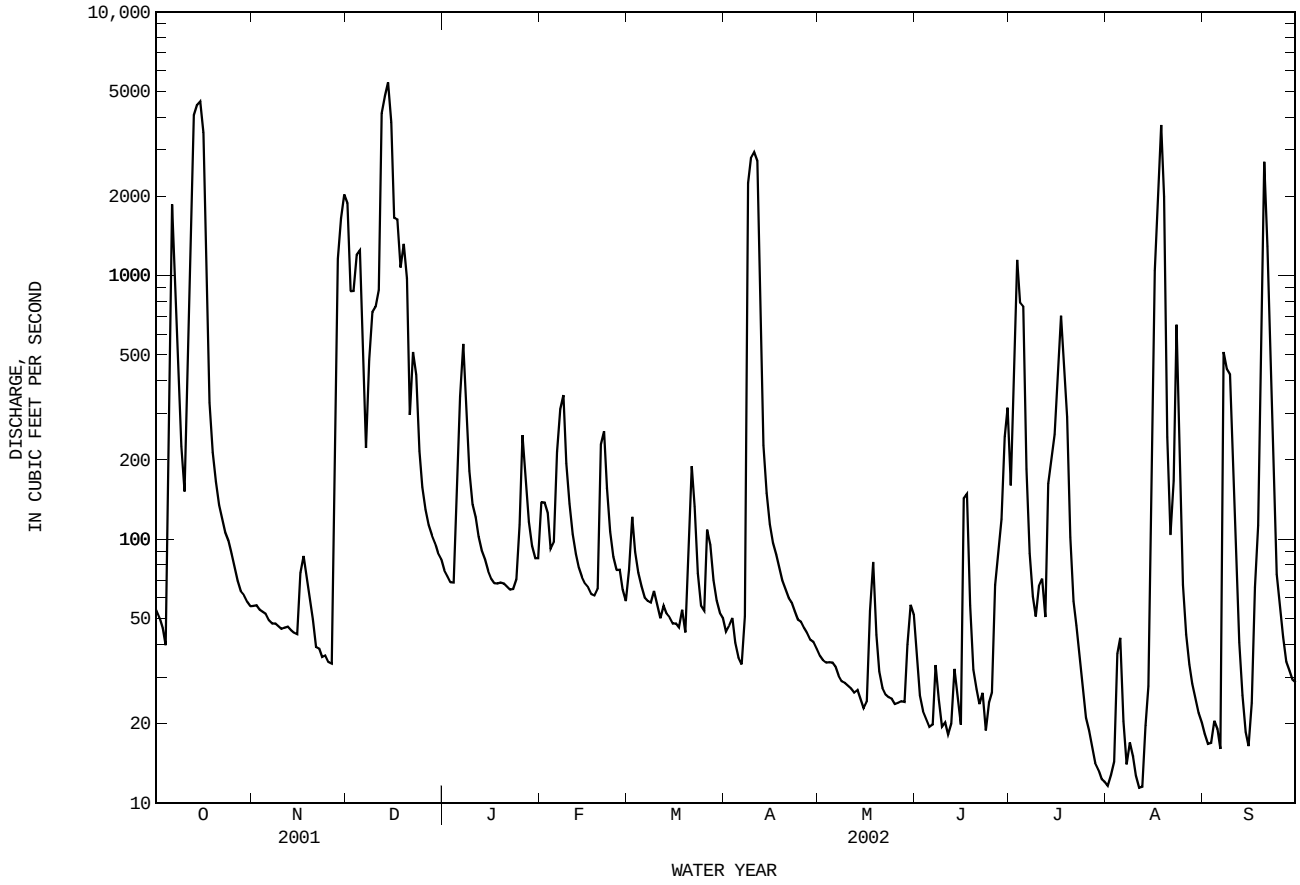
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

MEAN	223.9	296.6	252.7	342.0	350.1	260.5	342.7	342.5	321.1	92.91	75.24	132.5
MAX	5189	2982	1949	1710	1932	1972	2106	1541	2818	577	1208	1184
(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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1939 - 2002	
ANNUAL TOTAL	278074		119838			
ANNUAL MEAN	761.8		328.3		253.1	
HIGHEST ANNUAL MEAN					819	1941
LOWEST ANNUAL MEAN					13.4	1956
HIGHEST DAILY MEAN	18900	Jun 10	5400	Dec 14	55900	Oct 18 1994
LOWEST DAILY MEAN	19	Aug 25	11	Aug 11	1.1	Oct 23 1956
ANNUAL SEVEN-DAY MINIMUM	32	Aug 9	13	Jul 28	1.6	Oct 20 1956
MAXIMUM PEAK FLOW			5550	Dec 14	76500	Oct 18 1994
MAXIMUM PEAK STAGE			14.93	Dec 14	39.56	Oct 18 1994
ANNUAL RUNOFF (AC-FT)	551600		237700		183400	
10 PERCENT EXCEEDS	2270		874		437	
50 PERCENT EXCEEDS	109		66		44	
90 PERCENT EXCEEDS	36		22		12	

e Estimated

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. 1990.

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 fair. Interruption in the record was 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 units, Mar. 27, 2001; minimum, 5.8 units, Jan. 5, 2000.
WATER TEMPERATURE: Maximum, 35.0°C, July 19, 2000; minimum, 5.0°C, Jan. 4, 2001.
DISSOLVED OXYGEN: Maximum, 18.4 mg/L, Aug. 19, 2000; minimum, 1.8 mg/L, Apr. 30, 2000.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 662 microsiemens/cm, June 8; minimum, 45 microsiemens/cm, Aug. 18.
pH: Maximum, 8.8 units, Aug. 2; minimum, 6.2 units, Aug. 17, 18.
WATER TEMPERATURE: Maximum, 34.7°C, July 24; minimum, 6.2°C, Jan. 4.
DISSOLVED OXYGEN: Maximum, 15.5 mg/L, Aug. 3; minimum, 2.3 mg/L, June 4.

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	419	368	397	380	355	368	111	88	95	307	294	302
2	424	387	405	382	353	367	176	110	143	318	302	311
3	440	389	417	385	355	373	182	141	159	323	299	313
4	438	407	425	394	363	382	141	107	120	341	319	331
5	441	77	309	418	372	395	133	106	114	338	237	305
6	155	128	138	415	384	400	173	133	151	271	225	244
7	164	134	149	419	379	396	203	173	182	248	217	233
8	177	146	156	424	395	408	230	166	197	240	217	223
9	208	175	190	436	393	412	213	170	181	252	239	244
10	256	208	226	433	400	414	189	157	170	264	240	254
11	263	101	199	437	410	423	181	65	155	273	248	262
12	172	134	153	446	406	427	142	93	120	292	266	273
13	136	92	109	452	415	431	93	73	80	303	283	293
14	95	73	83	443	410	429	77	70	72	328	292	314
15	73	60	64	459	424	439	101	77	88	330	297	315
16	90	65	76	467	355	417	149	100	115	339	309	323
17	138	90	113	399	316	356	146	120	131	352	315	334
18	174	137	153	383	319	363	152	136	143	351	318	339
19	201	173	182	414	352	394	139	113	121	356	326	344
20	217	199	205	425	382	414	156	114	129	365	338	353
21	234	217	228	445	398	423	195	155	170	389	348	371
22	267	226	252	471	424	452	223	143	179	379	345	363
23	283	251	268	470	436	455	196	155	169	379	347	364
24	296	262	280	469	424	449	217	195	201	390	351	363
25	309	272	298	463	436	448	231	217	225	395	310	342
26	319	281	304	494	441	470	245	231	239	321	274	293
27	338	306	317	485	247	332	266	245	257	305	280	291
28	337	318	329	260	188	213	273	265	271	319	293	305
29	---	---	---	188	112	142	281	272	277	332	299	312
30	---	---	---	112	89	99	291	277	283	342	312	325
31	386	353	371	---	---	---	297	280	292	340	317	330
MONTH	---	---	---	494	89	383	297	65	169	395	217	309

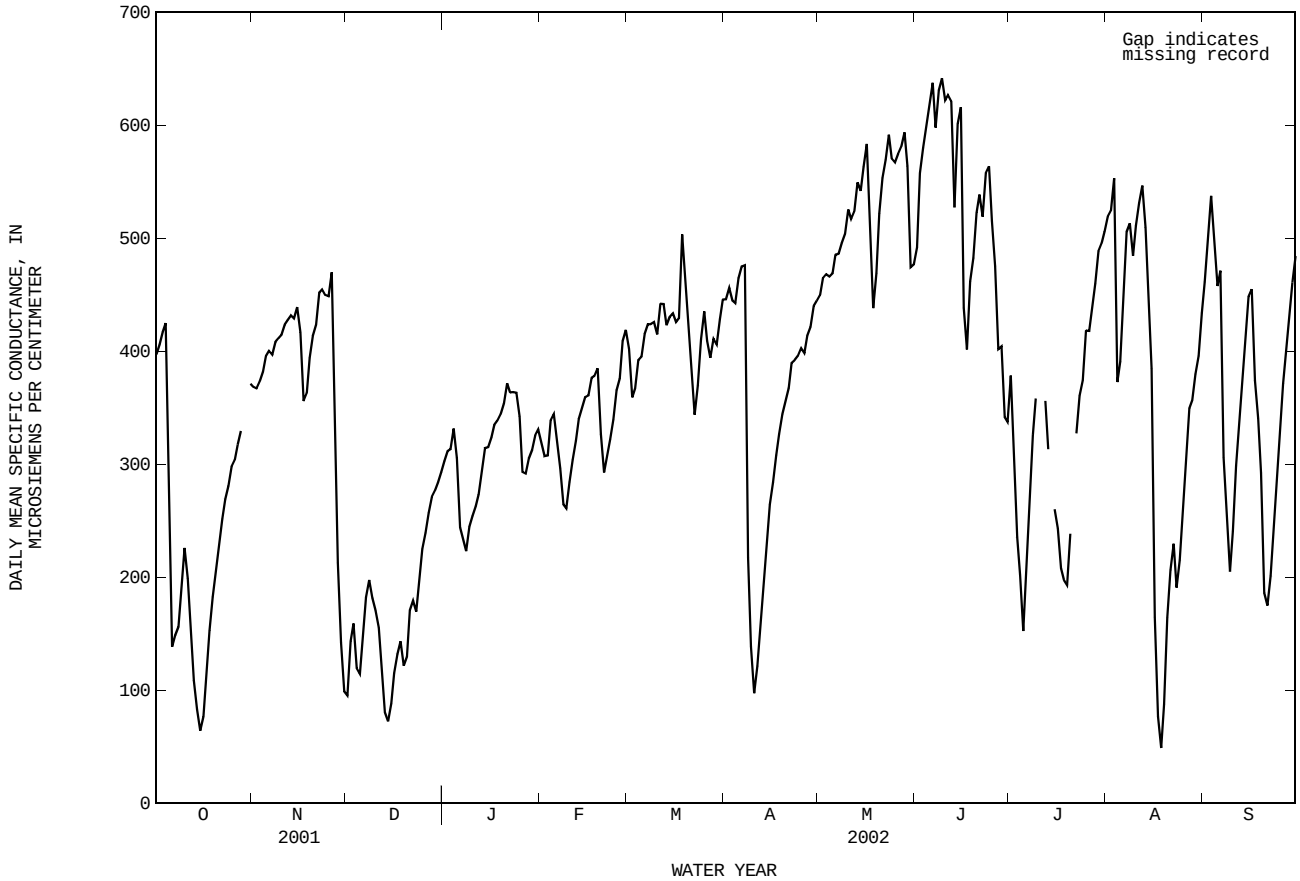
08068500 Spring Creek near Spring, TX--Continued

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	349	276	318	441	332	402	462	427	446	486	418	449
2	343	284	307	431	336	359	471	436	456	484	444	464
3	330	302	308	386	349	367	469	426	445	484	448	468
4	349	325	338	412	376	392	469	419	442	477	451	466
5	379	315	344	416	379	395	497	438	464	486	453	469
6	357	297	319	435	400	415	501	448	475	508	461	485
7	341	272	296	438	411	424	513	416	476	500	464	486
8	285	248	264	440	412	424	441	133	217	512	475	496
9	283	253	261	441	414	425	194	81	138	525	482	504
10	296	276	284	433	402	415	122	68	97	551	487	525
11	317	293	304	463	423	442	134	104	121	534	496	517
12	340	305	321	481	415	442	196	128	166	548	501	523
13	360	323	340	435	410	423	222	195	200	579	508	549
14	363	331	349	440	415	430	249	222	231	570	514	542
15	373	346	359	450	418	433	273	249	264	594	537	563
16	381	345	360	438	406	425	299	269	284	608	543	583
17	389	355	376	441	414	429	321	294	308	610	319	496
18	389	359	378	607	413	503	344	313	327	537	391	438
19	398	372	385	480	437	459	359	328	344	478	443	469
20	409	269	326	473	305	415	368	340	355	566	456	522
21	307	272	292	473	333	379	381	345	367	573	526	553
22	333	294	306	359	331	343	412	360	389	623	542	569
23	345	308	322	397	357	370	410	379	392	630	529	592
24	353	327	339	423	397	410	414	379	396	592	542	570
25	378	348	365	457	409	435	417	391	402	589	538	567
26	426	345	375	457	357	409	409	388	398	592	554	575
27	431	383	409	452	357	394	424	394	414	612	557	581
28	431	406	419	448	390	411	438	405	421	618	562	593
29	---	---	---	430	395	406	456	417	440	618	386	564
30	---	---	---	441	411	428	465	429	444	502	419	474
31	---	---	---	455	427	446	---	---	---	498	443	477
MONTH	431	248	334	607	305	415	513	68	344	630	319	520

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	507	476	492	397	347	378	536	494	519	498	433	461
2	570	505	557	378	75	297	576	500	524	546	476	499
3	605	529	580	256	210	235	632	502	553	562	503	537
4	623	574	598	244	154	202	637	313	372	536	450	501
5	645	597	618	192	136	152	436	341	391	470	443	457
6	654	616	637	269	191	224	477	425	450	503	450	471
7	649	515	598	309	266	275	519	459	506	483	159	305
8	662	589	631	346	309	326	549	457	513	275	227	250
9	660	593	641	367	344	358	505	452	484	236	164	205
10	650	604	622	---	---	---	525	469	511	272	209	240
11	646	597	627	---	---	---	555	487	531	332	271	298
12	643	571	621	445	219	356	569	520	546	367	321	338
13	577	490	527	436	158	313	610	400	510	399	365	379
14	643	577	601	---	234	---	507	405	453	421	399	412
15	651	566	616	300	226	260	523	134	384	474	410	448
16	616	196	438	255	218	243	223	120	164	496	315	455
17	456	357	401	230	196	208	121	47	77	423	292	374
18	494	442	462	211	186	197	59	45	49	371	306	340
19	512	460	482	222	175	193	132	59	87	395	87	292
20	541	471	522	277	221	238	187	132	164	201	163	186
21	555	504	538	---	---	---	226	186	206	190	163	175
22	545	498	519	347	312	327	271	156	229	232	184	201
23	586	537	557	377	342	361	217	163	190	272	201	241
24	617	409	563	396	354	374	268	195	215	316	250	280
25	599	425	515	433	393	418	295	243	261	361	299	325
26	599	404	475	432	402	418	336	295	309	393	356	371
27	454	365	401	458	416	439	361	317	349	423	383	404
28	448	354	404	472	441	460	373	340	356	449	398	432
29	426	236	342	506	465	488	398	360	379	478	418	461
30	388	286	337	514	465	496	417	367	396	511	437	484
31	---	---	---	525	488	506	461	406	434	---	---	---
MONTH	662	196	531	---	---	---	637	45	358	562	87	361

08068500 Spring Creek near Spring, TX--Continued



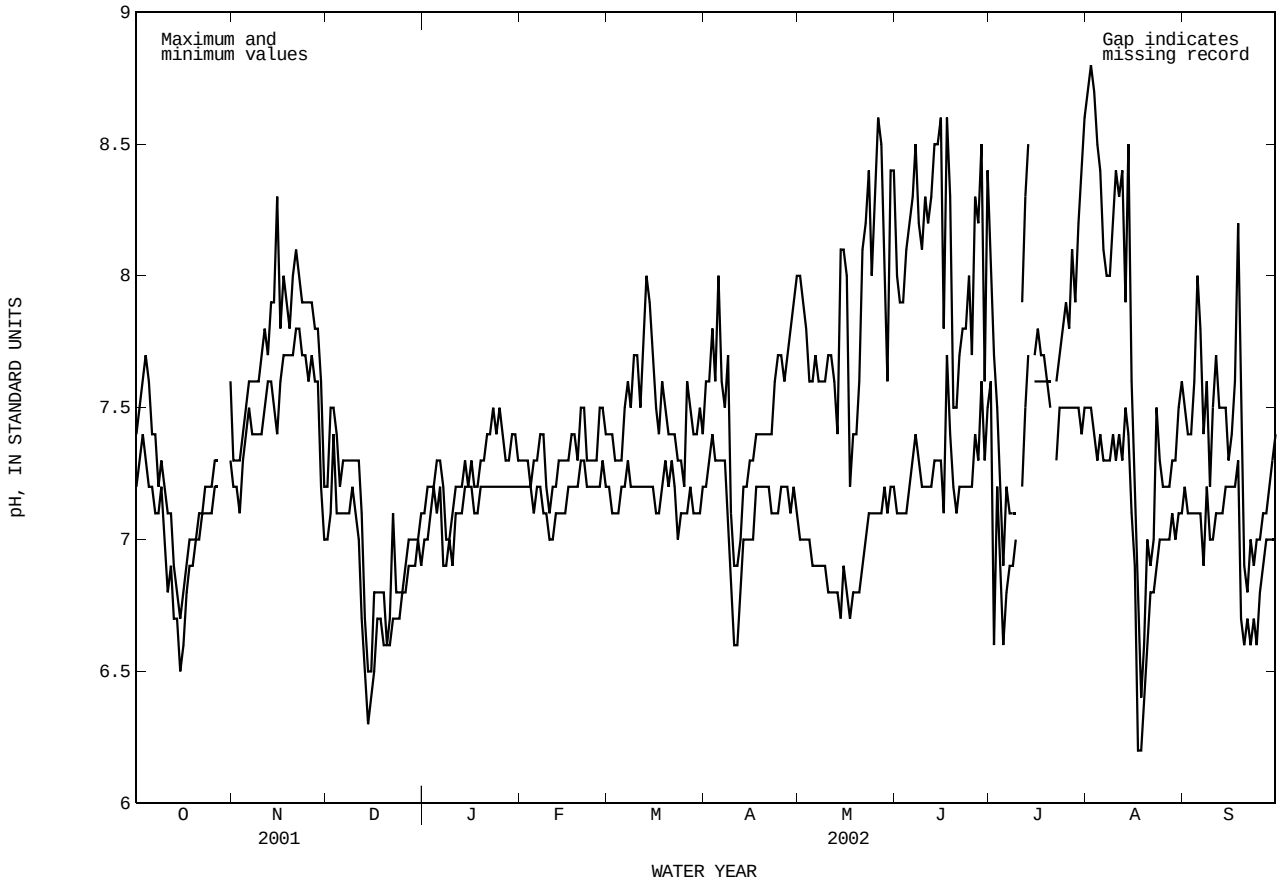
PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.4	7.2	7.3	7.2	7.2	7.0	7.1	7.0	7.3	7.2	7.4	7.2
2	7.5	7.3	7.3	7.2	7.5	7.1	7.2	7.0	7.3	7.2	7.4	7.1
3	7.6	7.4	7.3	7.1	7.5	7.4	7.2	7.1	7.3	7.2	7.3	7.1
4	7.7	7.3	7.4	7.3	7.4	7.1	7.2	7.2	7.2	7.2	7.3	7.1
5	7.6	7.2	7.5	7.4	7.2	7.1	7.3	7.1	7.3	7.1	7.3	7.2
6	7.4	7.2	7.6	7.5	7.3	7.1	7.3	7.2	7.3	7.2	7.5	7.2
7	7.4	7.1	7.6	7.4	7.3	7.1	7.2	6.9	7.4	7.2	7.6	7.3
8	7.2	7.1	7.6	7.4	7.3	7.1	7.0	6.9	7.4	7.1	7.5	7.2
9	7.3	7.2	7.6	7.4	7.3	7.2	7.0	7.0	7.2	7.1	7.7	7.2
10	7.2	7.0	7.7	7.4	7.3	7.1	7.1	6.9	7.1	7.0	7.7	7.2
11	7.1	6.8	7.8	7.5	7.3	7.0	7.2	7.1	7.2	7.0	7.5	7.2
12	7.1	6.9	7.7	7.6	7.1	6.7	7.2	7.1	7.2	7.1	7.8	7.2
13	6.9	6.7	7.9	7.6	6.7	6.5	7.2	7.1	7.3	7.1	8.0	7.2
14	6.8	6.7	7.9	7.5	6.5	6.3	7.3	7.2	7.3	7.1	7.9	7.2
15	6.7	6.5	8.3	7.4	6.5	6.4	7.2	7.2	7.3	7.1	7.7	7.2
16	6.8	6.6	7.8	7.6	6.8	6.5	7.3	7.2	7.3	7.2	7.5	7.1
17	6.9	6.8	8.0	7.7	6.8	6.7	7.2	7.1	7.4	7.2	7.4	7.1
18	7.0	6.9	7.9	7.7	6.8	6.7	7.2	7.1	7.4	7.2	7.6	7.2
19	7.0	6.9	7.8	7.7	6.8	6.6	7.3	7.2	7.3	7.2	7.5	7.3
20	7.0	7.0	8.0	7.7	6.6	6.6	7.3	7.2	7.5	7.3	7.4	7.2
21	7.1	7.0	8.1	7.8	6.7	6.6	7.4	7.2	7.5	7.3	7.4	7.3
22	7.1	7.1	8.0	7.8	7.1	6.7	7.4	7.2	7.3	7.2	7.4	7.2
23	7.2	7.1	7.9	7.7	6.8	6.7	7.5	7.2	7.3	7.2	7.3	7.0
24	7.2	7.1	7.9	7.7	6.8	6.7	7.4	7.2	7.3	7.2	7.3	7.1
25	7.2	7.1	7.9	7.6	6.8	6.8	7.5	7.2	7.3	7.2	7.2	7.1
26	7.3	7.2	7.9	7.7	6.9	6.8	7.4	7.2	7.5	7.2	7.6	7.1
27	7.3	7.2	7.8	7.6	7.0	6.9	7.3	7.2	7.5	7.3	7.5	7.2
28	---	---	7.8	7.6	7.0	6.9	7.3	7.2	7.4	7.2	7.4	7.1
29	---	---	7.6	7.2	7.0	6.9	7.4	7.2	---	---	7.4	7.1
30	---	---	7.2	7.0	7.0	7.0	7.4	7.2	---	---	7.5	7.1
31	7.6	7.3	---	---	7.1	6.9	7.3	7.2	---	---	7.4	7.2
MONTH	---	---	8.3	7.0	7.5	6.3	7.5	6.9	7.5	7.0	8.0	7.0

08068500 Spring Creek near Spring, TX--Continued

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.6	7.2	8.0	7.0	8.0	7.1	8.1	7.6	8.7	7.5	7.5	7.2
2	7.6	7.3	7.9	7.0	7.9	7.1	7.7	6.6	8.8	7.5	7.4	7.1
3	7.8	7.4	7.8	7.0	7.9	7.1	7.5	7.2	8.7	7.4	7.4	7.1
4	7.6	7.3	7.6	7.0	8.1	7.1	7.2	6.9	8.5	7.3	7.6	7.1
5	8.0	7.3	7.6	6.9	8.2	7.2	6.9	6.6	8.4	7.4	8.0	7.1
6	7.6	7.3	7.7	6.9	8.3	7.3	7.2	6.8	8.1	7.3	7.8	7.1
7	7.5	7.3	7.6	6.9	8.5	7.4	7.1	6.9	8.0	7.3	7.4	6.9
8	7.7	7.1	7.6	6.9	8.2	7.3	7.1	6.9	8.0	7.3	7.6	7.2
9	7.1	6.9	7.6	6.9	8.1	7.2	7.1	7.0	8.2	7.4	7.2	7.0
10	6.9	6.6	7.7	6.8	8.3	7.2	---	---	8.4	7.3	7.5	7.0
11	6.9	6.6	7.7	6.8	8.2	7.2	7.9	7.2	8.3	7.4	7.7	7.1
12	7.0	6.8	7.6	6.8	8.3	7.2	8.3	7.5	8.4	7.3	7.5	7.1
13	7.2	7.0	7.4	6.8	8.5	7.3	8.5	7.7	7.9	7.5	7.5	7.1
14	7.2	7.0	8.1	6.7	8.5	7.3	---	---	8.5	7.4	7.5	7.2
15	7.3	7.0	8.1	6.9	8.6	7.3	7.7	7.6	7.6	7.1	7.3	7.2
16	7.3	7.0	8.0	6.8	7.8	7.1	7.8	7.6	7.3	6.9	7.4	7.2
17	7.4	7.2	7.2	6.7	8.6	7.7	7.7	7.6	6.9	6.2	7.6	7.2
18	7.4	7.2	7.4	6.8	8.3	7.4	7.7	7.6	6.4	6.2	8.2	7.3
19	7.4	7.2	7.4	6.8	7.5	7.2	7.6	7.6	6.6	6.4	7.4	6.7
20	7.4	7.2	7.6	6.8	7.5	7.1	7.6	7.5	7.0	6.6	6.9	6.6
21	7.4	7.2	8.1	6.9	7.7	7.2	---	---	6.9	6.8	6.8	6.7
22	7.4	7.1	8.2	7.0	7.8	7.2	7.6	7.3	7.0	6.8	7.0	6.6
23	7.6	7.1	8.4	7.1	7.8	7.2	7.7	7.5	7.5	6.9	6.9	6.7
24	7.7	7.1	8.0	7.1	8.0	7.2	7.8	7.5	7.3	7.0	7.0	6.6
25	7.7	7.2	8.3	7.1	7.7	7.2	7.9	7.5	7.2	7.0	7.0	6.8
26	7.6	7.2	8.6	7.1	8.3	7.4	7.8	7.5	7.2	7.0	7.1	6.9
27	7.7	7.2	8.5	7.1	8.2	7.3	8.1	7.5	7.2	7.0	7.1	7.0
28	7.8	7.1	8.0	7.2	8.5	7.6	7.9	7.5	7.3	7.1	7.2	7.0
29	7.9	7.2	7.6	7.1	7.6	7.3	8.2	7.5	7.3	7.0	7.3	7.0
30	8.0	7.1	8.4	7.2	8.4	7.5	8.4	7.4	7.5	7.1	7.4	7.0
31	---	---	8.4	7.2	---	---	8.6	7.5	7.6	7.1	---	---
MONTH	8.0	6.6	8.6	6.7	8.6	7.1	---	---	8.8	6.2	8.2	6.6



08068500 Spring Creek near Spring, TX--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

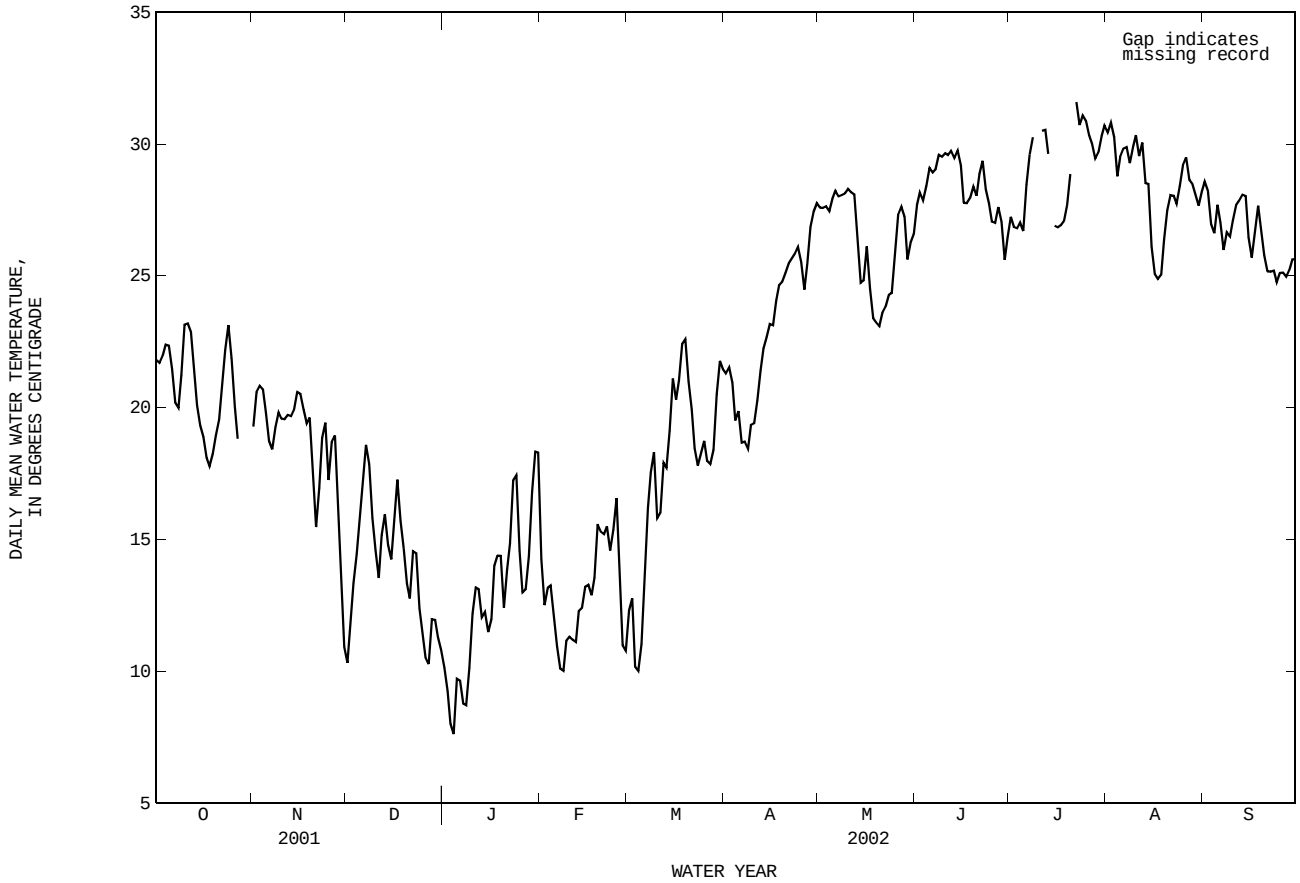
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	24.5	19.9	21.8	21.1	17.8	19.3	10.9	9.8	10.3	10.6	9.6	10.1
2	24.4	19.6	21.7	22.2	19.4	20.6	13.2	10.9	12.0	10.3	8.5	9.3
3	24.2	20.1	22.0	22.5	19.6	20.8	13.8	12.9	13.4	9.2	7.0	8.0
4	24.0	21.0	22.4	22.1	19.5	20.7	15.1	13.7	14.5	9.0	6.2	7.6
5	23.3	21.7	22.4	21.2	18.8	19.8	16.7	15.1	16.0	10.8	8.7	9.7
6	22.2	20.6	21.5	20.4	17.3	18.7	18.2	16.7	17.4	10.5	8.9	9.7
7	21.0	19.6	20.2	20.1	17.0	18.4	19.6	17.7	18.6	9.4	8.2	8.8
8	21.3	18.8	20.0	20.8	18.0	19.3	18.9	16.6	17.9	9.8	7.8	8.7
9	22.6	20.1	21.2	21.2	18.8	19.8	16.7	15.3	15.8	11.9	8.8	10.1
10	24.8	21.8	23.1	20.9	18.6	19.6	15.3	13.7	14.6	13.8	11.0	12.2
11	23.8	22.7	23.2	20.9	18.4	19.6	14.5	13.2	13.5	13.8	12.8	13.2
12	23.1	22.7	22.9	20.8	18.8	19.7	15.6	14.5	15.2	14.4	12.2	13.1
13	22.8	20.8	21.7	20.9	18.6	19.7	16.3	15.4	16.0	13.4	10.7	12.0
14	20.8	19.6	20.1	21.2	18.9	19.9	15.4	14.4	14.8	14.0	11.0	12.2
15	19.6	18.9	19.3	21.4	19.9	20.6	14.6	14.0	14.2	13.2	10.1	11.5
16	19.4	18.5	18.9	21.1	20.1	20.5	17.9	14.6	15.6	14.0	10.2	12.0
17	18.9	17.4	18.1	20.8	19.2	19.9	17.9	16.4	17.3	15.4	13.0	14.0
18	19.1	16.7	17.8	20.7	18.3	19.4	16.4	15.2	15.7	14.8	14.0	14.4
19	19.7	17.1	18.2	20.9	18.6	19.6	15.3	13.9	14.6	15.0	12.8	14.4
20	20.6	17.8	19.0	18.6	16.0	17.5	13.9	12.9	13.3	13.4	11.2	12.4
21	21.1	18.2	19.5	16.6	14.2	15.5	13.4	12.0	12.8	15.4	12.9	13.9
22	22.7	20.0	21.1	18.4	15.9	17.0	16.7	13.0	14.6	16.2	13.9	14.9
23	23.7	21.1	22.2	20.5	17.5	18.9	15.8	13.3	14.5	18.4	16.0	17.2
24	24.8	22.1	23.1	20.2	18.0	19.4	13.3	11.8	12.4	18.3	15.6	17.4
25	23.0	20.7	21.9	18.5	16.0	17.3	12.4	10.8	11.5	15.6	13.3	14.6
26	21.5	18.9	20.1	20.6	17.0	18.7	11.6	9.8	10.5	14.1	12.1	13.0
27	20.4	17.4	18.8	20.1	17.7	18.9	11.6	8.9	10.3	14.8	11.8	13.1
28	---	16.5	---	17.7	14.7	15.7	13.5	11.0	12.0	15.9	13.0	14.4
29	---	---	---	14.7	11.9	13.3	13.3	10.8	12.0	18.9	15.4	16.8
30	---	---	---	11.9	10.3	10.9	12.0	10.5	11.3	19.8	17.1	18.3
31	19.2	---	---	---	---	---	11.3	10.2	10.8	19.2	16.0	18.3
MONTH	---	---	---	22.5	10.3	18.6	19.6	8.9	14.0	19.8	6.2	12.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	16.0	12.8	14.3	13.5	11.5	12.3	25.0	18.7	21.3	30.3	25.6	27.6
2	13.6	11.3	12.5	13.6	10.7	12.8	24.1	19.7	21.5	30.0	25.5	27.6
3	14.1	12.3	13.2	12.4	8.6	10.2	23.1	19.4	21.0	29.2	26.2	27.6
4	13.6	12.9	13.2	13.3	7.4	10.0	21.7	17.8	19.5	29.8	25.8	27.5
5	13.0	11.4	12.1	14.3	8.2	11.0	23.5	17.4	19.9	31.0	25.9	27.9
6	11.4	10.2	11.0	16.1	11.5	13.5	19.8	17.6	18.7	31.5	26.0	28.2
7	11.5	9.1	10.1	19.1	14.1	16.2	19.8	17.7	18.7	30.5	26.4	28.0
8	11.4	8.9	10.0	18.8	16.6	17.6	19.7	17.6	18.4	30.8	26.0	28.1
9	13.3	9.4	11.2	20.4	16.0	18.3	20.3	18.6	19.3	30.5	26.3	28.1
10	12.0	10.5	11.3	18.6	13.5	15.8	19.9	18.8	19.4	31.4	26.0	28.3
11	13.5	9.8	11.2	17.0	15.1	16.0	21.2	19.6	20.3	30.9	26.1	28.2
12	12.9	9.4	11.1	21.1	16.0	17.9	23.1	20.4	21.4	30.6	25.9	28.1
13	14.9	10.4	12.3	21.4	14.8	17.7	24.3	20.8	22.2	28.5	24.2	26.2
14	14.8	10.6	12.4	21.6	17.1	19.1	24.4	21.3	22.7	28.2	21.9	24.7
15	15.6	11.6	13.2	23.1	19.8	21.1	25.2	21.8	23.2	28.5	21.5	24.8
16	15.1	11.6	13.3	21.4	19.3	20.3	24.1	22.5	23.1	29.1	23.6	26.1
17	14.9	10.8	12.9	22.5	20.0	21.0	26.3	22.5	24.1	27.0	23.1	24.5
18	15.4	12.0	13.6	24.6	21.0	22.4	27.0	22.9	24.7	25.8	22.2	23.4
19	16.8	14.7	15.6	23.9	21.4	22.6	27.0	23.1	24.8	27.2	20.3	23.2
20	16.9	14.0	15.3	22.3	19.7	21.0	27.5	23.4	25.1	26.7	20.2	23.1
21	17.2	13.6	15.2	22.2	18.5	19.9	27.9	23.8	25.5	27.7	20.2	23.6
22	17.3	14.3	15.5	20.7	16.7	18.5	27.8	24.0	25.6	27.0	21.1	23.8
23	17.3	12.4	14.6	20.9	15.2	17.8	28.2	24.0	25.8	27.1	21.9	24.3
24	18.5	12.9	15.4	20.2	16.6	18.3	28.8	24.1	26.1	26.5	22.3	24.4
25	18.5	15.2	16.6	19.6	17.7	18.7	27.2	24.3	25.5	29.3	23.0	25.9
26	16.0	11.0	13.2	20.5	16.0	18.0	26.4	22.6	24.5	30.8	24.6	27.3
27	13.7	8.8	11.0	20.9	15.3	17.9	28.2	23.5	25.5	30.7	24.9	27.6
28	12.8	8.8	10.8	20.6	16.6	18.4	29.8	24.6	26.9	29.4	25.2	27.2
29	---	---	---	22.4	19.2	20.5	30.4	25.4	27.4	27.6	23.6	25.6
30	---	---	---	23.8	20.5	21.8	31.1	25.4	27.8	29.8	24.0	26.3
31	---	---	---	23.9	20.0	21.5	---	---	---	29.8	24.4	26.6
MONTH	18.5	8.8	12.9	24.6	7.4	17.7	31.1	17.4	23.0	31.5	20.2	26.3

08068500 Spring Creek near Spring, TX--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	31.6	24.7	27.7	28.4	26.1	27.2	34.0	27.3	30.4	31.2	26.5	28.6
2	31.7	25.3	28.2	28.6	25.4	26.9	34.2	27.7	30.8	30.0	26.7	28.2
3	30.3	25.8	27.9	28.2	25.7	26.8	33.2	28.2	30.3	27.8	26.2	27.0
4	31.6	25.9	28.4	28.1	26.3	27.0	33.0	25.2	28.8	27.8	25.8	26.6
5	32.7	26.0	29.1	27.8	25.7	26.7	32.1	27.2	29.5	30.6	25.8	27.7
6	31.0	26.6	28.9	31.5	26.3	28.5	32.3	27.6	29.8	28.0	26.2	27.0
7	32.4	26.5	29.1	32.5	27.4	29.6	32.2	27.7	29.9	26.7	25.3	26.0
8	32.5	27.2	29.6	33.3	27.9	30.3	31.4	27.6	29.3	27.3	26.2	26.7
9	31.5	27.4	29.5	---	28.0	---	32.6	27.6	29.9	27.3	26.0	26.5
10	33.1	26.9	29.7	---	---	---	33.4	28.2	30.3	28.8	25.8	27.1
11	32.1	27.2	29.6	33.0	27.0	30.5	32.9	26.8	29.6	29.9	25.9	27.7
12	32.9	27.0	29.7	33.9	27.9	30.5	33.1	27.6	30.1	30.0	26.0	27.9
13	32.5	26.7	29.5	31.6	27.6	29.6	29.7	27.6	28.5	30.7	26.0	28.1
14	33.0	27.1	29.8	---	---	---	31.0	26.8	28.5	30.7	26.0	28.0
15	32.4	26.2	29.2	27.3	26.3	26.9	28.4	23.9	26.1	28.0	25.7	26.5
16	30.1	24.4	27.8	27.4	26.4	26.8	26.2	24.1	25.1	26.6	25.1	25.7
17	29.4	26.7	27.8	28.4	25.9	26.9	25.4	24.4	24.9	28.4	25.4	26.6
18	31.2	25.5	28.0	28.4	26.0	27.1	25.7	24.5	25.0	29.0	26.6	27.7
19	30.9	26.1	28.4	29.6	26.2	27.7	27.5	25.6	26.4	27.6	25.2	26.7
20	29.1	26.8	28.0	31.7	26.9	28.9	28.9	26.6	27.5	26.4	25.4	25.8
21	32.5	26.1	28.9	---	---	---	30.5	26.5	28.1	26.0	24.3	25.2
22	32.8	26.6	29.4	33.5	28.4	31.6	30.0	26.8	28.0	26.1	24.4	25.2
23	30.5	26.0	28.3	34.3	27.9	30.7	29.3	26.7	27.7	27.0	23.9	25.2
24	29.6	25.9	27.7	34.7	28.1	31.1	30.6	26.6	28.4	26.6	23.2	24.8
25	28.5	25.4	27.1	34.1	28.2	30.9	31.9	27.2	29.2	27.2	23.6	25.1
26	28.7	25.7	27.0	32.5	28.4	30.3	31.6	27.6	29.5	27.8	23.2	25.1
27	30.0	26.0	27.6	32.9	27.8	30.0	30.1	27.1	28.6	27.9	22.6	25.0
28	27.7	26.4	27.1	30.8	27.8	29.5	30.8	26.7	28.5	28.2	22.9	25.2
29	26.7	25.1	25.6	32.6	27.4	29.7	30.7	26.1	28.1	28.1	23.6	25.6
30	27.5	25.4	26.5	33.5	27.6	30.3	29.8	25.8	27.7	28.0	23.6	25.6
31	---	---	---	34.4	27.8	30.7	31.0	26.0	28.2	---	---	---
MONTH	33.1	24.4	28.4	---	---	---	34.2	23.9	28.5	31.2	22.6	26.5



08068500 Spring Creek near Spring, TX--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

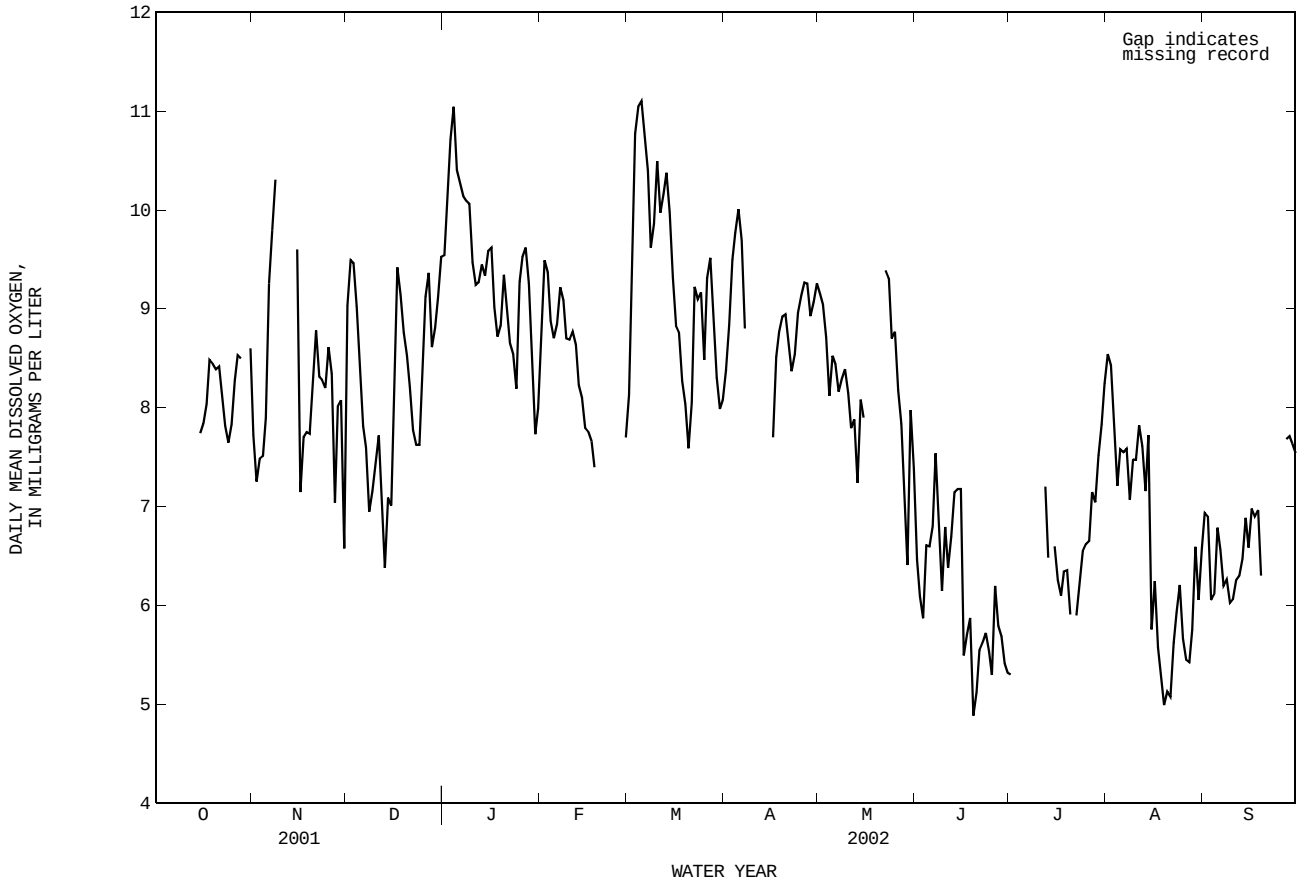
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	9.4	6.5	7.7	9.9	5.3	9.0	9.9	7.7	9.5
2	---	---	---	10.2	4.2	7.3	9.7	9.3	9.5	10.5	9.8	10.2
3	---	---	---	10.0	3.8	7.5	9.6	9.3	9.5	11.0	9.7	10.7
4	---	---	---	9.1	5.6	7.5	9.4	8.6	9.0	11.4	10.1	11.0
5	---	---	---	10.4	5.4	7.9	8.6	8.0	8.3	10.8	9.9	10.4
6	---	---	---	11.7	6.7	9.3	8.0	7.4	7.8	10.4	10.2	10.3
7	---	---	---	12.5	8.0	9.8	8.2	7.1	7.6	10.6	9.7	10.1
8	---	---	---	13.2	7.9	10.3	7.2	6.8	6.9	10.2	9.8	10.1
9	---	---	---	---	---	---	7.3	6.9	7.2	10.3	9.7	10.1
10	---	---	---	---	---	---	7.6	7.3	7.5	9.7	9.1	9.5
11	---	---	---	---	---	---	8.3	7.5	7.7	9.4	9.1	9.2
12	---	---	---	---	---	---	7.8	6.8	7.2	9.5	9.1	9.3
13	---	---	---	---	---	---	6.8	5.5	6.4	9.7	9.2	9.4
14	---	---	---	---	---	---	7.3	6.5	7.1	9.7	9.0	9.3
15	7.8	7.4	7.7	11.6	7.1	9.6	7.2	6.9	7.0	10.0	9.1	9.6
16	8.0	7.8	7.8	8.3	6.5	7.1	13.1	6.6	8.0	10.2	9.1	9.6
17	8.3	7.9	8.0	9.1	6.8	7.7	10.3	9.0	9.4	9.5	8.5	9.0
18	8.7	7.9	8.5	9.0	7.0	7.8	9.4	9.0	9.1	9.2	8.1	8.7
19	8.7	7.7	8.4	8.9	6.9	7.7	9.2	8.5	8.8	9.6	8.3	8.8
20	8.7	6.6	8.4	9.8	7.3	8.3	8.8	8.3	8.5	10.1	8.7	9.3
21	8.6	8.2	8.4	10.5	7.8	8.8	8.4	8.0	8.2	9.8	8.4	9.0
22	8.4	7.8	8.1	9.7	7.5	8.3	8.2	5.3	7.8	9.8	8.0	8.7
23	8.0	7.6	7.8	9.9	6.7	8.3	7.9	7.4	7.6	9.9	7.7	8.5
24	8.0	7.2	7.6	10.0	7.1	8.2	8.2	6.6	7.6	9.1	7.4	8.2
25	8.3	7.2	7.8	10.2	7.6	8.6	9.1	7.9	8.4	10.2	8.5	9.3
26	8.8	7.3	8.3	10.2	6.4	8.3	9.4	8.7	9.1	9.8	9.2	9.5
27	9.1	7.8	8.5	7.3	6.4	7.0	9.7	8.9	9.4	10.0	9.3	9.6
28	9.1	7.8	8.5	8.7	6.9	8.0	9.1	8.1	8.6	9.6	8.7	9.3
29	---	---	---	8.9	5.1	8.1	9.3	8.3	8.8	9.3	7.6	8.5
30	---	---	---	8.6	4.4	6.6	9.4	8.7	9.1	8.8	7.0	7.7
31	9.3	7.8	8.6	---	---	---	9.7	9.1	9.5	8.4	7.1	8.0
MONTH	---	---	---	---	---	---	13.1	5.3	8.2	11.4	7.0	9.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.0	8.3	8.6	9.1	5.5	8.1	10.8	6.1	8.4	13.0	6.7	9.2
2	9.9	9.0	9.5	10.7	9.0	9.8	10.8	7.1	8.8	12.8	6.6	9.0
3	9.8	9.0	9.4	11.5	10.1	10.8	11.9	8.0	9.5	12.3	6.4	8.7
4	9.3	8.6	8.9	11.7	10.5	11.0	12.4	8.0	9.8	11.8	5.8	8.1
5	9.0	8.5	8.7	12.0	10.4	11.1	12.8	7.4	10.0	11.9	6.0	8.5
6	9.1	8.6	8.8	11.8	9.8	10.7	12.4	7.2	9.7	12.6	5.8	8.4
7	9.5	9.0	9.2	12.1	9.3	10.4	10.5	7.4	8.8	12.1	5.6	8.2
8	9.5	8.8	9.1	11.2	8.8	9.6	---	---	---	12.2	5.7	8.3
9	9.1	8.4	8.7	11.8	8.6	9.9	---	---	---	12.2	5.9	8.4
10	8.9	8.0	8.7	12.5	9.4	10.5	---	---	---	12.0	5.8	8.1
11	9.0	8.5	8.8	11.6	8.9	10	---	---	---	11.8	5.3	7.8
12	9.0	8.3	8.6	12.4	8.8	10.2	---	---	---	11.9	5.1	7.9
13	8.7	7.5	8.2	13.5	8.6	10.4	---	---	---	12.0	5.0	7.2
14	8.6	7.0	8.1	12.9	8.3	10	---	---	---	11.7	4.9	8.1
15	8.1	7.4	7.8	11.9	7.8	9.3	---	---	---	10.4	5.9	7.9
16	8.1	7.4	7.8	11.1	7.4	8.8	8.0	7.4	7.7	---	---	---
17	8.2	7.2	7.7	11.0	7.5	8.8	8.9	8.0	8.5	---	---	---
18	8.0	7.0	7.4	10.5	7.0	8.3	9.3	8.2	8.8	---	---	---
19	---	---	---	9.9	6.5	8.0	9.7	8.4	8.9	---	---	---
20	---	---	---	8.5	6.9	7.6	9.9	8.3	8.9	---	---	---
21	---	---	---	9.2	7.1	8.0	9.8	7.8	8.6	---	---	---
22	---	---	---	10.3	8.4	9.2	9.8	7.3	8.4	14.0	6.1	9.4
23	---	---	---	10.4	7.8	9.1	10.8	7.1	8.5	14.2	5.9	9.3
24	---	---	---	10.7	7.6	9.2	11.0	7.9	9.0	13.2	5.6	8.7
25	---	---	---	9.3	8.0	8.5	11.2	7.8	9.1	14.0	4.6	8.8
26	---	---	---	10.8	8.0	9.3	11.5	8.1	9.3	14.2	3.3	8.2
27	---	---	---	10.9	8.2	9.5	11.6	7.6	9.3	13.9	3.2	7.8
28	11.0	7.0	7.7	10.5	6.9	8.8	11.5	7.3	8.9	12.2	3.9	7.1
29	---	---	---	10.1	6.1	8.3	12.5	7.0	9.1	9.4	3.4	6.4
30	---	---	---	9.8	6.3	8.0	13.2	7.0	9.3	11.2	5.7	8.0
31	---	---	---	10.3	6.0	8.1	---	---	---	10.9	5.4	7.4
MONTH	---	---	---	13.5	5.5	9.3	---	---	---	---	---	---

08068500 Spring Creek near Spring, TX--Continued

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	10.4	3.4	6.5	6.0	4.9	5.3	14.6	4.7	8.5	9.3	5.7	6.9
2	10.5	2.8	6.1	---	---	---	13.9	4.2	8.4	9.0	5.6	6.9
3	10.3	2.7	5.9	---	---	---	15.5	3.6	7.7	8.2	3.9	6.1
4	11.3	2.3	6.6	---	---	---	11.4	5.0	7.2	8.2	3.5	6.1
5	11.7	3.0	6.6	---	---	---	11.3	4.8	7.6	10.0	3.9	6.8
6	10.8	3.0	6.8	---	---	---	10.9	4.9	7.6	9.7	4.2	6.6
7	11.7	5.0	7.5	---	---	---	11.9	4.8	7.6	6.9	5.5	6.2
8	11.0	4.1	6.9	---	---	---	10.2	3.9	7.1	6.8	5.8	6.3
9	10.3	2.8	6.1	---	---	---	11.4	4.6	7.5	6.6	5.7	6.0
10	10.9	3.0	6.8	---	---	---	12.5	2.9	7.5	6.8	5.3	6.1
11	10.6	2.8	6.4	---	---	---	12.4	4.6	7.8	7.5	5.5	6.3
12	11.4	2.8	6.7	9.3	5.9	7.2	13.1	3.8	7.6	7.5	5.4	6.3
13	10.5	4.9	7.1	7.9	5.8	6.5	9.8	3.4	7.2	7.8	5.4	6.5
14	11.2	4.5	7.2	---	---	---	12.9	5.1	7.7	8.2	6.1	6.9
15	11.7	3.7	7.2	7.1	6.1	6.6	6.6	4.4	5.8	7.3	6.1	6.6
16	6.7	3.3	5.5	6.6	5.8	6.3	6.8	6.0	6.2	8.1	6.4	7.0
17	7.1	4.9	5.7	6.3	5.8	6.1	6.0	5.2	5.6	8.1	5.9	6.9
18	7.9	4.5	5.9	6.7	6.0	6.3	5.3	5.1	5.2	8.7	5.9	7.0
19	6.4	3.3	4.9	6.6	5.6	6.4	5.1	4.8	5.0	7.5	5.6	6.3
20	6.8	3.1	5.1	6.7	5.0	5.9	5.6	4.3	5.1	---	---	---
21	8.1	3.3	5.5	---	---	---	5.7	4.1	5.1	---	---	---
22	8.6	3.5	5.6	6.6	5.3	5.9	7.5	4.0	5.6	---	---	---
23	9.0	3.2	5.7	7.4	5.0	6.2	6.3	5.4	5.9	---	---	---
24	9.1	3.3	5.5	8.1	4.9	6.5	7.0	5.6	6.2	---	---	---
25	7.6	3.1	5.3	8.7	5.1	6.6	6.7	4.2	5.7	---	---	---
26	7.9	4.8	6.2	9.1	4.9	6.7	6.6	3.4	5.5	---	---	---
27	7.2	5.0	5.8	10.1	5.0	7.1	6.6	3.5	5.4	8.7	6.5	7.7
28	6.7	4.9	5.7	9.6	4.7	7.0	7.0	3.4	5.8	9.1	6.4	7.7
29	6.0	4.4	5.4	10.8	4.8	7.5	7.9	5.8	6.6	9.3	6.4	7.6
30	5.7	5.0	5.3	12.4	4.2	7.8	7.7	4.5	6.1	9.5	6.3	7.5
31	---	---	---	13.5	4.3	8.2	9.0	3.7	6.6	---	---	---
MONTH	11.7	2.3	6.1	---	---	---	15.5	2.9	6.6	---	---	---



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^2.

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.--No estimated daily discharges. Records good. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	2.6	44	4.7	25	1.1	1.6	1.2	0.00	14	0.01	0.18
2	2.2	1.9	63	4.0	18	1.2	1.5	0.97	0.00	5.3	0.00	0.10
3	1.6	1.2	306	3.8	7.6	1.1	9.0	0.72	0.00	4.8	0.00	0.06
4	1.1	0.99	359	3.9	5.7	1.1	3.5	0.58	0.00	5.5	0.00	0.00
5	2.4	1.2	146	5.6	3.9	1.3	1.7	0.79	0.00	0.69	0.00	0.00
6	55	0.98	74	66	12	1.3	0.77	0.59	0.00	0.26	0.00	0.00
7	91	0.72	50	30	39	1.2	0.58	0.43	0.00	0.05	0.00	3.8
8	27	0.57	72	13	16	1.1	394	0.35	0.00	0.0	0.00	116
9	13	0.52	256	8.1	8.4	1.3	725	0.25	0.00	0.00	0.00	92
10	8.0	0.79	189	6.2	5.5	1.2	746	0.17	0.00	0.00	0.00	44
11	18	0.78	97	4.8	4.0	1.1	400	0.13	0.00	0.00	0.00	21
12	133	0.96	587	3.8	3.1	1.0	90	0.09	0.00	0.00	0.00	10
13	369	0.70	895	3.1	2.4	1.3	44	0.03	0.00	0.03	0.00	3.3
14	601	0.58	899	2.6	1.9	1.0	26	0.00	0.00	1.6	0.00	2.6
15	748	0.36	712	2.0	1.6	0.80	20	0.00	0.00	0.58	153	1.0
16	582	0.56	443	1.9	1.5	0.96	14	0.00	0.00	1.9	537	0.84
17	217	0.78	233	2.0	1.4	0.99	11	0.00	0.00	13	578	0.67
18	68	0.75	154	2.0	1.4	1.00	9.9	0.00	0.00	12	230	0.36
19	46	0.69	104	2.1	1.5	1.1	7.4	0.00	0.00	5.1	60	8.0
20	32	0.68	74	2.0	16	3.1	5.3	0.00	0.00	1.7	29	19
21	23	0.55	55	1.8	18	11	3.8	0.00	0.00	0.55	25	13
22	19	0.44	43	2.5	8.0	5.1	2.9	0.00	0.00	0.27	36	6.3
23	16	0.37	34	2.7	4.4	2.3	2.5	0.00	0.00	0.17	16	1.6
24	17	0.27	25	2.1	2.8	1.4	2.3	0.00	0.00	0.14	9.9	0.45
25	20	0.25	19	15	2.0	1.0	2.1	0.00	0.00	0.16	5.8	0.16
26	16	0.26	15	9.2	1.5	0.87	1.9	0.00	0.16	0.15	4.2	0.06
27	12	56	11	4.4	1.2	0.92	1.6	0.00	2.4	0.11	2.6	0.00
28	8.7	187	10	2.7	0.95	0.84	1.3	0.00	3.8	0.08	1.8	0.00
29	6.3	186	9.0	2.0	---	0.65	1.7	0.00	2.3	0.10	1.1	0.00
30	4.1	98	7.0	1.8	---	0.81	1.5	0.00	5.0	0.11	0.69	0.00
31	3.6	---	5.7	1.9	---	1.5	---	0.00	---	0.07	0.39	---
TOTAL	3164.0	547.45	5990.7	217.7	214.75	50.64	2532.85	6.30	13.66	68.42	1690.49	344.48
MEAN	102.1	18.25	193.2	7.023	7.670	1.634	84.43	0.203	0.455	2.207	54.53	11.48
MAX	748	187	899	66	39	11	746	1.2	5.0	14	578	116
MIN	1.1	0.25	5.7	1.8	0.95	0.65	0.58	0.00	0.00	0.00	0.00	0.00
AC-FT	6280	1090	11880	432	426	100	5020	12	27	136	3350	683

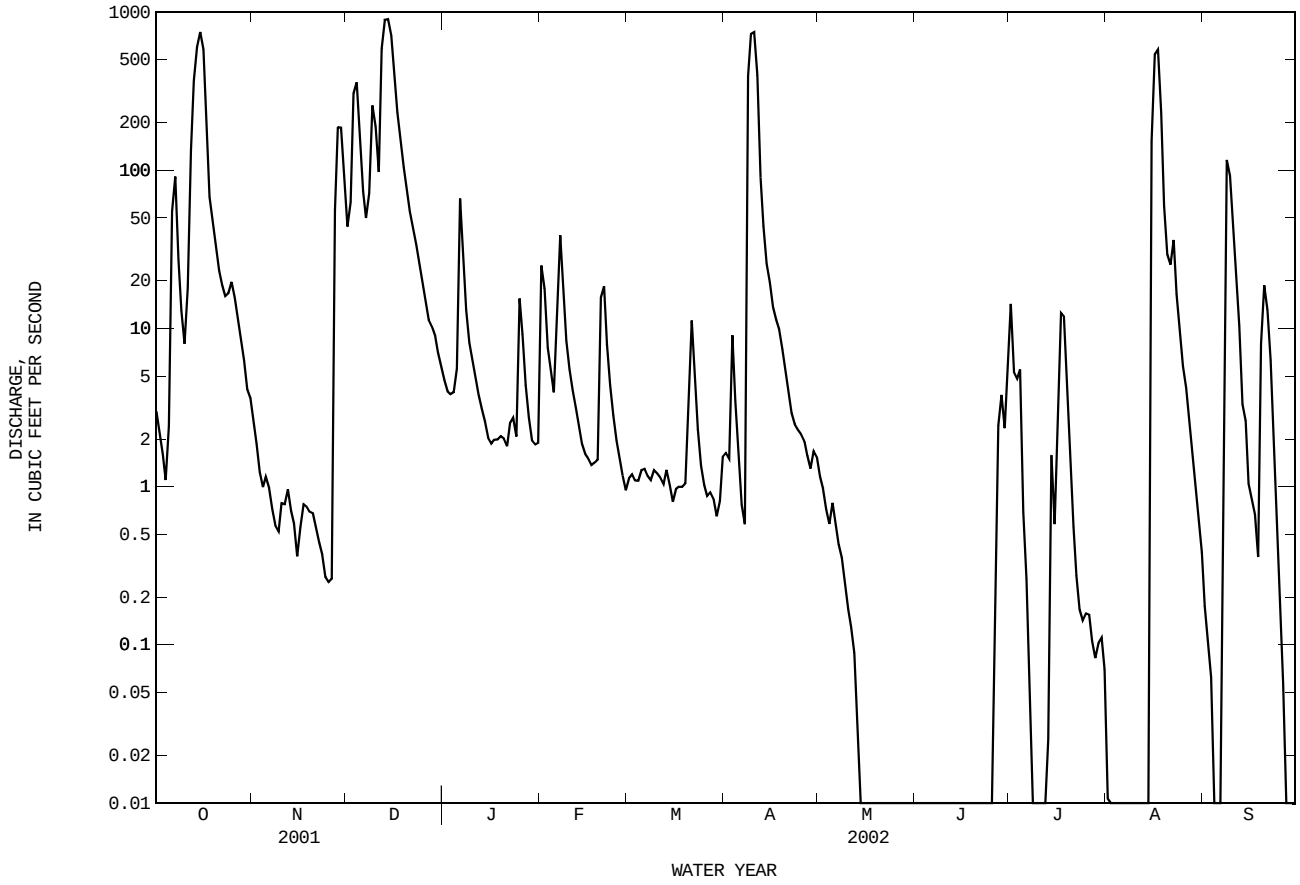
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2002h, BY WATER YEAR (WY)

MEAN	53.50	60.14	73.11	92.97	79.64	60.36	63.93	77.50	87.24	16.53	6.684	34.33
MAX	368	359	257	508	534	353	344	377	375	98.7	54.5	358
(WY)	1999	1999	1977	1979	1992	2001	1991	1993	1987	1979	2002	1979
MIN	0.000	0.000	0.000	0.28	0.000	0.000	0.10	0.004	0.22	0.000	0.019	0.000
(WY)	2000	2000	1989	2000	1976	2000	1987	1996	1988	1998	1988	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1975 - 2002h	
ANNUAL TOTAL	33688.59		14841.44			
ANNUAL MEAN	92.30		40.66		58.46	
HIGHEST ANNUAL MEAN					186	1979
LOWEST ANNUAL MEAN					5.01	1990
HIGHEST DAILY MEAN	1090	Mar 29	899	Dec 14	2240	Jan 20 1979
LOWEST DAILY MEAN	0.00	Jul 14	0.00	May 14	0.00	Sep 9 1975
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 14	0.00	May 14	0.00	Jan 31 1976
MAXIMUM PEAK FLOW			927	Dec 14	2370	Jan 20 1979
MAXIMUM PEAK STAGE			56.55	Dec 14	63.49	Oct 19 1998
ANNUAL RUNOFF (AC-FT)	66820		29440		42350	
10 PERCENT EXCEEDS	361		74		115	
50 PERCENT EXCEEDS	9.5		1.7		2.8	
90 PERCENT EXCEEDS	0.07		0.00		0.00	

h See PERIOD OF RECORD paragraph.

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^2.

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.--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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	9.0	39	12	12	4.5	3.9	4.5	0.78	25	1.2	4.2
2	2.9	7.1	58	11	19	5.8	3.5	3.9	0.63	13	1.2	3.6
3	6.2	5.9	241	9.8	8.7	4.3	11	3.6	0.91	11	1.4	3.1
4	4.6	5.2	327	10	12	4.0	7.4	2.9	0.82	9.3	1.5	1.6
5	e50	4.7	150	17	8.6	3.8	5.6	2.6	0.76	4.1	1.5	1.2
6	92	4.5	60	47	11	4.1	3.0	2.9	2.0	1.9	1.5	1.1
7	113	4.4	39	32	40	4.0	2.8	2.5	33	1.4	1.2	18
8	38	4.2	84	18	29	3.8	548	1.9	23	1.4	1.4	82
9	17	4.1	208	13	22	4.1	770	1.7	2.8	1.3	1.5	94
10	7.6	4.0	183	10	17	3.7	785	1.4	1.9	2.0	1.5	60
11	28	4.1	101	8.2	14	3.7	502	1.0	1.5	1.5	1.1	40
12	108	4.1	663	6.7	12	3.4	115	0.95	1.4	1.3	0.79	28
13	479	3.9	1060	5.8	11	3.2	53	0.96	1.3	57	1.2	15
14	572	3.9	1100	5.2	8.5	3.7	40	0.89	1.2	111	1.5	7.7
15	680	4.0	863	4.4	7.3	3.5	31	0.59	1.0	21	575	7.1
16	617	9.4	529	4.2	6.8	3.4	26	0.63	19	68	945	9.6
17	221	4.9	275	4.2	5.9	3.9	23	1.3	5.9	36	676	8.1
18	63	3.9	161	4.3	5.9	4.0	23	9.0	1.7	38	378	4.3
19	43	3.7	107	4.2	6.4	3.9	18	2.7	1.3	22	111	27
20	32	3.8	71	4.1	12	15	14	0.92	1.9	9.8	65	62
21	26	3.8	52	4.0	29	18	10	0.69	1.7	6.4	47	25
22	23	4.1	45	3.9	19	13	7.6	0.61	1.5	5.0	58	13
23	20	3.9	36	4.5	12	6.8	5.8	0.62	1.4	5.6	41	5.6
24	21	3.9	27	5.3	9.1	4.8	4.9	0.63	1.4	9.7	33	2.5
25	21	3.7	23	12	7.1	6.9	4.7	0.63	14	9.2	23	1.7
26	19	5.7	21	13	5.3	11	5.4	0.64	11	5.2	19	1.3
27	17	26	18	6.9	4.3	3.6	5.8	0.63	1.9	2.6	14	1.1
28	15	e188	18	4.9	4.2	3.3	4.9	0.92	4.1	1.8	9.8	1.0
29	13	195	17	4.0	---	3.0	5.0	1.1	6.3	1.5	7.4	1.1
30	11	104	15	3.5	---	3.0	5.6	1.1	15	1.3	5.9	1.1
31	10	---	13	4.2	---	4.3	---	0.82	---	1.3	5.3	---
TOTAL	3372.8	636.9	6604	297.3	359.1	167.5	3044.9	55.23	161.10	485.6	3031.89	531.0
MEAN	108.8	21.23	213.0	9.590	12.82	5.403	101.5	1.782	5.370	15.66	97.80	17.70
MAX	680	195	1100	47	40	18	785	9.0	33	111	945	94
MIN	2.5	3.7	13	3.5	4.2	3.0	2.8	0.59	0.63	1.3	0.79	1.0
AC-FT	6690	1260	13100	590	712	332	6040	110	320	963	6010	1050

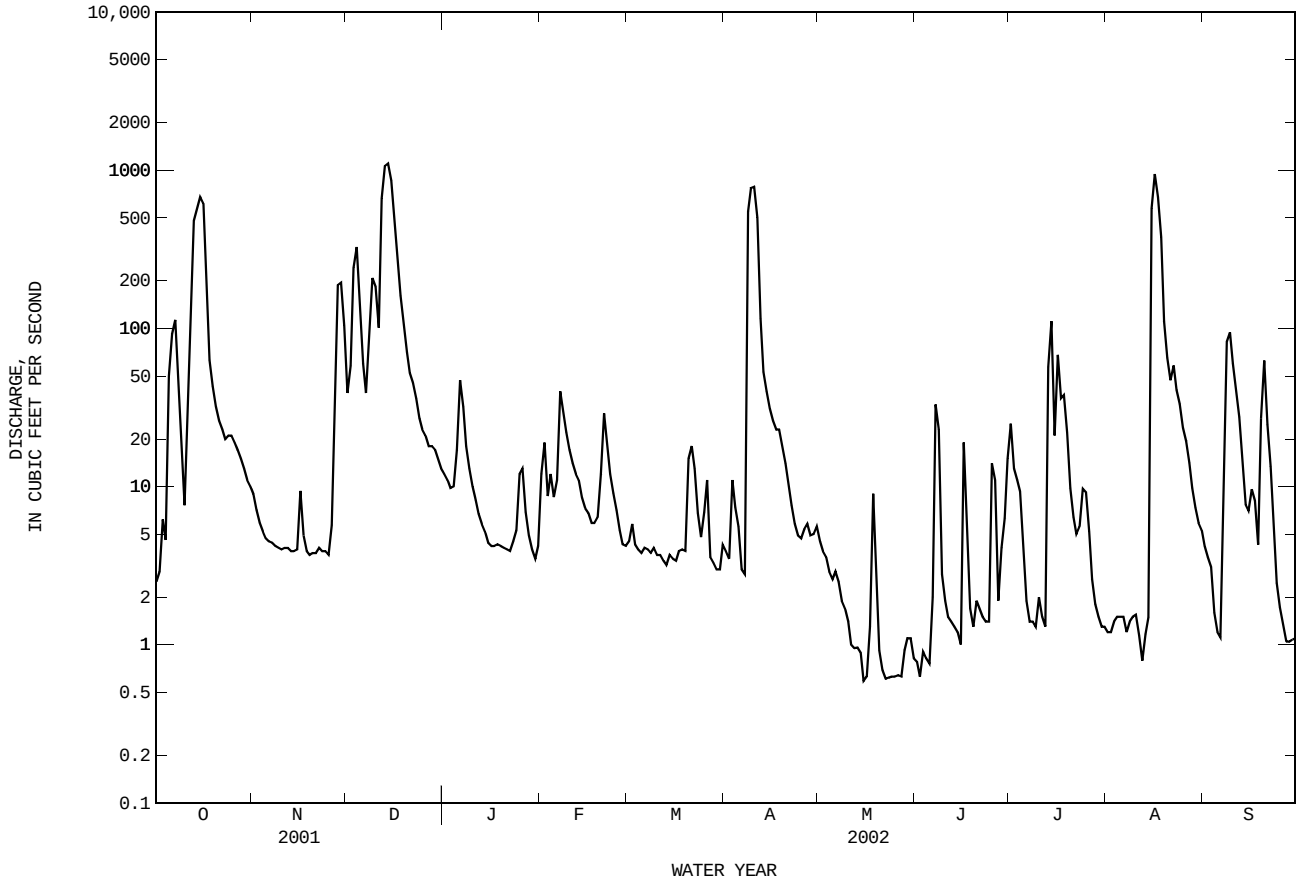
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2002, BY WATER YEAR (WY)

MEAN	86.08	86.74	99.54	115.1	102.0	77.49	85.85	104.1	124.8	23.12	17.84	54.82
MAX	996	787	336	685	649	430	463	513	625	120	214	537
(WY)	1999	1999	1977	1979	1992	2001	1991	1993	1993	1979	1983	1979
MIN	0.95	0.27	0.26	1.65	0.065	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1975 - 2002	
ANNUAL TOTAL	44020.88		18747.32			
ANNUAL MEAN	120.6		51.36		80.90	
HIGHEST ANNUAL MEAN					255	1979
LOWEST ANNUAL MEAN					9.49	1996
HIGHEST DAILY MEAN	2580	Jun 9	1100	Dec 14	7640	Oct 20 1998
LOWEST DAILY MEAN	0.72	Jul 27	0.59	May 15	0.00	Mar 3 1976
ANNUAL SEVEN-DAY MINIMUM	0.77	Jul 24	0.64	May 21	0.00	Jan 3 1978
MAXIMUM PEAK FLOW			1190	Dec 14	9710	Oct 20 1998
MAXIMUM PEAK STAGE			42.80	Dec 14	48.45	Oct 20 1998
ANNUAL RUNOFF (AC-FT)	87320		37190		58610	
10 PERCENT EXCEEDS	391		93		168	
50 PERCENT EXCEEDS	21		5.9		5.7	
90 PERCENT EXCEEDS	2.4		1.2		0.32	

e Estimated

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 at downstream side of bridge on Cypress-Rosehill Road, 3.2 mi north of Cypress, and 6.9 mi upstream from mouth.

DRAINAGE AREA.--41.0 mi^2.

PERIOD OF RECORD.--May 1982 to Sept. 1992, 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 except those for estimated daily discharges, which are poor. No known regulation or diversions.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.94	0.63	17	1.6	1.6	0.45	0.46	0.24	e0.0	22	0.00	0.49
2	e0.90	0.49	39	1.5	1.5	0.44	0.51	0.22	e0.0	11	0.00	0.46
3	e0.80	0.60	114	2.2	1.2	0.38	0.49	0.17	e0.0	46	0.00	e0.40
4	e1.0	0.45	57	2.3	0.98	0.37	0.44	0.14	0.0	16	0.00	0.35
5	5.1	0.60	25	3.0	1.1	0.35	0.37	0.10	e0.0	5.8	0.00	e0.25
6	43	0.33	14	7.3	2.3	0.34	0.32	0.16	e0.0	2.5	0.00	e0.20
7	14	0.37	10	5.3	2.8	0.30	0.27	0.35	0.06	1.0	0.00	e0.40
8	6.6	0.36	36	4.2	2.5	0.30	322	0.28	0.07	0.49	0.00	0.77
9	3.6	0.27	58	3.3	2.5	0.31	396	0.16	0.36	0.20	0.00	4.2
10	2.5	0.41	25	2.8	2.2	0.21	101	0.12	0.25	0.07	0.00	1.0
11	4.0	0.47	24	2.3	1.9	0.24	31	0.07	0.21	1.3	0.00	0.58
12	4.7	0.54	619	2.0	1.6	0.19	14	0.03	0.16	0.16	0.00	0.41
13	193	0.55	659	1.6	1.4	0.27	8.7	e0.0	0.15	1.2	0.00	0.44
14	238	0.66	219	1.4	1.2	0.35	5.7	e0.0	0.07	10	0.00	0.46
15	90	0.37	81	1.3	3.0	0.37	3.7	e0.0	e0.01	1.1	176	e0.25
16	36	0.89	44	1.8	3.0	0.29	2.3	e0.0	0.22	12	546	e0.20
17	18	2.1	78	1.7	2.8	0.32	1.8	e0.0	0.38	13	224	e0.20
18	10	2.0	47	1.1	1.7	0.27	1.3	0.03	0.44	1.5	38	0.49
19	9.2	1.3	22	0.96	2.7	0.41	0.85	0.34	0.25	1.5	16	0.53
20	16	0.55	13	0.96	3.9	1.1	0.62	0.29	0.16	1.6	9.3	1.6
21	11	0.28	9.8	0.94	7.0	2.5	0.50	0.17	0.10	1.2	5.5	2.3
22	5.7	0.12	8.2	0.98	3.7	2.0	0.45	0.09	0.11	0.67	3.6	0.79
23	4.2	0.03	6.7	1.1	2.3	1.3	0.36	0.05	0.03	1.9	2.8	0.48
24	2.4	0.05	5.6	1.1	1.4	0.97	0.33	0.05	e0.0	2.1	2.2	0.36
25	2.1	0.16	4.1	1.5	0.88	0.90	0.29	0.05	e0.0	4.8	1.8	e0.25
26	1.9	0.60	3.1	4.0	0.59	0.99	0.26	0.03	0.05	6.7	1.4	0.52
27	1.5	25	3.5	3.2	0.43	0.77	0.24	e0.01	0.39	1.4	1.1	0.46
28	0.96	60	2.7	2.7	0.42	0.67	0.26	e0.0	0.29	0.18	0.99	0.29
29	0.79	62	2.5	2.2	---	0.59	0.30	e0.0	0.31	0.03	0.88	e0.10
30	0.69	36	2.1	1.9	---	0.51	0.26	e0.0	1.1	0.01	0.68	e0.05
31	0.75	---	1.8	1.7	---	0.47	---	e0.0	---	0.00	0.64	---
TOTAL	729.33	198.18	2251.1	69.94	58.60	18.93	895.08	3.15	5.17	167.41	1030.89	19.28
MEAN	23.53	6.606	72.62	2.256	2.093	0.611	29.84	0.102	0.172	5.400	33.25	0.643
MAX	238	62	659	7.3	7.0	2.5	396	0.35	1.1	46	546	4.2
MIN	0.69	0.03	1.8	0.94	0.42	0.19	0.24	0.00	0.00	0.00	0.00	0.05
AC-FT	1450	393	4470	139	116	38	1780	6.2	10	332	2040	38

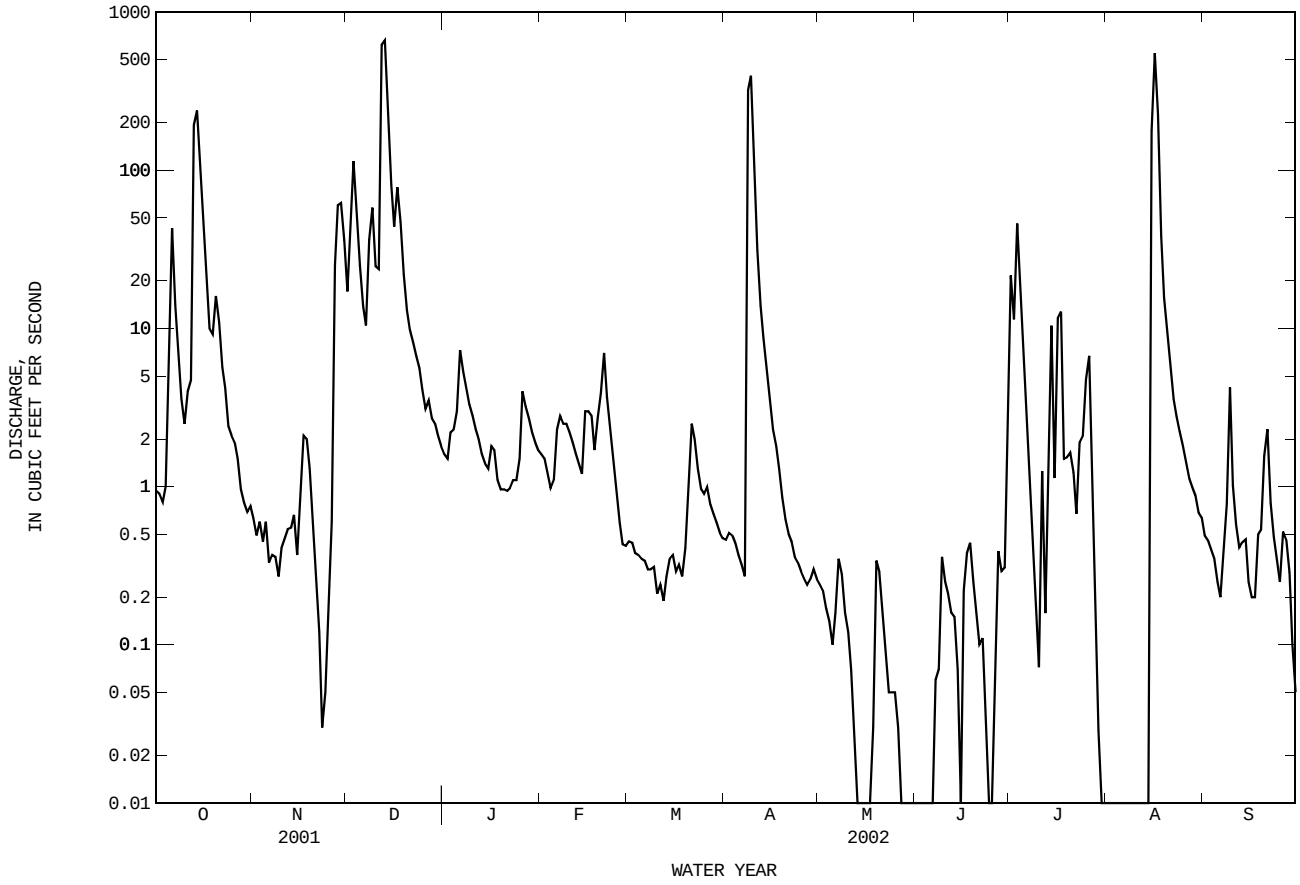
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2002h, BY WATER YEAR (WY)

MEAN	9.437	46.58	33.46	34.49	35.55	26.72	24.26	27.13	39.18	6.944	8.378	14.44
MAX	38.6	215	82.4	176	205	162	202	135	178	37.3	71.3	90.3
(WY)	1998	1999	1998	1991	1992	2001	1991	1982	2001	1983	1983	2001
MIN	0.031	0.56	0.29	0.69	0.45	0.30	0.14	0.10	0.046	0.91	0.16	0.000
(WY)	1989	2000	1989	1986	2000	1986	1987	2002	1990	1990	1988	1988

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 1982 - 2002h	
ANNUAL TOTAL	5447.06			
ANNUAL MEAN	14.92		23.15	
HIGHEST ANNUAL MEAN			59.3	1992
LOWEST ANNUAL MEAN			5.38	1989
HIGHEST DAILY MEAN	659	Dec 13	2710	Jun 9 2001
LOWEST DAILY MEAN	0.00	May 13	0.00	Jun 23 1982
ANNUAL SEVEN-DAY MINIMUM	0.00	May 28	0.00	Jun 23 1982
MAXIMUM PEAK FLOW	850	Dec 12	4520	Oct 18 1994
MAXIMUM PEAK STAGE	76.40	Dec 12	81.41	Oct 18 1994
ANNUAL RUNOFF (AC-FT)	10800		16770	
10 PERCENT EXCEEDS	17		31	
50 PERCENT EXCEEDS	0.85		0.87	
90 PERCENT EXCEEDS	0.03		0.04	

e Estimated
h See PERIOD OF RECORD paragraph.

08068780 Little Cypress Creek near Cypress, TX--Continued



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 at downstream side of bridge on Grant Road and 6.0 mi east of Cypress.

DRAINAGE AREA.--214 mi^2.

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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	14	135	16	15	9.7	7.3	7.2	e7.0	27	4.7	6.9
2	15	14	201	14	27	11	7.1	7.4	e6.0	54	4.4	7.0
3	13	13	363	13	19	9.1	6.7	7.4	e8.0	50	5.0	7.5
4	12	12	460	14	21	8.0	11	7.1	e7.0	55	12	5.3
5	199	11	335	78	29	7.4	8.4	6.1	e6.5	26	8.4	4.4
6	805	11	149	66	50	7.3	8.2	6.9	e6.0	15	5.9	3.8
7	251	11	101	81	42	7.7	7.5	7.1	e50	9.6	5.3	71
8	113	11	222	34	35	7.7	1360	6.8	e40	8.5	6.2	54
9	60	11	334	23	22	8.2	1380	6.6	e20	9.5	5.0	153
10	46	11	326	18	17	7.7	1100	6.6	e10	16	4.6	98
11	493	11	318	16	14	7.3	842	6.3	e7.0	12	4.8	35
12	222	12	1110	15	12	7.3	315	6.1	e5.5	10	5.4	18
13	1310	11	1670	13	12	6.4	108	7.0	4.9	66	7.3	11
14	1170	11	1510	12	11	6.6	67	7.7	4.7	441	10	6.7
15	965	11	1140	11	9.7	7.0	44	6.4	4.6	90	993	9.2
16	859	40	899	9.9	11	6.9	34	6.3	81	240	2130	17
17	539	25	650	9.8	10	6.8	25	15	35	215	1570	29
18	168	16	336	9.9	9.9	7.1	25	22	11	66	939	9.0
19	98	15	204	11	9.7	6.9	21	15	7.9	30	306	281
20	82	14	138	10	11	21	18	12	9.2	22	120	838
21	66	13	102	10	37	18	14	11	7.4	22	56	104
22	51	13	111	9.8	38	18	13	9.4	6.1	14	49	38
23	41	12	85	9.9	19	12	13	9.0	5.5	9.7	36	21
24	36	12	55	12	14	9.6	12	e8.0	5.6	15	25	12
25	34	11	41	13	12	8.8	10	e7.0	6.4	17	18	8.9
26	35	13	31	23	10	30	8.9	e6.5	29	22	14	6.7
27	30	41	25	18	8.8	11	9.3	e6.0	9.6	16	11	6.4
28	25	281	33	14	7.7	7.7	9.1	e8.0	9.0	8.6	9.8	6.3
29	21	303	27	11	---	6.8	7.6	e10	22	6.8	8.2	5.9
30	18	240	20	10	---	7.5	6.6	e10	32	5.8	8.2	5.9
31	15	---	17	11	---	8.2	---	e8.0	---	4.9	7.4	---
TOTAL	7812	1224	11148	616.3	533.8	304.7	5498.7	265.9	463.9	1604.4	6389.6	1879.9
MEAN	252.0	40.80	359.6	19.88	19.06	9.829	183.3	8.577	15.46	51.75	206.1	62.66
MAX	1310	303	1670	81	50	30	1380	22	81	441	2130	838
MIN	12	11	17	9.8	7.7	6.4	6.6	6.0	4.6	4.9	4.4	3.8
AC-FT	15500	2430	22110	1220	1060	604	10910	527	920	3180	12670	3730

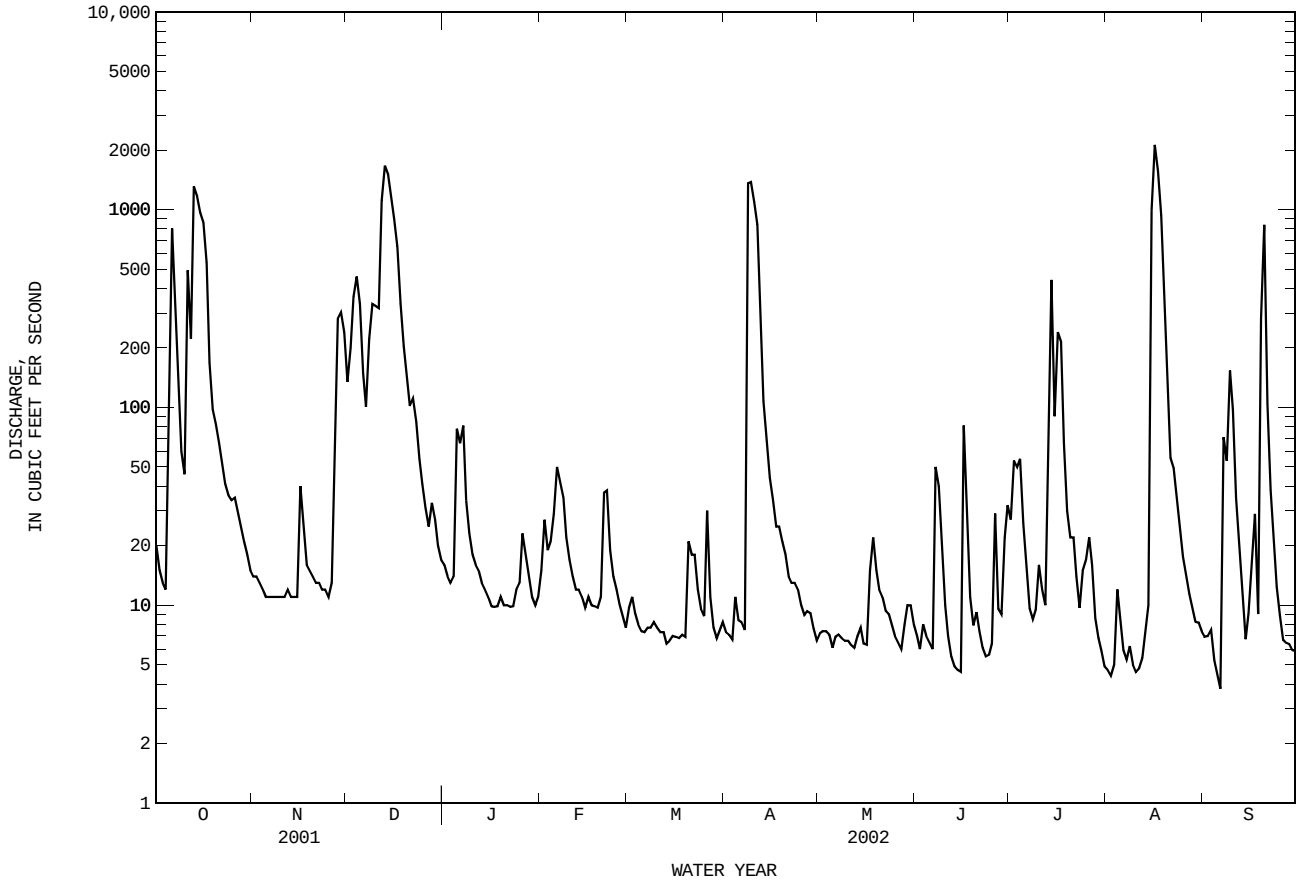
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2002h, BY WATER YEAR (WY)

MEAN	58.26	126.9	187.1	163.6	186.3	147.0	117.6	94.73	242.8	40.56	54.17	59.78
MAX	252	433	594	669	1099	711	697	476	752	137	302	387
(WY)	2002	1986	1992	1991	1992	2001	1991	1983	2001	1983	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 2002 WATER YEAR		WATER YEARS 1983 - 2002h	
ANNUAL TOTAL	37741.2			
ANNUAL MEAN	103.4		114.7	
HIGHEST ANNUAL MEAN			339	1992
LOWEST ANNUAL MEAN			23.7	1990
HIGHEST DAILY MEAN	2130	Aug 16	6600	Jun 9 2001
LOWEST DAILY MEAN	3.8	Sep 6	0.05	Apr 26 1989
ANNUAL SEVEN-DAY MINIMUM	5.3	Aug 6	0.07	Apr 23 1989
MAXIMUM PEAK FLOW	2260	Aug 16	10500	Oct 18 1994
MAXIMUM PEAK STAGE	36.56	Aug 16	47.38	Oct 18 1994
ANNUAL RUNOFF (AC-FT)	74860		83090	
10 PERCENT EXCEEDS	244		269	
50 PERCENT EXCEEDS	13		10	
90 PERCENT EXCEEDS	6.5		1.5	

e Estimated
h See PERIOD OF RECORD paragraph.

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



08068900 Cypress Creek at Stuebner-Airline Road near Westfield, TX
(Flood-hydrograph partial-record station)

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^2.

PERIOD OF RECORD.--June 1982 to May 1986, Feb. to Sept. 1987 (gage heights and discharge measurements only), Oct. 1987 to Sept. 1989, 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 good. 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^3/s, June 9, 2001, gage height, 41.33 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 6	0015	2,760	25.52	Apr. 8	0915	3,540	27.50
Oct. 11	1315	3,420	27.21	July 13	2230	2,630	25.17
Oct. 13	1000	3,190	26.64	Aug. 16	0600	2,620	25.16
Dec. 12	0115	3,090	26.39	Sept. 20	0200	*3,620	*27.69
Dec. 16	2230	2,110	23.69				

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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^2.

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. 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^3/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^3/s), from information by Texas Department of Transportation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	80	271	62	61	175	42	45	38	103	31	34
2	54	78	550	62	66	100	38	45	35	216	30	33
3	46	72	496	62	81	55	43	45	35	259	139	41
4	45	74	534	59	63	50	41	43	34	141	153	40
5	529	72	502	346	146	45	46	40	33	106	47	38
6	1900	73	298	212	223	44	40	42	32	73	41	37
7	424	73	210	161	105	46	44	40	74	e50	36	892
8	236	68	465	117	115	43	3060	39	201	46	33	327
9	128	66	510	80	80	57	1600	36	108	50	35	280
10	94	69	476	65	66	49	1190	39	68	106	33	225
11	1870	66	805	60	61	42	963	37	42	53	33	86
12	665	72	2530	57	57	41	617	39	40	46	37	55
13	2970	73	1780	55	54	39	212	42	36	618	68	44
14	1580	63	1640	52	56	39	135	41	35	1420	60	37
15	974	62	1200	48	50	36	99	36	34	e600	1370	62
16	873	178	1190	48	47	40	83	35	506	e700	2280	101
17	723	116	1400	46	52	37	70	157	180	433	1480	219
18	373	79	598	49	51	41	64	140	68	126	932	81
19	210	74	396	60	55	39	60	56	47	73	434	875
20	168	73	305	54	53	112	53	46	48	72	234	2830
21	155	68	245	48	81	80	50	40	43	52	170	318
22	135	68	e450	48	137	59	50	36	47	165	248	121
23	115	65	327	45	77	54	48	37	36	59	263	70
24	107	65	e160	62	61	47	49	35	44	62	82	52
25	107	67	e120	70	51	63	62	37	64	57	56	45
26	106	73	99	57	48	159	53	36	153	59	48	42
27	100	144	87	68	47	68	50	34	130	58	45	39
28	95	565	133	58	46	47	50	38	70	53	42	37
29	91	540	99	50	---	39	49	51	399	42	41	37
30	87	405	77	49	---	76	48	52	216	42	40	37
31	85	---	69	53	---	92	---	53	---	39	37	---
TOTAL	15106	3641	18022	2363	2090	1914	9009	1492	2896	5979	8578	7135
MEAN	487.3	121.4	581.4	76.23	74.64	61.74	300.3	48.13	96.53	192.9	276.7	237.8
MAX	2970	565	2530	346	223	175	3060	157	506	1420	2280	2830
MIN	45	62	69	45	46	36	38	34	32	39	30	33
AC-FT	29960	7220	35750	4690	4150	3800	17870	2960	5740	11860	17010	14150

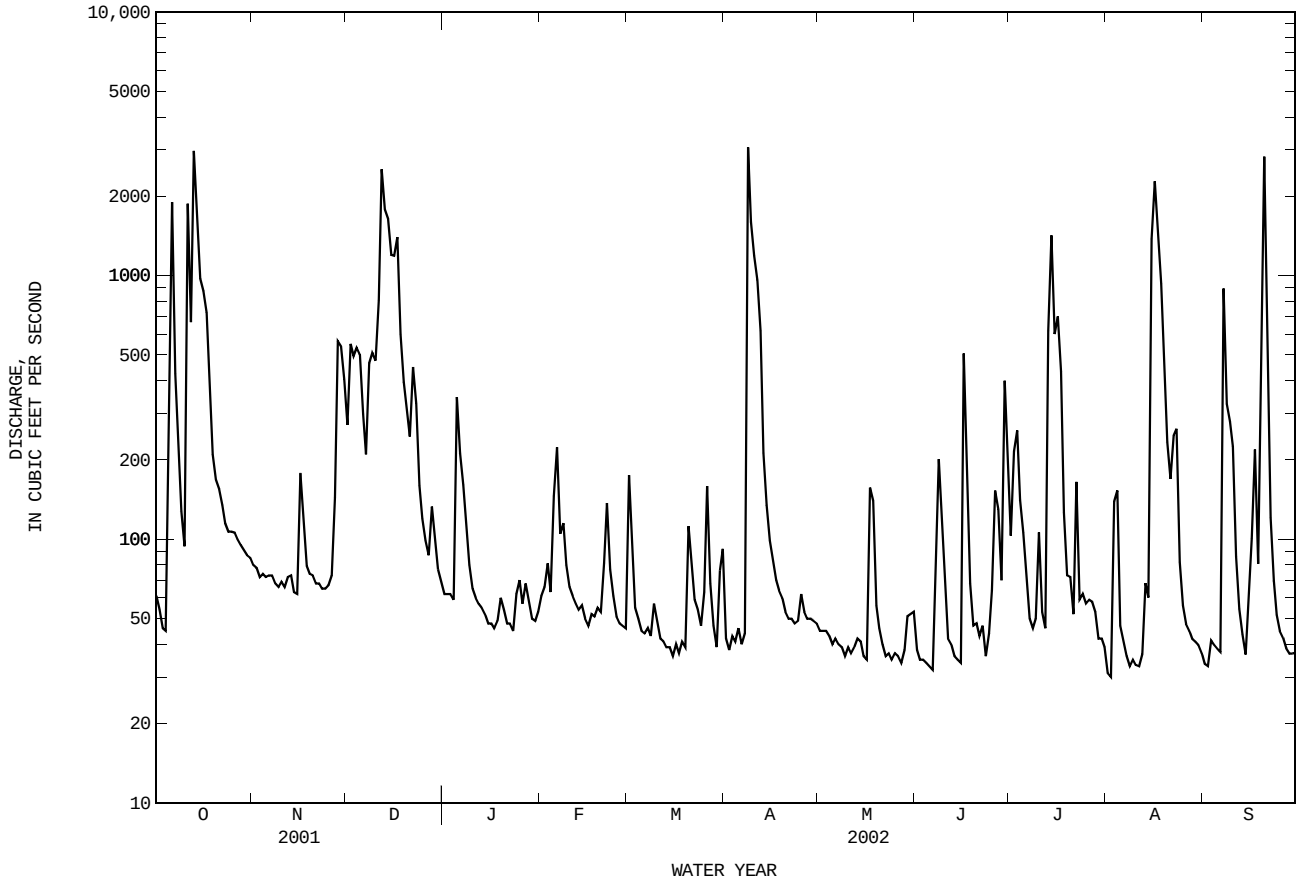
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2002, BY WATER YEAR (WY)

MEAN	195.6	191.4	195.9	234.1	229.1	135.5	209.0	268.8	262.2	85.11	66.33	148.8
MAX	1768	1788	931	1168	1322	811	1133	1260	1527	588	562	862
(WY)	1995	1947	1992	1979	1992	2001	1973	1953	2001	1960	1945	1961
MIN	0.13	0.023	0.15	0.60	1.39	0.21	1.50	1.77	1.64	0.26	0.087	1.21
(WY)	1957	1956	1951	1951	1951	1956	1963	1956	1958	1958	1948	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1944 - 2002	
ANNUAL TOTAL	154119		78225			
ANNUAL MEAN	422.2		214.3		184.9	
HIGHEST ANNUAL MEAN					510	1992
LOWEST ANNUAL MEAN					7.53	1956
HIGHEST DAILY MEAN	14600	Jun 9	3060	Apr 8	15600	Oct 8 1949
LOWEST DAILY MEAN	36	Jun 3	30	Aug 2	0.00	Aug 3 1948
ANNUAL SEVEN-DAY MINIMUM	39	May 19	35	Aug 6	0.00	Aug 3 1948
MAXIMUM PEAK FLOW			5020	Sep 20	22100	Oct 8 1949
MAXIMUM PEAK STAGE			17.39	Sep 20	33.44	Oct 8 1949
ANNUAL RUNOFF (AC-FT)	305700		155200		134000	
10 PERCENT EXCEEDS	988		531		422	
50 PERCENT EXCEEDS	107		63		29	
90 PERCENT EXCEEDS	46		37		1.7	

e Estimated

08069000 Cypress Creek near Westfield, TX--Continued



08069000 Cypress Creek near Westfield, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Mar. 1959 to Apr. 1964, Oct. 1977 to June 1978, Aug. 1983 to current year.
BIOCHEMICAL DATA: Aug. 1983 to current year.
PESTICIDE DATA: Aug. 1983 to Sept. 1990, June 2000 to current year.
SEDIMENT DATA: Oct. 1976 to Sept. 1979, Oct. 1986 to Apr. 1990.

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

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	FECAL STREP, KF STRP MF, WATER (COL/ 100 ML) (31673)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
MAR													
05...	1055	47	672	7.7	11.5	25	773	9.2	83	220	150	130	141
APR													
08-09	1100	1520	103	6.8	18.9	250	760	6.0	65	--	--	--	36
08...	1110	4890	--	--	--	--	--	--	--	6000	4000	2000	--
SEP													
05...	1245	33	780	6.9	28.0	100	764	6.9	88	270	120	150	196

Date	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
MAR													
05...	90	28.8	4.40	97.2	4	9.76	24.6	80.5	.5	15.1	396	381	16
APR													
08-09	25	7.92	1.36	11.0	1	4.61	6.7	9.52	.2	3.66	95	69	286
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
05...	92	28.9	4.80	132	6	10.4	26.0	101	.7	17.2	492	479	26

Date	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
MAR													
05...	6.66	.057	6.71	.18	8.1	1.2	.88	1.1	1.3	1.86	1.88	1.72	5.27
APR													
08-09	.18	.070	.25	.29	7.3	6.8	3.8	4.1	7.1	.74	.196	.16	.478
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
05...	7.44	.059	7.50	.05	8.5	.99	.65	.70	1.0	3.52	3.47	2.14	6.55

Date	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
MAR													
05...	8.2	6.4	.9	<.1	9	.47	4	85	<.06	.06	E.6	.48	6.0
APR													
08-09	35.6	18.7	E8.7	E1.0	20	.22	3	43	<.06	.04	<.8	.52	3.4
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
05...	7.8	5.6	3.4	E.7	7	.32	5	95	E.04	.07	<.8	.72	5.7

08069000 Cypress Creek near Westfield, TX--Continued

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

Date	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)
MAR													
05...	18	.22	19.5	<.01	8.1	1.18	<2	<1	27	.41	<.006	<.006	<.004
APR													
08-09	79	.47	51.1	<.01	.7	1.82	<2	<1	240	.08	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	<.006	<.006	.020
SEP													
05...	E7	.19	4.9	<.01	4.6	1.60	<2	<1	21	.49	<.006	<.006	<.004

Date	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)
MAR													
05...	6.59	<.050	<.010	<.002	E.168	<.020	.007	<.018	<.003	E.200	.269	<.005	<.02
APR													
08-09	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	21.3	<.050	<.010	<.002	E.655	<.020	<.005	<.018	<.003	E.266	1.17	<.005	<.02
SEP													
05...	.271	<.050	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.026	.031	<.005	<.02

Date	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PARA-THION, DIS-SOLVED (UG/L) (39542)
MAR													
05...	<.002	<.009	<.005	<.003	<.004	<.035	.039	E.013n	<.006	<.002	<.007	<.006	<.010
APR													
08-09	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	<.002	<.009	<.005	<.003	<.004	<.035	.047	.100	<.006	<.002	<.007	<.006	<.010
SEP													
05...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.013	<.006	<.002	<.007	<.006	<.010

Date	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)
MAR													
05...	<.004	.034	<.011	.10	<.010	<.011	<.02	.102	.242	<.02	<.034	<.02	<.005
APR													
08-09	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	<.004	<.022	<.011	<.01	<.010	<.011	<.02	.039	.639	<.02	<.034	<.02	<.005
SEP													
05...	<.004	<.022	<.011	<.01	<.010	<.020	<.02	<.004	.008	<.02	<.034	<.02	<.005

08069000 Cypress Creek near Westfield, TX--Continued

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

Date	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	P,P' DDE DISSOLV (UG/L) (34653)	PLANK-TON BIOMASS ASH WT (MG/L) (81353)	PLANK-TON BIOMASS DRY WT (MG/L) (81354)	UV ABSORB-ANCE 254 NM, WTR FLT (UNITS /CM) (50624)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
MAR										
05...	<.002	<.009	<.005	<.006	<.003	295	300	.154	15	1.9
APR										
08-09	--	--	--	--	--	1730	1790	.305	547	2240
08...	<.002	<.009	<.005	<.006	<.003	--	--	--	--	--
SEP										
05...	<.002	<.009	<.005	<.006	<.003	382	393	.141	28	2.5

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

Value qualifier codes used in this report:
n -- Below the NDV

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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^2.

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^3/s), present site and datum, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

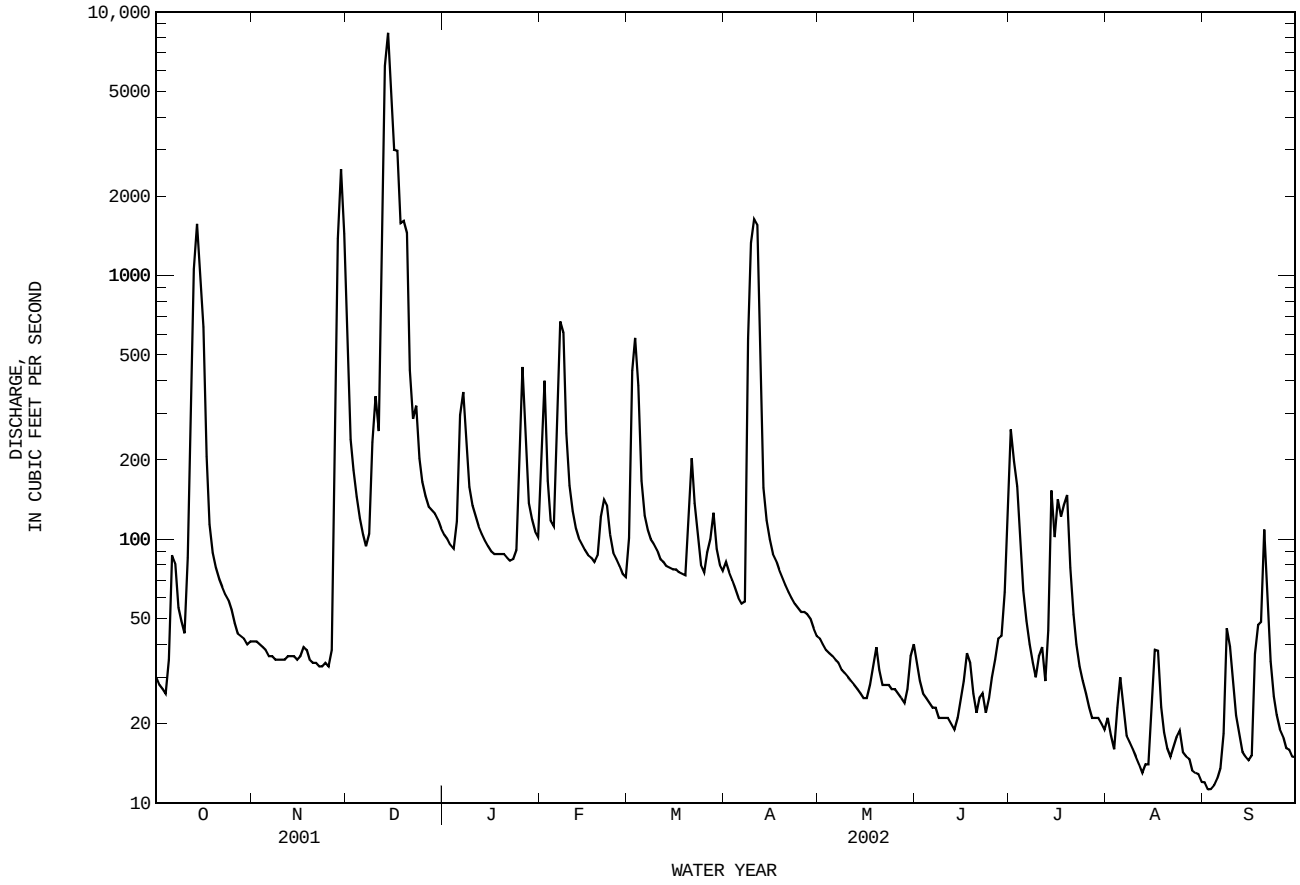
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	41	467	104	182	101	82	42	34	261	21	12
2	28	41	239	100	399	437	75	40	29	198	18	11
3	27	40	183	95	167	580	70	38	26	159	16	11
4	26	39	145	92	118	383	65	37	25	102	23	12
5	35	38	120	117	112	167	60	36	24	64	30	12
6	87	36	104	296	265	123	57	35	23	49	23	14
7	81	36	94	362	670	108	58	34	23	40	18	18
8	55	35	105	244	607	100	575	32	21	34	17	46
9	49	35	233	158	252	96	1330	31	21	30	16	39
10	44	35	349	134	160	91	1640	30	21	36	15	29
11	85	35	257	122	128	84	1560	29	21	39	14	21
12	282	36	1480	112	110	82	415	28	20	29	13	18
13	1060	36	6250	105	101	79	157	27	19	45	14	16
14	1570	36	8340	99	96	78	118	26	21	153	14	15
15	1060	35	4840	94	91	77	100	25	25	102	24	14
16	638	36	3000	90	87	77	88	25	29	142	38	15
17	206	39	2980	88	85	75	83	28	37	122	38	37
18	114	38	1580	88	82	74	77	33	34	135	23	47
19	89	35	1610	88	87	73	72	39	26	147	19	49
20	78	34	1450	88	122	113	67	32	22	78	16	109
21	71	34	438	85	142	203	63	28	25	52	15	55
22	66	33	286	83	135	137	60	28	26	40	16	34
23	62	33	321	84	104	104	57	28	22	33	18	25
24	59	34	203	91	89	80	55	27	25	29	19	22
25	54	33	165	229	84	75	53	27	30	26	16	19
26	48	38	146	450	79	89	53	26	35	23	15	18
27	44	285	133	226	74	100	52	25	42	21	15	16
28	43	1380	129	137	72	126	50	24	43	21	13	16
29	42	2530	125	119	---	92	46	27	63	21	13	15
30	40	1440	119	107	---	80	43	36	131	20	13	15
31	41	---	110	102	---	76	---	40	---	19	12	---
TOTAL	6214	6576	36001	4389	4700	4160	7281	963	943	2270	575	780
MEAN	200.5	219.2	1161	141.6	167.9	134.2	242.7	31.06	31.43	73.23	18.55	26.00
MAX	1570	2530	8340	450	670	580	1640	42	131	261	38	109
MIN	26	33	94	83	72	73	43	24	19	19	12	11
AC-FT	12330	13040	71410	8710	9320	8250	14440	1910	1870	4500	1140	1550
CFSM	0.62	0.67	3.57	0.44	0.52	0.41	0.75	0.10	0.10	0.23	0.06	0.08
IN.	0.71	0.75	4.12	0.50	0.54	0.48	0.83	0.11	0.11	0.26	0.07	0.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

MEAN	162.6	291.0	281.4	381.5	381.7	277.6	336.1	286.4	277.9	88.45	50.16	83.05
MAX	2964	3101	1613	1745	1336	892	2302	1473	2023	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1939 - 2002	
ANNUAL TOTAL	152988		74852			
ANNUAL MEAN	419.1		205.1		241.2	
HIGHEST ANNUAL MEAN					733	1941
LOWEST ANNUAL MEAN					22.8	1971
HIGHEST DAILY MEAN	16100	Jun 10	8340	Dec 14	44200	Oct 18 1994
LOWEST DAILY MEAN	15	Aug 24	11	Sep 2	3.0	Aug 23 1956
ANNUAL SEVEN-DAY MINIMUM	16	Aug 20	12	Aug 30	3.2	Aug 19 1956
MAXIMUM PEAK FLOW			10900	Dec 13	63000	Oct 18 1994
MAXIMUM PEAK STAGE			18.15	Dec 13	24.57	Oct 18 1994
ANNUAL RUNOFF (AC-FT)	303500		148500		174800	
ANNUAL RUNOFF (CFSM)	1.29		0.63		0.74	
ANNUAL RUNOFF (INCHES)	17.51		8.57		10.09	
10 PERCENT EXCEEDS	1320		283		485	
50 PERCENT EXCEEDS	89		54		50	
90 PERCENT EXCEEDS	27		18		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^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1952 to Sept. 1958 and 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

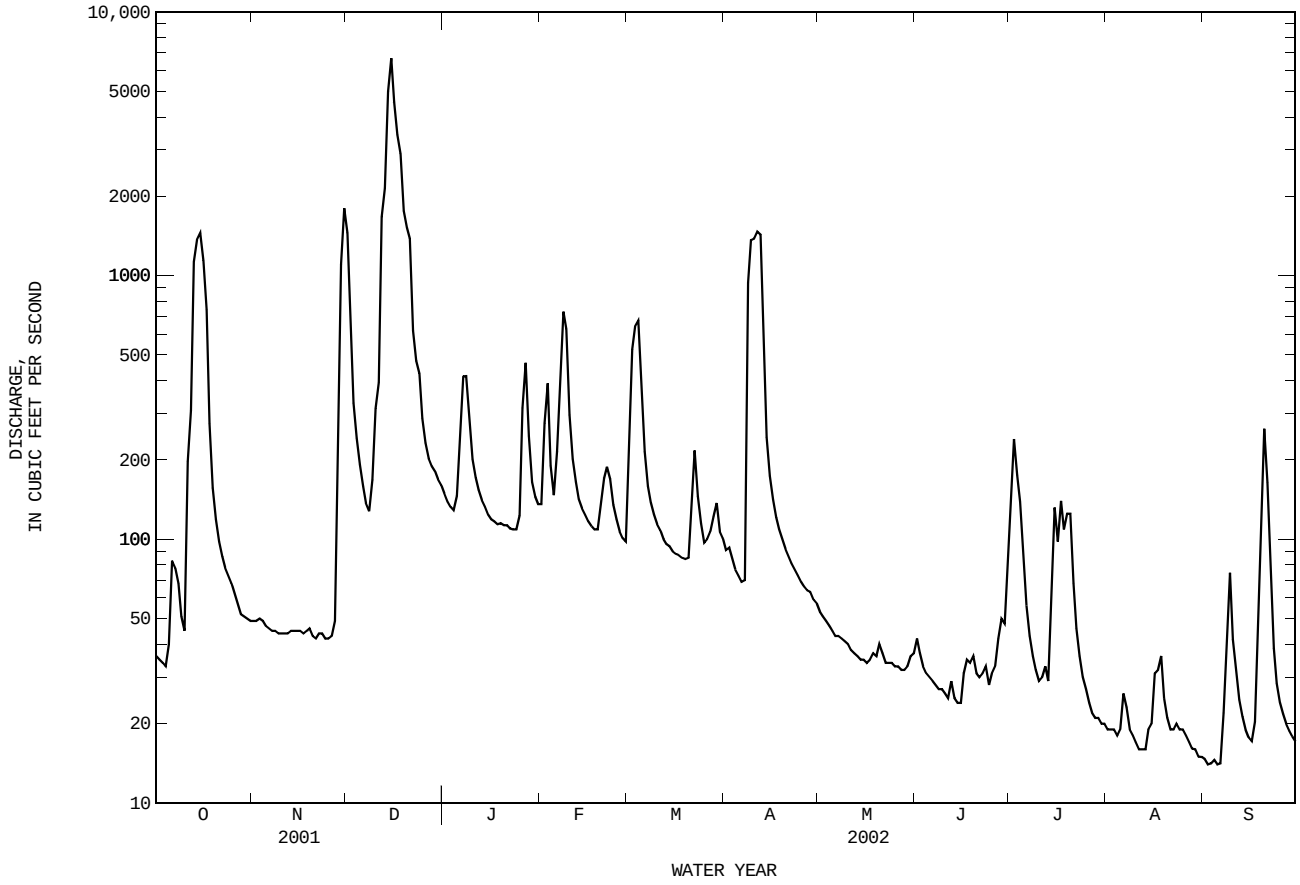
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	49	1450	149	136	194	91	53	42	131	19	15
2	35	49	619	139	276	526	93	51	37	240	19	14
3	34	50	329	133	390	642	84	49	33	175	19	14
4	33	49	242	129	190	675	77	47	31	139	18	15
5	40	47	192	146	147	419	73	45	30	88	19	14
6	83	46	159	253	215	215	69	43	29	56	26	14
7	78	45	137	415	441	159	70	43	28	43	23	22
8	68	45	128	416	730	138	940	42	27	36	19	40
9	51	44	168	282	628	124	1360	41	27	32	18	75
10	45	44	314	201	297	114	1380	40	26	29	17	42
11	197	44	394	171	202	108	1470	38	25	30	16	32
12	308	44	1670	154	165	100	1430	37	29	33	16	25
13	1130	45	2150	141	142	96	602	36	25	29	16	21
14	1370	45	4990	133	131	94	244	35	24	69	19	19
15	1450	45	6690	124	124	90	174	35	24	132	20	18
16	1140	45	4550	119	117	88	142	34	31	98	31	17
17	743	44	3430	117	112	87	121	35	35	140	32	20
18	274	45	2900	114	109	85	109	37	34	109	36	39
19	157	46	1760	115	109	84	100	36	36	125	25	74
20	119	43	1520	113	136	85	92	40	31	125	21	262
21	98	42	1380	113	170	146	86	37	30	68	19	164
22	86	44	619	110	188	217	81	34	31	46	19	69
23	78	44	474	109	169	146	77	34	33	36	20	39
24	73	42	424	109	135	115	73	34	28	30	19	28
25	68	42	288	123	119	97	69	33	31	27	19	24
26	62	43	232	315	107	100	66	33	33	24	18	22
27	57	49	203	467	101	107	64	32	42	22	17	20
28	52	347	189	246	98	122	63	32	50	21	16	19
29	51	1100	181	165	---	137	59	33	48	21	16	18
30	50	1800	169	145	---	107	57	36	81	20	15	17
31	49	---	161	136	---	101	---	37	---	20	15	---
TOTAL	8115	4467	38112	5602	5884	5518	9416	1192	1011	2194	622	1212
MEAN	261.8	148.9	1229	180.7	210.1	178.0	313.9	38.45	33.70	70.77	20.06	40.40
MAX	1450	1800	6690	467	730	675	1470	53	81	240	36	262
MIN	33	42	128	109	98	84	57	32	24	20	15	14
AC-FT	16100	8860	75600	11110	11670	10940	18680	2360	2010	4350	1230	2400
CFSM	0.67	0.38	3.17	0.47	0.54	0.46	0.81	0.10	0.09	0.18	0.05	0.10
IN.	0.78	0.43	3.65	0.54	0.56	0.53	0.90	0.11	0.10	0.21	0.06	0.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2002, BY WATER YEAR (WY)

MEAN	319.6	315.9	432.8	536.5	485.4	491.5	319.3	274.4	383.1	136.7	42.25	62.12
MAX	2843	2892	1229	1857	1557	1142	958	1330	1596	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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1984 - 2002	
ANNUAL TOTAL	160522		83345			
ANNUAL MEAN	439.8		228.3		316.4	
HIGHEST ANNUAL MEAN					660	1995
LOWEST ANNUAL MEAN					53.9	2000
HIGHEST DAILY MEAN	11100	Jun 11	6690	Dec 15	46600	Oct 19 1994
LOWEST DAILY MEAN	21	Aug 25	14	Sep 2	9.5	Sep 8 2000
ANNUAL SEVEN-DAY MINIMUM	22	Aug 20	14	Aug 31	10	Oct 29 1990
MAXIMUM PEAK FLOW			7720	Dec 15	74100	Oct 19 1994
MAXIMUM PEAK STAGE			20.66	Dec 15	33.00	Oct 19 1994
ANNUAL RUNOFF (AC-FT)	318400		165300		229200	
ANNUAL RUNOFF (CFSM)	1.13		0.59		0.82	
ANNUAL RUNOFF (INCHES)	15.39		7.99		11.08	
10 PERCENT EXCEEDS	1420		417		756	
50 PERCENT EXCEEDS	100		69		81	
90 PERCENT EXCEEDS	33		20		24	

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



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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Aug. 1983 to current year.
BIOCHEMICAL DATA: Aug. 1983 to current year.
PESTICIDE DATA: Aug. 1985 to Sept. 1990, June 2000 to current year.
SEDIMENT DATA: June 2000.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1984 to Sept. 1999.
WATER TEMPERATURE: June 1984 to Sept. 1999.

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

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	FECAL STREP, KF STRP MF, WATER (COL/ 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
MAR													
07...	1240	156	180	6.8	12.9	80	770	9.2	86	120	88	84	46
APR													
08-12	0100	1410	101	6.5	17.6	150	760	6.7	70	--	--	--	27
09...	1400	1340	--	--	--	--	--	--	--	5800	2900	3100	--
SEP													
05...	1057	14	177	6.7	25.5	75	764	6.8	83	140	92	120	35

Date	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAR													
07...	20	15.2	1.93	13.6	.9	1.97	26	6.1	28.1	E.1n	11.0	116	94
APR													
08-12	8	8.72	1.31	7.19	.6	2.15	19	4.1	13.6	.1	5.61	75	55
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
05...	12	10.9	1.83	16.8	1	1.52	23	4.4	29.8	.1	14.4	108	95

Date	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)
MAR													
07...	22	<.008	.10	E.03	.73	.45	.64	.078	.023	E.01	--	10.7	10.0
APR													
08-12	62	E.004	.08	<.04	1.3	.59	1.2	.056	.028	E.01	--	20.8	15.9
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
05...	11	<.008	.23	<.04	.55	.16	.32	.085	.028	.02	.055	4.2	3.3

Date	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)
MAR													
07...	1.1	<.1	12	.23	<2	63	E.04	<.04	<.8	.32	1.7	115	.21
APR													
08-12	E1.8	E.2	44	.11	<2	46	E.04	.04	<.8	.17	2.5	204	.29
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
05...	1.7	E.2	1	E.04	<2	54	<.06	E.02	<.8	.34	1.1	33	E.06

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

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

Date	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)
MAR													
07...	40.5	<.01	E.2	1.26	<2	<1	3	.12	<.006	<.006	<.004	.018	<.050
APR													
08-12	6.7	E.01n	E.1	1.50	<2	<1	6	.14	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	<.006	<.006	<.004	.233	<.050
SEP													
05...	64.7	<.01	E.2	.70	<2	<1	2	.03	<.006	<.006	<.004	.019	<.050

Date	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)
MAR													
07...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	.011	<.005	<.02	<.002	<.009
APR													
08-12	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.010	<.002	E.020	<.020	<.005	<.018	<.003	E.006	.051	<.005	<.02	<.002	<.009
SEP													
05...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	.019	<.005	<.02	<.002	<.009

Date	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)
MAR													
07...	<.005	<.003	<.004	<.035	<.027	<.013	<.006	<.002	<.007	<.006	<.010	<.004	<.022
APR													
08-12	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.005	<.003	<.004	<.035	<.027	E.006n	<.006	<.002	<.007	<.006	<.010	<.004	<.022
SEP													
05...	<.005	<.003	<.004	<.035	<.027	<.013	<.006	<.002	<.007	<.006	<.010	<.004	<.022

Date	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
MAR													
07...	<.011	<.01	<.010	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009
APR													
08-12	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.011	<.01	<.010	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009
SEP													
05...	<.011	<.01	<.010	<.011	<.02	<.004	<.005	<.02	<.034	<.02	<.005	<.002	<.009

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

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

Date	ALPHA BHC DIS- SOLVED (UG/L) (34253)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	P,P' DDE DISSOLV (UG/L) (34653)	PLANK- TON BIOMASS ASH WT (MG/L) (81353)	PLANK- TON BIOMASS DRY WT (MG/L) (81354)	UV ABSORB- ANCE 254 NM, WTR FLT (UNITS /CM) (50624)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
MAR								
07...	<.005	<.006	<.003	330	338	.346	26	11.0
APR								
08-12	--	--	--	1510	1550	.557	150	571
09...	<.005	<.006	<.003	--	--	--	--	--
SEP								
05...	<.005	<.006	<.003	344	350	.098	15	.57

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

Value qualifier codes used in this report:
n -- Below the NDV

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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^2.

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.--Records good except those for estimated daily discharge, which are 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	30	102	59	154	61	34	27	25	56	17	16
2	22	29	88	59	79	140	32	26	22	40	17	16
3	22	29	92	58	61	100	32	26	20	29	16	17
4	21	29	76	59	57	70	30	25	19	24	20	16
5	27	29	68	72	57	55	29	26	18	22	22	17
6	87	28	63	243	227	50	29	26	18	20	17	16
7	48	28	60	113	189	49	31	26	18	19	16	20
8	30	28	68	78	92	49	420	24	17	18	16	29
9	26	28	201	68	76	49	1230	24	17	18	16	30
10	25	28	102	63	81	49	294	23	17	23	18	20
11	60	28	91	60	79	47	89	23	20	27	18	17
12	175	29	1190	57	75	45	66	22	19	19	18	17
13	594	29	3360	55	76	42	56	22	17	26	18	16
14	712	29	705	54	77	41	50	21	17	28	18	16
15	133	29	231	52	82	40	46	21	16	26	22	16
16	66	30	162	51	85	40	43	21	21	26	34	16
17	50	30	661	51	81	39	42	22	33	123	28	26
18	44	30	496	51	80	38	41	30	24	67	23	27
19	40	29	155	51	84	38	38	29	19	33	21	28
20	38	28	110	51	104	54	36	24	17	25	20	53
21	37	28	e90	50	90	72	35	22	16	22	19	29
22	35	28	e85	49	73	50	33	22	18	20	19	19
23	35	29	e195	48	60	41	32	21	16	19	19	16
24	34	29	e134	50	56	38	31	21	15	18	19	16
25	33	28	e89	174	55	37	31	21	16	18	18	15
26	32	31	e75	93	54	44	30	20	22	17	17	14
27	31	447	68	62	52	46	30	20	21	17	17	14
28	30	1540	68	55	50	40	30	19	22	17	17	14
29	30	423	66	52	---	38	28	22	55	17	17	14
30	29	169	63	52	---	37	29	26	95	17	17	14
31	29	---	60	50	---	36	---	27	---	18	17	---
TOTAL	2597	3329	9074	2140	2386	1575	2977	729	690	869	591	594
MEAN	83.77	111.0	292.7	69.03	85.21	50.81	99.23	23.52	23.00	28.03	19.06	19.80
MAX	712	1540	3360	243	227	140	1230	30	95	123	34	53
MIN	21	28	60	48	50	36	28	19	15	17	16	14
AC-FT	5150	6600	18000	4240	4730	3120	5900	1450	1370	1720	1170	1180
CFSM	0.80	1.06	2.79	0.66	0.81	0.48	0.95	0.22	0.22	0.27	0.18	0.19
IN.	0.92	1.18	3.21	0.76	0.85	0.56	1.05	0.26	0.24	0.31	0.21	0.21

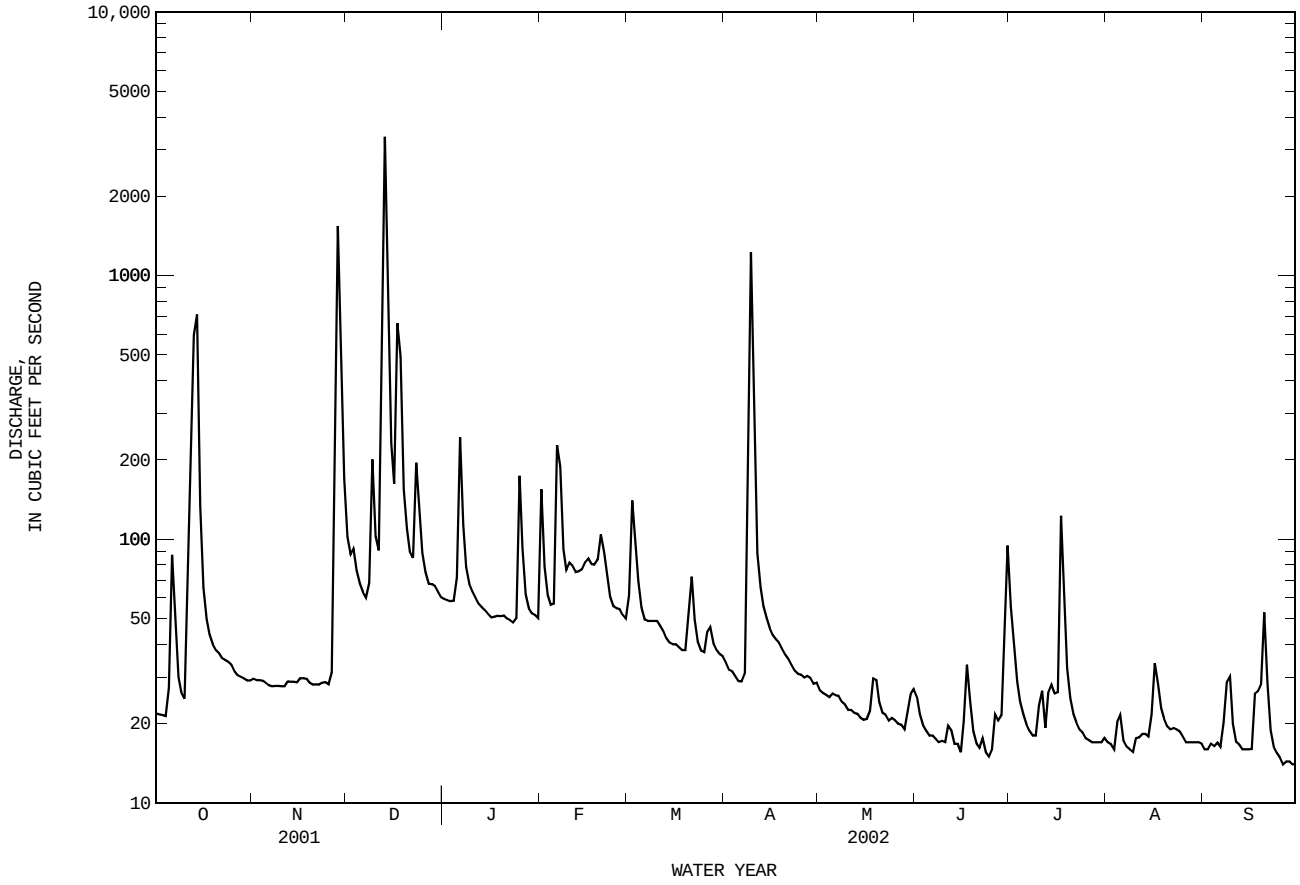
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2002h, BY WATER YEAR (WY)

MEAN	68.41	87.03	88.79	121.0	119.2	90.05	105.9	96.94	106.8	38.17	27.41	38.10
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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1944 - 2002h	
ANNUAL TOTAL	64248		27551			
ANNUAL MEAN	176.0		75.48		81.94	
HIGHEST ANNUAL MEAN					192	1995
LOWEST ANNUAL MEAN					15.9	1971
HIGHEST DAILY MEAN	18800	Jun 9	3360	Dec 13	18800	Jun 9 2001
LOWEST DAILY MEAN	14	Jun 3	14	Sep 26	5.4	Sep 21 1956
ANNUAL SEVEN-DAY MINIMUM	15	May 30	14	Sep 24	5.5	Sep 21 1956
MAXIMUM PEAK FLOW			5020	Dec 13	36500	Jun 9 2001
MAXIMUM PEAK STAGE			19.20	Dec 13	26.45	Jun 9 2001
ANNUAL RUNOFF (AC-FT)	127400		54650		59360	
ANNUAL RUNOFF (CFSM)	1.68		0.72		0.78	
ANNUAL RUNOFF (INCHES)	22.76		9.76		10.60	
10 PERCENT EXCEEDS	229		94		112	
50 PERCENT EXCEEDS	34		30		28	
90 PERCENT EXCEEDS	21		17		12	

e Estimated
h See PERIOD OF RECORD paragraph.

08070500 Caney Creek near Splendora, TX--Continued



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^2.

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.--Records good except those for estimated daily discharges, which are fair. 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^3/s, from information by local resident. Flood of June 12, 1986 reached a stage of 20.92 ft, discharge 15,700 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	28	129	65	53	73	40	27	28	115	18	18
2	22	28	86	63	74	218	39	27	26	57	17	18
3	22	28	104	60	59	145	35	26	23	48	16	19
4	22	28	94	59	52	80	33	26	22	37	15	18
5	23	27	74	76	53	63	31	26	21	29	15	18
6	107	26	64	167	103	58	29	27	22	26	16	19
7	96	25	60	146	131	56	31	26	22	24	15	19
8	53	25	64	94	90	54	411	25	21	23	15	23
9	36	25	110	78	69	53	1040	25	20	23	15	24
10	31	25	114	73	62	51	410	24	20	22	15	24
11	59	25	82	72	56	46	148	23	20	23	14	21
12	255	26	873	67	52	45	94	24	21	26	14	19
13	570	26	1550	62	51	45	77	23	20	31	16	18
14	1180	25	984	60	49	43	66	23	21	49	14	17
15	469	25	337	57	48	42	59	22	20	44	16	e17
16	127	26	267	56	47	43	58	22	20	38	22	e17
17	73	27	1800	55	47	41	52	23	22	45	33	e20
18	58	27	826	56	45	41	49	25	36	47	25	e46
19	51	26	257	58	47	40	46	33	24	34	20	31
20	46	25	144	58	81	49	44	29	22	27	19	149
21	43	25	110	56	84	108	41	24	21	24	19	90
22	41	25	104	54	62	76	38	23	24	23	19	e42
23	40	24	249	54	53	51	37	22	20	21	19	e28
24	39	25	159	59	48	44	35	22	20	21	19	e24
25	37	25	105	73	46	42	34	22	21	21	19	e21
26	34	25	88	88	46	48	32	22	23	22	19	e20
27	31	42	82	63	43	65	33	22	44	19	19	19
28	29	228	80	56	40	51	31	21	127	19	20	18
29	28	508	87	56	---	44	30	22	67	17	19	18
30	27	260	76	55	---	43	28	22	219	17	20	18
31	27	---	69	55	---	42	---	32	---	17	20	---
TOTAL	3698	1710	9228	2151	1691	1900	3131	760	1037	989	562	853
MEAN	119.3	57.00	297.7	69.39	60.39	61.29	104.4	24.52	34.57	31.90	18.13	28.43
MAX	1180	508	1800	167	131	218	1040	33	219	115	33	149
MIN	22	24	60	54	40	40	28	21	20	17	14	17
AC-FT	7330	3390	18300	4270	3350	3770	6210	1510	2060	1960	1110	1690

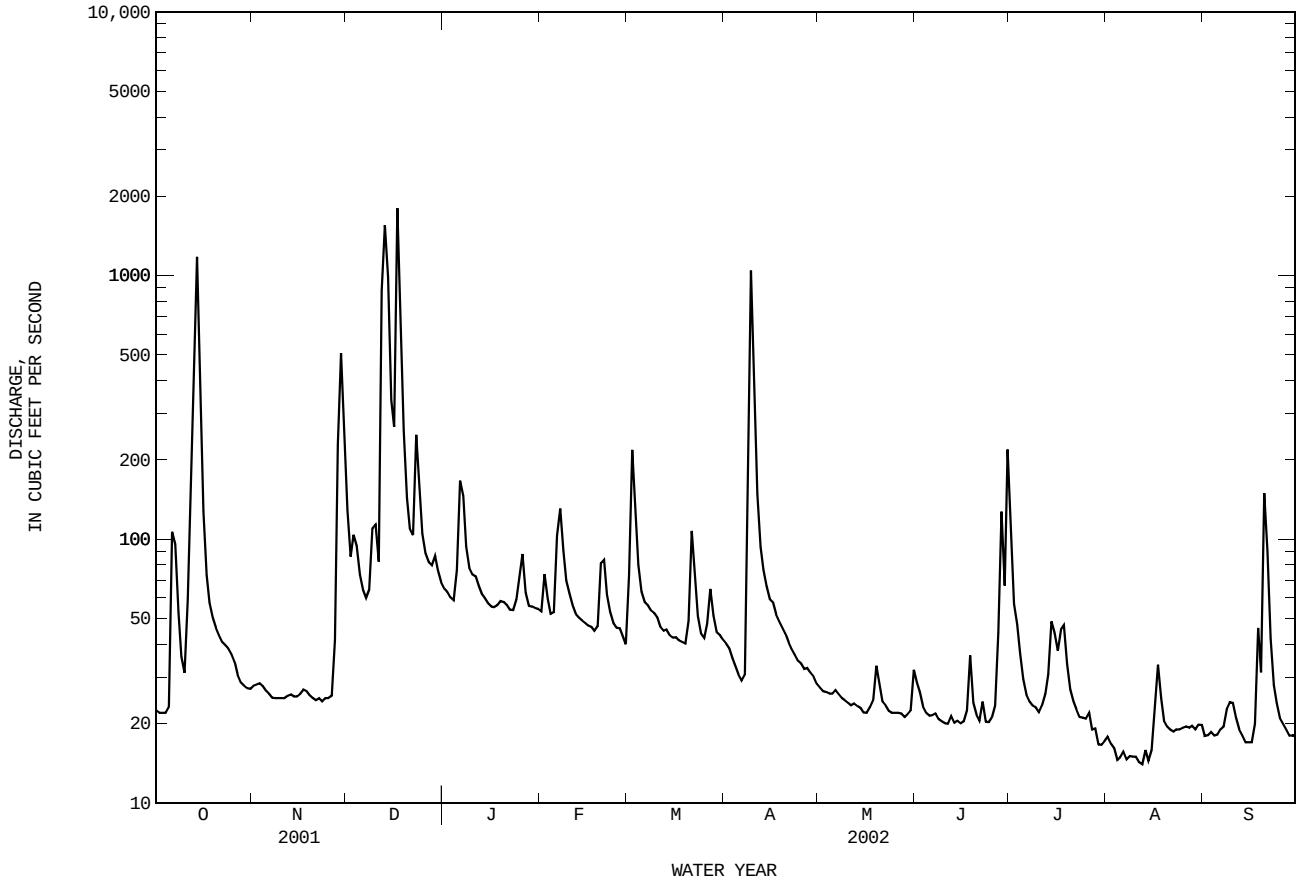
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2002h, BY WATER YEAR (WY)

MEAN	62.97	72.00	79.46	109.9	109.1	86.06	97.04	85.97	85.71	38.71	23.23	34.57
MAX	908	850	333	629	449	388	488	319	799	271	129	342
(WY)	1950	1947	1975	1974	1961	2001	1945	1953	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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1944 - 2002h	
ANNUAL TOTAL	51081		27710			
ANNUAL MEAN	139.9		75.92		73.36	
HIGHEST ANNUAL MEAN					213	1973
LOWEST ANNUAL MEAN					13.7	1956
HIGHEST DAILY MEAN	5450	Jun 10	1800	Dec 17	14400	Jun 14 1973
LOWEST DAILY MEAN	15	Aug 24	14	Aug 11	1.1	Sep 29 1956
ANNUAL SEVEN-DAY MINIMUM	16	Aug 20	15	Aug 8	1.2	Sep 25 1956
MAXIMUM PEAK FLOW			2290	Dec 17	28500	Oct 8 1949
MAXIMUM PEAK STAGE			15.22	Dec 17	22.73	Oct 8 1949
ANNUAL RUNOFF (AC-FT)	101300		54960		53150	
10 PERCENT EXCEEDS	263		109		125	
50 PERCENT EXCEEDS	48		34		25	
90 PERCENT EXCEEDS	23		19		8.4	

e Estimated
h see PERIOD OF RECORD paragraph.

08071000 Peach Creek at Splendora, TX--Continued



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^2.

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. 1990.

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 poor. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

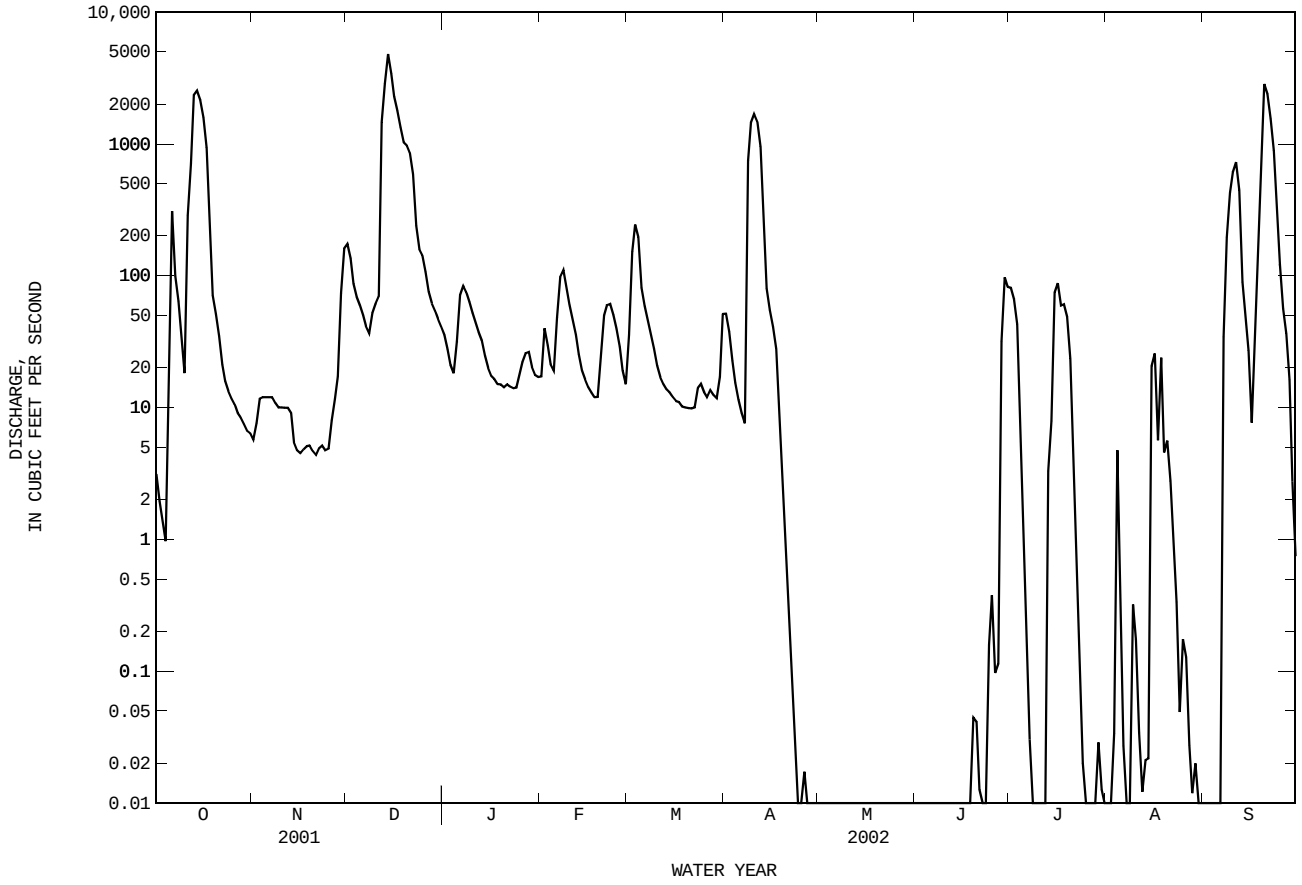
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	5.7	174	35	17	35	52	0.00	0.00	81	0.00	0.00
2	1.9	7.6	135	28	40	152	38	0.00	0.00	66	0.00	0.00
3	1.3	12	87	21	30	244	23	0.00	0.00	43	0.03	0.00
4	0.97	12	69	18	21	196	15	0.00	0.00	15	4.7	0.00
5	25	12	60	32	19	81	11	0.00	0.00	3.0	0.19	0.00
6	308	12	50	71	48	59	9.1	0.00	0.00	0.23	0.03	0.00
7	100	12	41	84	97	46	7.6	0.00	0.00	0.03	0.00	34
8	64	11	37	75	110	36	748	0.00	0.00	0.01	0.01	195
9	35	10	52	63	82	28	1450	0.00	0.00	0.00	0.32	427
10	18	10	61	52	60	21	1690	0.00	0.00	0.00	0.17	611
11	286	10	70	44	47	17	1470	0.00	0.00	0.00	0.03	724
12	707	9.9	1460	37	36	15	950	0.00	0.00	0.00	0.01	447
13	2340	9.1	2870	32	25	14	339	0.00	0.00	3.3	0.02	90
14	2520	5.4	4790	25	19	13	80	0.00	0.00	7.9	0.02	48
15	2150	4.7	3410	20	16	12	55	0.00	0.00	75	21	27
16	1590	4.5	2280	17	14	11	41	0.00	0.00	88	26	7.7
17	931	4.8	1790	16	13	11	28	0.00	0.00	59	5.6	32
18	262	5.1	1330	15	12	10	11	0.00	0.00	61	24	164
19	71	5.1	1030	15	12	10	3.1	0.00	0.04	49	4.5	638
20	51	4.7	968	14	26	9.9	0.81	0.00	0.04	23	5.6	2830
21	35	4.4	859	15	50	9.9	0.23	0.00	0.01	3.6	2.8	2380
22	21	4.9	590	14	60	10	0.07	0.00	0.00	0.52	0.80	1550
23	16	5.1	240	14	61	14	0.02	0.00	0.00	0.10	0.33	887
24	13	4.7	159	14	50	15	0.01	0.00	0.16	0.02	0.05	356
25	12	4.9	143	18	39	13	0.00	0.00	0.38	0.00	0.17	122
26	11	8.0	107	22	29	12	0.02	0.00	0.10	0.00	0.13	56
27	9.1	12	75	26	19	14	0.00	0.00	0.11	0.00	0.03	36
28	8.4	17	62	26	15	12	0.00	0.00	32	0.01	0.01	16
29	7.5	74	54	20	---	12	0.00	0.00	97	0.03	0.02	2.7
30	6.6	160	47	18	---	17	0.00	0.00	83	0.01	0.00	0.74
31	6.4	---	41	17	---	51	---	0.00	---	0.00	0.00	---
TOTAL	11611.27	462.6	23141	918	1067	1200.8	7021.96	0.00	212.84	578.76	96.57	11681.14
MEAN	374.6	15.42	746.5	29.61	38.11	38.74	234.1	0.000	7.095	18.67	3.115	389.4
MAX	2520	160	4790	84	110	244	1690	0.00	97	88	26	2830
MIN	0.97	4.4	37	14	12	9.9	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	23030	918	45900	1820	2120	2380	13930	0.00	422	1150	192	23170
CFSM	1.72	0.07	3.42	0.14	0.17	0.18	1.07	0.00	0.03	0.09	0.01	1.79
IN.	1.98	0.08	3.95	0.16	0.18	0.20	1.20	0.00	0.04	0.10	0.02	1.99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2002, BY WATER YEAR (WY)

MEAN	312.6	155.9	268.4	238.9	259.6	319.9	198.8	201.4	323.8	47.97	9.514	61.15
MAX	2988	1416	862	826	980	878	1047	2443	1965	334	103	394
(WY)	1995	1999	1998	1992	1992	1993	1991	1989	1993	1987	1995	1996
MIN	0.009	0.17	1.43	1.06	1.34	1.62	3.06	0.000	0.12	0.008	0.35	0.034
(WY)	1993	1989	1989	2000	2000	2000	1987	2002	1998	1998	1999	1992

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1984 - 2002	
ANNUAL TOTAL	72742.80		57991.94			
ANNUAL MEAN	199.3		158.9		202.1	
HIGHEST ANNUAL MEAN					453	1995
LOWEST ANNUAL MEAN					13.2	2000
HIGHEST DAILY MEAN	4790	Dec 14	4790	Dec 14	23000	Oct 19 1994
LOWEST DAILY MEAN	0.02	Aug 25	0.00	Apr 25	0.00	Jul 16 1984
ANNUAL SEVEN-DAY MINIMUM	0.04	Aug 20	0.00	Apr 27	0.00	Jul 16 1984
MAXIMUM PEAK FLOW			5110	Dec 14	25900	Oct 18 1994
MAXIMUM PEAK STAGE			25.36	Dec 14	35.08	Oct 18 1994
ANNUAL RUNOFF (AC-FT)	144300		115000		146400	
ANNUAL RUNOFF (CFSM)	0.91		0.73		0.93	
ANNUAL RUNOFF (INCHES)	12.41		9.90		12.60	
10 PERCENT EXCEEDS	572		251		397	
50 PERCENT EXCEEDS	18		12		8.8	
90 PERCENT EXCEEDS	0.36		0.00		0.18	

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



08072000 Lake Houston near Sheldon, TX

LOCATION.--Lat 29°54'58", long 95°08'28", Harris County, Hydrologic Unit 12040101, at intake structure on San Jacinto River near right bank 100 ft upstream from Lake Houston Dam, 4.0 mi north of Sheldon, 4.6 mi upstream from bridge on U.S. Highway 90, and 18 mi northeast of Houston.

DRAINAGE AREA.--2,828 mi^2.

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Apr. 1954 to current year.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage at dam is 0.70 ft below NGVD of 1929; unadjusted for land-surface subsidence. Satellite telemeter at station.

REMARKS.--Records fair. The lake is formed by two earthfill embankment sections and a 3,160-foot long concrete spillway midway between the embankment sections. The dam was completed and storage began Apr. 9, 1954. The spillway includes two tainter gates, 18.0 x 20.5 ft, that can be used for control of releases below gage heights of 44.5 ft and above 28.0 ft. In addition, there is a 36-inch-diameter sluice gate that is used for low-flow releases. The dam is owned by the city of Houston. Water is used for irrigation, municipal, and industrial supply in the Houston metropolitan area. Conservation pool storage is 128,863 acre-ft. Data regarding the dam are given in the following table:

	Gage height (feet)
Top of dam	63.0
Design flood	57.0
Crest of spillway	44.5
Crest of tainter gates (sill)	28.0
Lowest gated outlet (invert)	22.0

COOPERATION.--The capacity table is based on a bathymetric survey made in 1994 by Texas Water Development Board. Records of diversions may be obtained from the San Jacinto River Authority and the city of Houston.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 249,900 acre-ft, Oct. 19, 1994, gage height, 52.79 ft; minimum since first filling of lake in Aug. 1954, 53,380 acre-ft, Dec. 1, 1971, gage height, 34.08 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 160,600 acre-ft, Dec. 14, 15, gage height, 46.63 ft; minimum contents, 126,600 acre-ft, Oct. 22, gage height, 43.79 ft.

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

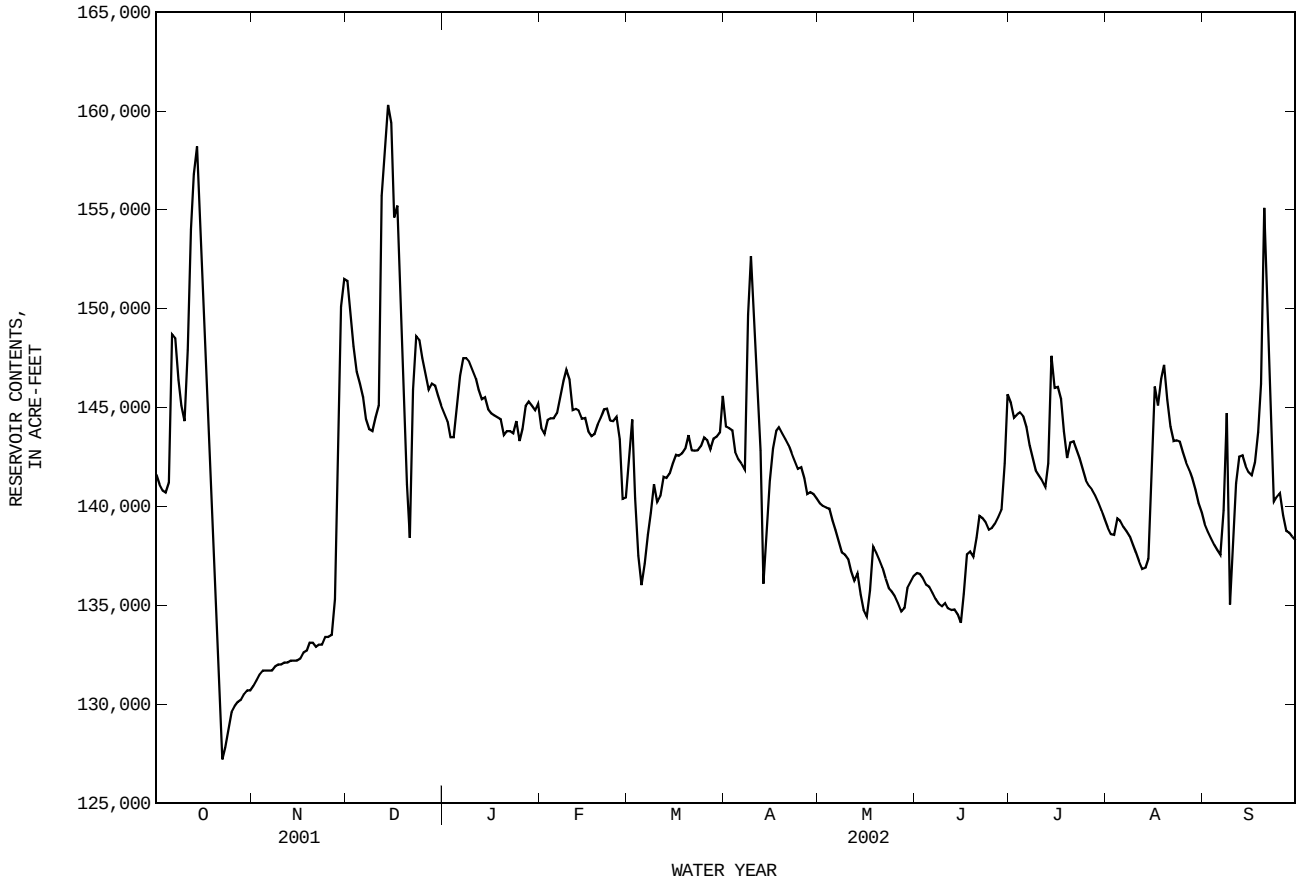
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141600	130900	151400	144700	144000	142300	144000	140200	136600	145200	138900	139100
2	141100	131200	149700	144300	143700	144400	143900	140000	136600	144500	138600	138700
3	140800	131500	148100	143500	144400	140400	143800	139900	136400	144600	138600	138400
4	140700	131700	146800	143500	144500	137500	142700	139900	136000	144700	139400	138100
5	141200	131700	146200	145000	144400	136000	142400	139300	135900	144600	139300	137800
6	148700	131700	145500	146600	144700	137100	142200	138800	135600	144000	139000	137600
7	148500	131700	144400	147500	145500	138600	141900	138200	135300	143100	138700	139800
8	146400	131900	143900	147500	146300	139700	149700	137700	135100	142400	138500	144700
9	145100	132000	143800	147300	146900	141100	152600	137600	135000	141800	138000	135000
10	144300	132000	144500	146900	146400	140200	149100	137300	135100	141500	137700	138400
11	147900	132100	145100	146500	144900	140500	146300	136700	134800	141300	137200	141200
12	154000	132100	155700	145900	144900	141500	142800	136200	134700	141000	136800	142500
13	156800	132200	158100	145400	144800	141400	136100	136600	134800	142200	136900	142600
14	158200	132200	160300	145500	144400	141700	138500	135500	134500	147600	137300	142000
15	154600	132200	159400	144900	144500	142200	141300	134800	134100	146000	141000	141700
16	151700	132300	154600	144700	143800	142600	142900	134400	135600	146000	146100	141600
17	148800	132600	155200	144600	143500	142600	143800	135700	137600	145400	145100	142200
18	145400	132700	151800	144500	143600	142700	144000	138000	137700	143800	146500	143800
19	141200	133100	146800	144400	144100	142900	e143700	137700	137500	142500	147200	146200
20	135800	133100	141100	143600	144500	143600	e143400	137300	138400	143200	145400	155100
21	130900	132900	138400	143800	144900	142800	e143100	136900	139500	143300	144000	149200
22	127200	133000	145900	143800	144900	142800	e142700	136300	139400	142900	143300	144300
23	127800	133000	148600	143700	144300	142800	e142300	135900	139200	142400	143300	140200
24	128700	133400	148400	144300	144300	143000	141900	135700	138800	141900	143300	140500
25	129600	133400	147500	143300	144500	143500	142000	135500	138900	141300	142700	140700
26	129900	133500	146700	143900	143400	143400	141400	135100	139100	141000	142200	139500
27	130100	135300	145900	145100	140400	142900	140600	134700	139500	140800	141800	138800
28	130200	142900	146200	145300	140400	143400	140700	134900	139800	140500	141400	138600
29	130500	150100	146100	145100	---	143500	140600	135900	142200	140200	140800	138500
30	130700	151500	145600	144900	---	143700	140400	136200	145700	139800	140100	138300
31	130700	---	145100	145200	---	145600	---	136500	---	139400	139700	---
MEAN	140600	134000	148300	145000	144300	141800	143000	136900	137300	142900	140900	141200
MAX	158200	151500	160300	147500	146900	145600	152600	140200	145700	147600	147200	155100
MIN	127200	130900	138400	143300	140400	136000	136100	134400	134100	139400	136800	135000
(+)	44.19	45.91	45.37	45.38	44.98	45.41	44.98	44.69	45.42	44.90	44.92	44.82
(@)	-11400	+20800	-6400	+100	-4800	+5200	-5200	-3900	+9200	-6300	+300	-1400

CAL YR 2001 MAX 188100 MIN 127200 (@) -2800
WTR YR 2002 MAX 160300 MIN 127200 (@) -3800

e Estimated

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

08072000 Lake Houston near Sheldon, TX--Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: July 1961 to Apr. 1964, Dec. 1969 to current year.
BIOCHEMICAL DATA: Aug. 1983 to current year.
PESTICIDE DATA: May 1968 to Aug. 1972, Aug. 1983 to current year.
SEDIMENT DATA: Feb. 2000 to current year.

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

295516095080801 -- Lk Houston Site AC

Date	Time	RESER-VOIR STORAGE (AC-FT) (00054)	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	FECAL STREP, KF STRP MF, WATER (COL/ 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
MAR													
06...	1000	137000	1.00	215	7.8	11.5	80	770	10.0	91	260	200	52
06...	1002	--	10.0	215	7.8	11.5	--	770	10.0	91	--	--	--
06...	1004	--	20.0	215	7.7	11.0	--	770	9.8	88	--	--	--
06...	1006	--	30.0	220	7.6	11.0	--	770	9.8	88	--	--	--
06...	1008	--	41.0	220	7.5	11.0	100	770	9.5	85	--	--	--
JUN													
05...	0906	136000	1.00	180	7.5	27.0	60	760	7.8	98	E1k	E4k	46
05...	0908	--	10.0	180	7.3	26.5	--	760	7.8	97	--	--	--
05...	0910	--	20.0	180	6.9	25.5	--	760	6.6	81	--	--	--
05...	0912	--	30.0	190	6.7	24.5	--	760	5.1	61	--	--	--
05...	0914	--	40.0	190	6.7	24.0	75	760	5.1	61	--	--	--
SEP													
04...	1043	138000	1.00	230	7.7	28.5	25	766	5.7	73	E4k	E1k	50
04...	1045	--	10.0	230	7.8	29.0	--	766	5.5	71	--	--	--
04...	1047	--	20.0	230	7.8	29.0	--	766	5.4	70	--	--	--
04...	1049	--	30.0	235	7.6	29.0	--	766	5.0	65	--	--	--
04...	1051	--	40.0	255	7.0	28.5	40	766	.8	10	--	--	--

295516095080801 -- Lk Houston Site AC

Date	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
MAR													
06...	5	17.1	2.27	18.8	1	42	3.22	--	47	9.0	25.4	.1	9.44
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	6	15.1	2.07	16.1	1	41	3.18	40	--	7.8	22.1	E.1n	7.66
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
04...	--	16.4	2.27	25.7	2	50	3.88	63	--	8.1	25.6	.2	9.22
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--

08072000 Lake Houston near Sheldon, TX--Continued

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

295516095080801 -- Lk Houston Site AC

Date	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
MAR													
06...	126	116	12	<.008	.59	<.04	1.3	--	--	.47	.71	.142	.080
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	10	<.008	.58	E.02	1.2	--	--	.46	.63	.150	.077
JUN													
05...	125	98	12	<.008	E.05	<.04	--	--	--	.38	.75	.082	.065
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	<10	E.007	.12	<.04	.87	--	--	.41	.74	.111	.074
SEP													
04...	139	130	10	E.004	<.05	<.04	--	--	--	.34	.68	.21	.176
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	12	<.008	<.05	.53	--	.69	.34	.87	1.2	.52	.47

295516095080801 -- Lk Houston Site AC

Date	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)
MAR													
06...	.06	.187	10.7	8.7	6.8	.5	12	8	.21	<2	61	<.06	E.02
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	.06	.181	--	--	6.7	.6	23	--	--	--	--	--	--
JUN													
05...	.05	.141	9.5	8.4	7.0	.3	19	3	.16	E2	56	<.06	E.02
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	.06	.172	9.3	8.1	1.8	.1	19	--	--	--	--	--	--
SEP													
04...	.16	.481	8.8	6.4	24.4	1.8	7.0	2	.19	5	47	<.06	<.04
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	.45	1.36	8.1	6.6	2.8	.4c	10	--	--	--	--	--	--

295516095080801 -- Lk Houston Site AC

Date	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
MAR													
06...	<.8	.17	1.8	44	.26	1.5	<.01	.9	1.37	<2	<1	8	.21
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	<.8	.15	2.7	21	E.06	1.9	<.01	.7	1.43	<2	<1	3	.11
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
04...	<.8	.25	1.0	13	<.08	.5	<.01	1.3	1.02	<2	<1	<1	.20
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--

295516095080801 -- Lk Houston Site AC

Date	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)
MAR													
06...	<.006	<.006	<.004	<.005	.171	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	<.006	<.006	<.004	<.005	.678	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
04...	<.006	<.006	<.004	<.005	.430	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--

295516095080801 -- Lk Houston Site AC

Date	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)
MAR													
06...	<.003	E.009	.021	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	E.004n
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	<.003	E.106	.064	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.020
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
04...	<.003	E.080	.022	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.013
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--

295516095080801 -- Lk Houston Site AC

Date	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
MAR													
06...	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010	<.011	<.02
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010	<.011	<.02
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
04...	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--

08072000 Lake Houston near Sheldon, TX--Continued

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

295516095080801 -- Lk Houston Site AC

Date	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
MAR								
06...	<.004	.152	<.02	<.034	<.02	<.005	<.002	<.009
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
JUN								
05...	<.004	.037	<.02	<.034	<.02	<.005	<.002	<.009
05...	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--
SEP								
04...	<.004	.030	<.02	<.034	<.02	<.005	<.002	<.009
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--

300158095074601 -- Lk Houston Site EC

Date	Time	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	FECAL STREP, KF STRP MF, WATER (COL/ 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
MAR													
06...	1350	1.00	155	7.4	12.0	100	768	10.1	93	240	150	40	8
06...	1352	10.0	155	7.4	12.0	--	768	10.1	93	--	--	--	--
06...	1354	15.0	155	7.4	12.0	80	768	10.4	96	--	--	--	--
JUN													
05...	1210	1.00	220	8.2	32.0	52	760	8.4	115	E1k	E17k	51	2
05...	1212	10.0	210	7.4	28.5	--	760	6.8	88	--	--	--	--
05...	1214	19.5	215	7.1	28.0	50	760	4.6	59	--	--	--	--
SEP													
04...	1510	1.00	215	7.2	28.5	90	766	4.3	55	E1k	E1k	46	--
04...	1512	10.0	215	7.2	29.0	--	766	4.1	53	--	--	--	--
04...	1514	18.0	215	7.2	29.0	45	766	4.0	52	--	--	--	--

300158095074601 -- Lk Houston Site EC

Date	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
MAR													
06...	12.8	1.96	14.2	1	42	1.97	--	32	6.3	24.1	E.1n	8.11	106
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	16.7	2.35	23.1	1	48	3.25	49	--	8.9	29.4	.1	8.20	141
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
04...	14.8	2.14	22.2	1	49	3.57	51	--	7.4	24.6	.2	10.1	129
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--

08072000 Lake Houston near Sheldon, TX--Continued

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

300158095074601 -- Lk Houston Site EC

Date	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
MAR													
06...	90	20	--	E.004	.19	<.04	.96	.44	.77	.105	E.003	E.01	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	14	1.81	.021	1.83	<.04	2.6	.48	.79	.117	.027	.02	.061
JUN													
05...	122	13	--	<.008	<.05	<.04	--	.45	.97	.080	.084	.05	.156
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	25	--	<.008	<.05	<.04	--	.41	.79	.085	.069	.06	.169
SEP													
04...	116	25	.05	.008	.06	<.04	.85	.34	.79	.19	.121	.10	.319
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	24	.10	.023	.13	E.04	.93	.37	.80	.19	.159	.14	.435

300158095074601 -- Lk Houston Site EC

Date	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)
MAR													
06...	13.9	10.3	10.5	1.0	20	11	.14	<2	59	<.06	<.04	<.8	.20
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	11.0	1.0	23	--	--	--	--	--	--	--	--
JUN													
05...	9.8	7.9	17.6	1.1	40	4	.19	2	56	<.06	<.04	<.8	.36
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	10.7	8.1	12.2	.7	28	--	--	--	--	--	--	--	--
SEP													
04...	8.4	6.6	34.3	2.2	21	26	.16	4	50	<.06	<.04	<.8	.20
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	9.7	6.7	<.1c	<.1	26	--	--	--	--	--	--	--	--

300158095074601 -- Lk Houston Site EC

Date	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)
MAR													
06...	1.4	71	.27	12.8	<.01	.4	1.18	<2	<1	6	.14	<.006	<.006
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	1.7	19	.09	2.9	<.01	.9	1.35	<2	<1	1	.19	<.006	<.006
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
04...	1.2	38	E.05	8.4	<.01	1.1	1.06	<2	<1	1	.12	<.006	<.006
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--

08072000 Lake Houston near Sheldon, TX--Continued

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

300158095074601 -- Lk Houston Site EC

Date	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)
MAR													
06...	<.004	<.005	.657	<.050	<.010	<.002	E.010	<.020	<.005	<.006	<.018	<.003	E.013
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	<.004	<.005	.612	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.081
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
04...	<.004	<.005	.369	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	E.046
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--

300158095074601 -- Lk Houston Site EC

Date	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)
MAR													
06...	.097	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	E.005n	<.006	<.002
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	.039	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	.014	<.006	<.002
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
04...	.020	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	E.010n	<.006	<.002
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--

300158095074601 -- Lk Houston Site EC

Date	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)
MAR													
06...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01	<.010	<.011	<.02	<.004	.088
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01	<.010	<.011	<.02	<.015	.029
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
04...	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.004	.020
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--

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

300158095074601 -- Lk Houston Site EC

Date	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
MAR						
06...	<.02	<.034	<.02	<.005	<.002	<.009
06...	--	--	--	--	--	--
06...	--	--	--	--	--	--
JUN						
05...	<.02	<.034	<.02	<.005	<.002	<.009
05...	--	--	--	--	--	--
05...	--	--	--	--	--	--
SEP						
04...	E.01n	<.034	<.02	<.005	<.002	<.009
04...	--	--	--	--	--	--
04...	--	--	--	--	--	--

300209095091201 -- Lk Houston Site FC

Date	Time	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	FECAL STREP, KF STRP MF, WATER (COL/ 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
MAR													
06...	1200	1.00	365	8.2	12.5	70	770	11.5	107	104	84	70	22.8
06...	1202	9.00	365	8.2	12.5	60	770	11.5	107	--	--	--	--
JUN													
05...	1050	1.00	470	8.8	31.0	50	760	9.0	122	E4k	E19k	75	24.5
05...	1052	8.50	485	8.8	31.0	80	760	9.0	122	--	--	--	--
SEP													
04...	1356	1.00	240	8.0	29.0	175	766	5.7	74	E6k	E16k	48	15.3
04...	1358	4.00	250	8.0	29.0	--	766	5.4	70	--	--	--	--
04...	1402	8.00	265	7.9	29.0	175	766	5.3	69	--	--	--	--

300209095091201 -- Lk Houston Site FC

Date	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAR													
06...	3.08	40.7	2	54	4.37	--	77	15.3	47.8	.2	8.57	206	191
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	3.35	59.8	3	61	5.40	106	--	18.2	61.3	.3	7.72	262	247
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
04...	2.30	26.8	2	52	4.95	61	--	9.2	25.9	.2	10.1	144	132
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--

300209095091201 -- Lk Houston Site FC

Date	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)
MAR													
06...	44	--	E.005	.20	<.04	1.2	--	--	.52	.98	.47	.33	.32
06...	62	--	<.008	<.05	<.04	--	--	--	.55	.98	.50	.34	.32
JUN													
05...	30	.30	.029	.33	.04	1.9	1.5	.59	.63	1.5	.62	.44	.40
05...	51	.35	.031	.38	.12	2.1	1.6	.60	.73	1.7	.66	.47	.44
SEP													
04...	49	--	E.007	.06	.12	1.6	1.4	.43	.55	1.5	.41	.25	.23
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	79	.25	.021	.27	.20	1.8	1.4	.47	.67	1.6	.40	.28	.26

08072000 Lake Houston near Sheldon, TX--Continued

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

300209095091201 -- Lk Houston Site FC

Date	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)
MAR													
06...	.978	11.6	7.1	22.8	1.5	41	6	.28	E2	78	<.06	E.03	<.8
06...	.981	--	--	15.3	1.4	41	--	--	--	--	--	--	--
JUN													
05...	1.24	13.0	7.9	34.1	2.0	81	10	.31	6	63	<.06	E.02	<.8
05...	1.34	13.8	6.8	25.4	1.0	81	--	--	--	--	--	--	--
SEP													
04...	.717	12.0	7.7	28.1	E3.7	43	4	.23	4	52	<.06	<.04	<.8
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	.785	12.6	7.8	41.6	E5.5	49	--	--	--	--	--	--	--

300209095091201 -- Lk Houston Site FC

Date	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)
MAR													
06...	.81	2.0	18	.27	15.6	<.01	1.6	1.18	<2	<1	9	.41	<.006
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	1.53	2.4	E5	E.04	2.4	<.01	2.6	1.88	<2	<1	2	.66	<.006
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
04...	.45	1.7	11	.10	1.6	<.01	1.4	1.06	<2	<1	2	.23	<.006
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--

300209095091201 -- Lk Houston Site FC

Date	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
MAR													
06...	<.006	<.004	<.005	3.58	<.050	<.010	<.002	E.063	<.020	<.005	<.006	<.018	<.003
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	<.006	<.004	<.005	.724	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
04...	<.006	<.004	<.005	.301	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--

300209095091201 -- Lk Houston Site FC

Date	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)
MAR													
06...	E.063	.210	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	E.008n	E.009n	<.006
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	E.090	.051	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	E.011	<.006
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
04...	E.029	.027	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	E.010n	<.006
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--

08072000 Lake Houston near Sheldon, TX--Continued

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

300209095091201 -- Lk Houston Site FC

Date	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)
MAR													
06...	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	.05	<.010	<.011	<.02	.022
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	.03	<.010	<.011	<.02	<.004
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
04...	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	E.01n	<.010	<.011	<.02	<.004
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--

300209095091201 -- Lk Houston Site FC

Date	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
MAR							
06...	1.21	<.02	<.034	<.02	<.005	<.002	<.009
06...	--	--	--	--	--	--	--
JUN							
05...	.037	<.02	<.034	<.02	<.005	<.002	<.009
05...	--	--	--	--	--	--	--
SEP							
04...	.029	<.02	<.034	<.02	<.005	<.002	<.009
04...	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--

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

Value qualifier codes used in this report:
c -- See laboratory comment
k -- Counts outside acceptable range
n -- Below the NDV

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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^2.

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^3/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, 6.63 ft, Dec. 13, 15; minimum gage height, -1.48 ft, Feb. 26.

GAGE HEIGHT FROM DCP, in FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2.63	1.45	3.22	1.63	3.16	1.56	2.54	0.21	0.92	-0.80	4.75	2.47
2	2.67	1.40	2.97	1.15	3.20	1.33	2.16	-0.21	2.00	0.48	4.16	0.74
3	2.73	1.41	3.12	1.13	3.05	1.07	1.21	-0.50	2.11	0.91	0.74	-0.83
4	2.93	1.51	3.12	0.89	2.83	1.13	2.27	0.91	1.92	0.32	2.19	-0.24
5	3.08	1.22	2.97	0.95	2.91	1.24	3.30	0.84	2.91	1.32	2.35	0.39
6	3.20	0.90	3.08	1.19	2.92	1.05	1.07	-0.62	2.30	0.47	2.59	0.78
7	2.70	1.28	2.91	0.95	2.71	0.88	0.55	-1.17	1.61	-0.48	2.57	0.73
8	2.97	1.66	2.76	0.99	2.54	-0.09	1.76	0.04	2.34	0.21	3.02	1.10
9	3.51	1.80	2.86	0.93	1.56	-0.11	1.97	0.18	2.62	1.00	2.81	0.36
10	3.57	1.96	2.75	0.88	2.26	0.85	1.95	0.20	2.24	-0.75	2.70	0.31
11	4.05	2.10	2.52	0.88	3.62	1.05	1.78	-0.33	1.45	-0.60	3.03	1.55
12	4.37	3.06	2.72	1.24	6.58	3.50	1.70	-0.37	2.03	0.45	2.59	0.42
13	5.83	3.94	3.12	1.24	6.63	6.00	2.12	0.12	2.10	0.30	2.43	1.05
14	5.64	4.43	3.37	1.59	6.60	6.15	2.20	0.11	2.13	0.63	2.82	1.52
15	4.58	4.01	3.96	2.34	6.63	6.09	2.25	0.59	2.15	0.98	2.78	1.76
16	4.34	2.17	3.84	1.64	6.26	4.34	2.41	0.93	1.75	0.43	2.54	1.31
17	3.65	2.46	3.30	0.80	5.49	4.08	2.28	0.82	1.90	0.54	2.67	1.37
18	3.63	1.65	2.57	0.56	4.31	3.00	2.15	0.74	2.87	0.99	2.81	1.26
19	3.23	1.31	2.49	0.35	3.74	1.70	2.07	-0.05	3.08	1.69	3.44	1.25
20	2.92	---	1.42	-0.20	2.61	1.77	2.14	0.65	2.43	0.66	3.31	0.78
21	---	---	2.28	0.95	3.09	1.21	2.43	1.05	2.68	0.81	1.78	-0.36
22	---	---	2.71	1.42	2.90	1.93	2.46	1.07	2.08	0.01	2.39	-0.39
23	---	---	3.29	2.21	2.46	0.98	2.49	0.84	2.71	0.61	3.06	0.89
24	---	---	3.21	1.28	2.10	0.72	2.47	0.85	2.69	0.68	3.26	1.49
25	2.74	1.43	2.61	1.30	2.10	0.74	1.51	-0.73	2.78	0.77	3.04	1.21
26	3.08	1.40	3.37	2.31	1.94	0.08	2.31	0.20	2.12	-1.48	2.08	-0.13
27	3.00	1.96	2.89	1.42	2.10	0.00	2.51	0.38	1.50	-1.06	2.90	0.78
28	2.99	1.79	2.19	0.71	2.70	0.61	2.69	0.75	2.79	1.23	3.03	1.48
29	2.68	1.54	2.37	0.92	2.50	0.43	2.56	0.77	---	---	3.04	1.51
30	2.88	1.30	3.09	1.35	2.59	0.47	2.81	1.17	---	---	3.07	1.02
31	3.21	1.88	---	---	2.55	0.24	2.80	0.47	---	---	2.54	1.04
MONTH	---	---	3.96	-0.20	6.63	-0.11	3.30	-1.17	3.08	-1.48	4.75	-0.83

08072050 San Jacinto River near Sheldon, TX--Continued

GAGE HEIGHT FROM DCP, in FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	2.53	0.16	3.48	1.13	3.23	1.33	3.22	1.55	2.14	0.89	3.37	1.69
2	3.01	0.98	3.36	1.26	3.35	1.49	3.09	1.64	2.27	0.64	3.54	1.68
3	2.20	0.39	3.28	1.24	3.41	2.02	2.94	1.68	2.28	0.63	3.84	1.81
4	2.32	0.47	2.87	0.78	3.27	2.12	2.57	1.23	2.65	0.79	4.21	2.25
5	2.71	0.91	3.24	1.50	3.26	1.93	2.39	0.67	2.83	0.80	4.36	2.30
6	3.36	1.17	3.25	2.12	2.83	1.55	2.10	0.42	2.58	0.71	5.13	2.62
7	3.78	2.18	3.37	2.31	2.84	1.30	2.49	0.30	2.60	0.33	6.07	4.10
8	6.29	3.16	3.98	2.77	3.00	1.16	2.76	0.71	3.13	0.76	5.75	3.90
9	6.26	4.53	3.72	2.04	3.23	1.52	3.36	1.09	3.08	0.98	5.06	3.53
10	4.75	3.41	3.24	1.80	3.49	1.41	2.80	0.75	3.90	1.51	4.65	3.00
11	3.97	3.23	3.96	2.15	3.81	1.66	2.67	0.50	3.86	2.41	4.36	1.93
12	3.69	2.93	4.26	2.31	3.30	1.32	2.61	0.51	3.74	2.22	3.67	1.44
13	3.28	1.81	2.70	1.14	3.18	0.95	2.91	0.60	3.84	2.14	3.32	1.53
14	2.95	1.21	3.38	0.04	2.57	0.84	2.87	1.06	3.37	1.83	3.61	1.79
15	3.13	1.28	3.79	1.75	2.61	0.43	2.53	1.20	4.89	2.19	3.57	1.25
16	3.52	1.45	3.77	1.80	2.80	0.93	3.34	1.72	3.96	2.16	3.29	1.26
17	3.16	1.17	3.10	1.60	2.27	0.53	2.83	1.36	3.68	1.69	3.48	1.47
18	3.10	1.00	2.34	0.37	2.75	1.24	2.54	1.02	3.49	1.59	3.76	1.66
19	3.22	1.11	2.74	0.69	3.10	1.77	2.47	0.58	3.56	1.77	5.01	2.53
20	3.36	1.36	3.24	1.22	3.09	1.31	2.40	0.45	3.45	1.67	7.09	4.98
21	3.46	1.57	3.49	1.71	2.80	1.05	2.42	0.43	3.38	1.42	6.43	3.87
22	2.88	0.91	3.58	2.10	2.83	0.80	2.43	0.37	3.33	1.60	4.65	2.95
23	3.04	1.11	3.64	2.12	2.89	0.99	2.33	0.20	3.09	1.53	5.67	3.01
24	2.99	1.44	3.30	1.72	3.05	0.82	2.24	0.14	3.04	1.54	5.58	3.69
25	2.71	1.19	3.17	1.29	3.08	0.72	2.53	0.33	2.86	1.60	5.73	2.97
26	3.00	1.53	3.04	0.90	3.14	1.02	2.61	0.77	3.32	1.57	3.86	2.14
27	3.90	1.59	3.33	1.00	3.23	1.04	2.70	0.90	3.48	1.55	4.19	1.89
28	3.52	1.53	3.83	1.00	2.86	0.94	2.84	1.14	2.74	1.56	3.75	2.18
29	2.96	0.76	3.21	1.18	3.68	1.20	2.73	1.37	2.89	1.49	4.01	1.95
30	3.35	1.02	3.39	0.84	3.39	1.94	2.39	1.36	2.93	1.67	3.82	1.93
31	---	---	3.01	1.11	---	---	2.15	1.11	3.20	1.67	---	---
MONTH	6.29	0.16	4.26	0.04	3.81	0.43	3.36	0.14	4.89	0.33	7.09	1.25

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^2.

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.--No estimated daily discharges. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

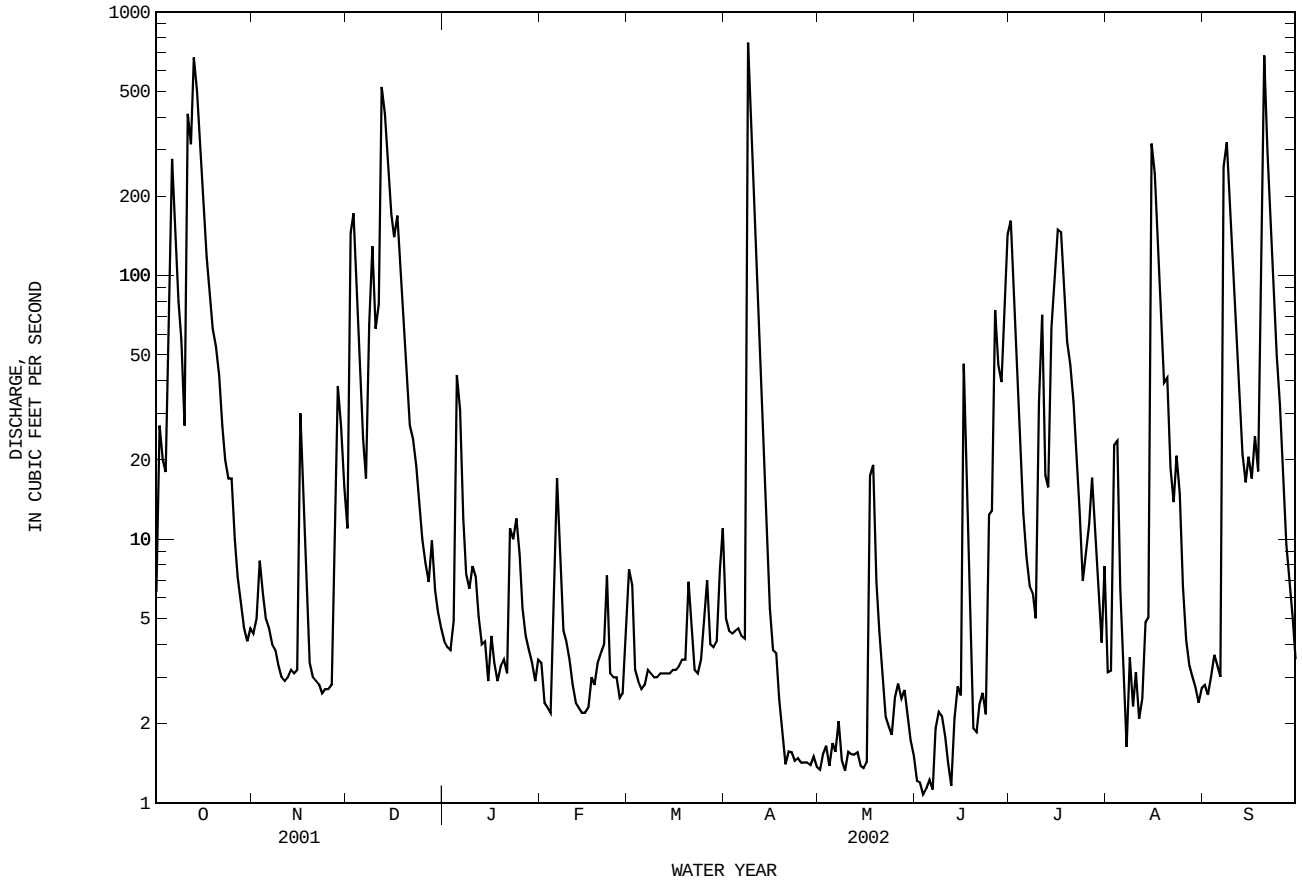
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	4.4	11	4.1	3.4	7.7	5.0	1.3	1.2	161	3.1	2.8
2	27	5.0	145	3.9	2.4	6.7	4.5	1.5	1.2	99	3.2	2.6
3	20	8.3	172	3.8	2.3	3.2	4.4	1.6	1.1	50	23	3.0
4	18	6.2	80	4.9	2.2	2.9	4.5	1.4	1.1	28	24	3.6
5	63	5.0	40	42	7.0	2.7	4.6	1.7	1.2	13	6.6	3.3
6	277	4.6	24	31	17	2.8	4.3	1.6	1.1	8.6	3.1	3.0
7	148	4.0	17	12	8.0	3.2	4.2	2.0	1.9	6.7	1.6	259
8	80	3.8	65	7.4	4.5	3.1	764	1.4	2.2	6.2	3.6	321
9	57	3.3	129	6.5	4.1	3.0	414	1.3	2.1	5.0	2.3	209
10	27	3.0	63	7.9	3.5	3.0	161	1.6	1.8	33	3.1	126
11	411	2.9	78	7.2	2.8	3.1	70	1.5	1.4	71	2.1	68
12	315	3.0	520	5.1	2.4	3.1	39	1.5	1.2	17	2.5	40
13	672	3.2	412	4.0	2.3	3.1	17	1.6	2.1	16	4.8	21
14	499	3.1	278	4.1	2.2	3.1	9.1	1.4	2.8	63	5.0	16
15	306	3.2	172	2.9	2.2	3.2	5.5	1.4	2.6	98	317	21
16	192	30	140	4.3	2.3	3.2	3.8	1.4	46	150	244	17
17	118	11	169	3.4	3.0	3.3	3.7	17	14	146	115	25
18	88	5.4	103	2.9	2.8	3.5	2.5	19	4.3	94	62	18
19	63	3.4	66	3.3	3.4	3.5	1.9	6.9	1.9	56	39	202
20	54	3.0	42	3.5	3.7	6.9	1.4	4.5	1.9	46	41	684
21	42	2.9	27	3.1	4.0	4.4	1.6	3.1	2.4	33	19	297
22	27	2.8	24	11	7.3	3.2	1.6	2.1	2.6	20	14	172
23	20	2.6	19	10	3.1	3.1	1.4	1.9	2.2	13	21	93
24	17	2.7	14	12	3.0	3.5	1.5	1.8	12	7.0	15	50
25	17	2.7	10	8.8	3.0	5.0	1.4	2.5	13	9.0	6.6	32
26	10	2.8	8.1	5.5	2.5	7.0	1.4	2.8	74	11	4.2	17
27	7.2	10	6.9	4.3	2.6	4.0	1.4	2.5	46	17	3.3	9.6
28	5.8	38	9.9	3.8	4.2	3.9	1.4	2.7	39	10	3.0	6.8
29	4.6	27	6.4	3.4	---	4.1	1.5	2.2	78	6.2	2.7	5.2
30	4.1	16	5.3	2.9	---	7.7	1.4	1.7	143	4.1	2.4	3.5
31	4.6	---	4.6	3.5	---	11	---	1.5	---	7.9	2.7	---
TOTAL	3600.6	223.3	2861.2	232.5	111.2	131.2	1539.0	96.4	505.3	1305.7	999.9	2731.4
MEAN	116.1	7.443	92.30	7.500	3.971	4.232	51.30	3.110	16.84	42.12	32.25	91.05
MAX	672	38	520	42	17	11	764	19	143	161	317	684
MIN	4.1	2.6	4.6	2.9	2.2	2.7	1.4	1.3	1.1	4.1	1.6	2.6
AC-FT	7140	443	5680	461	221	260	3050	191	1000	2590	1980	5420

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2002, BY WATER YEAR (WY)

MEAN	52.73	56.13	59.80	62.53	66.93	41.52	46.59	57.70	59.68	25.09	25.43	52.85
MAX	236	223	376	224	356	186	330	173	292	136	76.7	320
(WY)	1995	1983	1992	1979	1992	2001	1991	1993	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1977 - 2002	
ANNUAL TOTAL	24291.3		14337.7			
ANNUAL MEAN	66.55		39.28		50.59	
HIGHEST ANNUAL MEAN					137	1992
LOWEST ANNUAL MEAN					11.9	2000
HIGHEST DAILY MEAN	1170	Mar 28	764	Apr 8	2810	Feb 21 1994
LOWEST DAILY MEAN	1.6	Apr 15	1.1	Jun 3	0.29	May 21 1995
ANNUAL SEVEN-DAY MINIMUM	2.8	Aug 19	1.2	May 31	0.34	Dec 23 1984
MAXIMUM PEAK FLOW			1120	Oct 11	3780	Feb 21 1994
MAXIMUM PEAK STAGE			29.53	Oct 11	38.85	Feb 21 1994
ANNUAL RUNOFF (AC-FT)	48180		28440		36650	
10 PERCENT EXCEEDS	197		108		107	
50 PERCENT EXCEEDS	14		4.9		7.7	
90 PERCENT EXCEEDS	3.1		1.7		1.6	

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, 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^2. Prior to Aug. 1977, 134 mi^2. 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.--No estimated daily contents. 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, 11,550 acre-ft, Oct. 16, elevation, 88.94 ft; minimum contents, 0.11 acre-ft, on many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.16	0.20	0.26	0.17	0.31	0.16	0.28	68.8	0.12	2.85	0.15	0.13
2	0.15	0.21	46.2	0.16	0.30	0.23	0.22	93.5	0.12	0.99	0.14	0.14
3	0.17	0.20	540	0.15	0.29	0.22	0.19	68.5	0.12	0.50	0.21	0.14
4	0.19	0.21	196	0.15	0.29	0.19	0.17	2.98	0.12	0.33	35.6	0.14
5	1.97	0.21	4.76	0.61	0.28	0.17	0.16	0.22	0.12	0.24	708	0.14
6	271	0.21	1.55	7.26	0.44	0.16	0.16	0.18	0.12	0.19	1180	0.45
7	824	0.20	0.38	1.50	0.46	0.16	0.15	0.13	0.13	0.16	561	40.8
8	885	0.20	0.46	0.30	0.38	0.16	1220	0.13	0.13	0.16	43.9	739
9	513	0.20	3.83	0.24	0.31	0.16	7430	0.12	0.13	0.15	0.19	2640
10	101	0.20	4.44	0.22	0.28	0.15	8500	0.12	0.13	1.14	0.35	3930
11	3.61	0.20	3.25	0.20	0.27	0.15	7560	0.12	0.13	102	0.28	3510
12	920	0.20	1170	0.18	0.26	0.16	5650	0.12	0.12	105	0.20	1950
13	4800	0.20	4270	0.17	0.27	0.15	3410	0.12	0.12	8.41	0.20	358
14	10000	0.19	6540	0.17	0.27	0.16	999	0.12	0.11	206	1.71	7.50
15	11340	0.19	7900	0.16	0.28	0.16	3.36	0.13	0.11	1030	125	0.39
16	11240	0.34	8950	0.15	0.29	0.15	3.10	0.13	0.36	1980	2940	0.41
17	10150	0.76	9730	0.15	0.30	0.16	0.21	2.04	2.14	3000	5570	0.31
18	8730	0.31	8450	0.15	0.32	0.17	0.19	155	0.39	3190	5910	0.29
19	7130	0.23	7060	0.16	0.33	0.17	0.17	521	0.21	2070	5580	0.33
20	5450	0.18	6540	0.17	0.37	0.19	0.16	522	0.16	384	4570	11.8
21	3720	0.16	5930	0.19	0.38	0.24	0.15	34.1	0.14	0.23	3410	357
22	2050	0.16	5960	0.21	0.41	0.21	0.16	0.15	0.12	0.25	2310	803
23	1840	0.17	5930	0.22	0.42	0.18	0.15	0.13	0.12	0.29	2400	458
24	1980	0.16	4720	0.23	0.38	0.17	0.15	0.12	0.12	0.19	2060	9.90
25	2040	0.15	3300	0.26	0.31	0.17	1.15	0.12	0.16	0.17	1280	2.19
26	1240	0.15	1720	0.26	0.15	0.26	4.64	0.12	0.19	0.16	480	0.65
27	6.27	12.9	163	0.25	0.14	0.27	8.57	0.12	0.30	0.17	26.8	0.49
28	0.19	388	0.23	0.24	0.15	0.22	14.1	0.13	0.35	0.18	0.16	0.43
29	0.21	899	0.22	0.24	---	0.19	35.1	0.13	0.36	0.18	0.15	0.31
30	0.22	184	0.19	0.23	---	0.17	47.9	0.13	2.65	0.16	0.14	0.17
31	0.21	---	0.17	0.27	---	0.29	---	0.12	---	0.15	0.14	---
MEAN	2750	49.7	2880	0.48	0.31	0.19	1160	47.4	0.32	390	1260	494
MAX	11340	899	9730	7.26	0.46	0.29	8500	522	2.65	3190	5910	3930
MIN	0.15	0.15	0.17	0.15	0.14	0.15	0.15	0.12	0.11	0.15	0.14	0.13

CAL YR 2001 MAX 17880 MIN .13
WTR YR 2002 MAX 11340 MIN .11

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^2.

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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	1.5	2.0	1.2	1.2	1.7	1.9	1.0	0.26	12	1.9	1.7
2	1.8	1.2	71	1.3	0.95	2.3	1.3	1.1	0.32	6.8	1.3	1.4
3	1.5	1.1	35	1.3	0.95	1.3	1.1	1.1	0.33	3.4	7.5	1.4
4	1.3	1.0	13	1.4	0.98	1.1	1.0	1.2	0.49	1.6	42	1.2
5	56	1.1	6.3	41	3.0	1.1	1.00	1.2	0.52	1.0	14	1.2
6	179	1.1	4.5	13	6.2	1.1	0.99	1.2	0.30	0.78	5.3	1.7
7	55	1.0	3.2	6.1	2.2	1.1	1.1	1.1	0.30	0.60	3.5	67
8	17	1.0	21	3.9	1.7	1.1	434	1.0	0.27	0.61	1.9	90
9	7.1	1.1	18	3.1	1.3	1.1	185	0.97	0.21	0.60	2.4	21
10	4.0	1.1	7.1	2.3	1.1	0.99	80	0.95	0.21	27	2.8	1.9
11	444	1.1	60	1.6	1.1	1.0	29	0.87	0.20	65	1.9	1.0
12	250	1.1	198	1.3	1.1	1.00	9.4	0.97	0.33	10	9.3	0.85
13	590	1.1	181	1.4	1.1	0.97	3.9	0.81	0.39	21	85	0.76
14	318	1.1	135	1.4	1.1	0.99	2.2	0.63	0.41	220	43	0.69
15	167	1.1	83	1.3	1.1	0.97	1.6	0.64	0.41	21	693	2.0
16	96	11	101	1.1	1.1	0.95	1.5	0.78	52	72	479	3.5
17	56	2.7	136	1.0	1.1	0.94	1.4	15	17	24	272	6.0
18	30	1.6	58	0.93	1.1	0.92	1.3	15	1.7	2.0	160	3.8
19	16	1.2	33	1.0	1.2	0.92	1.2	2.1	0.99	0.88	81	133
20	13	0.99	17	1.2	1.2	1.6	1.1	1.1	0.64	0.62	33	409
21	8.8	1.00	10	1.0	1.2	1.4	1.1	0.78	0.56	0.37	24	128
22	6.5	1.0	19	0.97	1.2	0.93	1.1	0.70	0.42	0.37	17	46
23	7.2	1.0	10	0.99	1.1	0.87	1.1	0.64	1.9	0.57	11	14
24	11	1.0	5.6	1.1	1.1	0.94	1.0	0.65	2.4	0.78	7.2	7.7
25	11	0.99	4.2	1.4	1.2	1.1	0.99	0.65	4.7	1.0	4.1	6.0
26	5.4	1.0	3.3	0.97	1.1	2.8	0.97	0.53	24	0.86	3.0	3.0
27	3.3	11	3.0	0.94	1.1	1.3	0.96	0.45	42	0.77	2.5	1.5
28	2.5	12	5.3	0.96	1.2	1.1	0.97	0.57	71	3.9	3.2	1.6
29	2.3	4.8	3.0	0.98	---	1.00	1.1	0.51	36	8.2	4.7	1.4
30	1.8	2.9	1.9	0.99	---	3.4	1.1	0.39	54	5.5	3.2	1.1
31	1.6	---	1.5	1.1	---	8.3	---	0.26	---	2.9	2.1	---
TOTAL	2366.4	70.88	1249.9	98.23	39.98	46.29	770.38	54.85	314.26	516.11	2021.8	959.40
MEAN	76.34	2.363	40.32	3.169	1.428	1.493	25.68	1.769	10.48	16.65	65.22	31.98
MAX	590	12	198	41	6.2	8.3	434	15	71	220	693	409
MIN	1.3	0.99	1.5	0.93	0.95	0.87	0.96	0.26	0.20	0.37	1.3	0.69
AC-FT	4690	141	2480	195	79	92	1530	109	623	1020	4010	1900

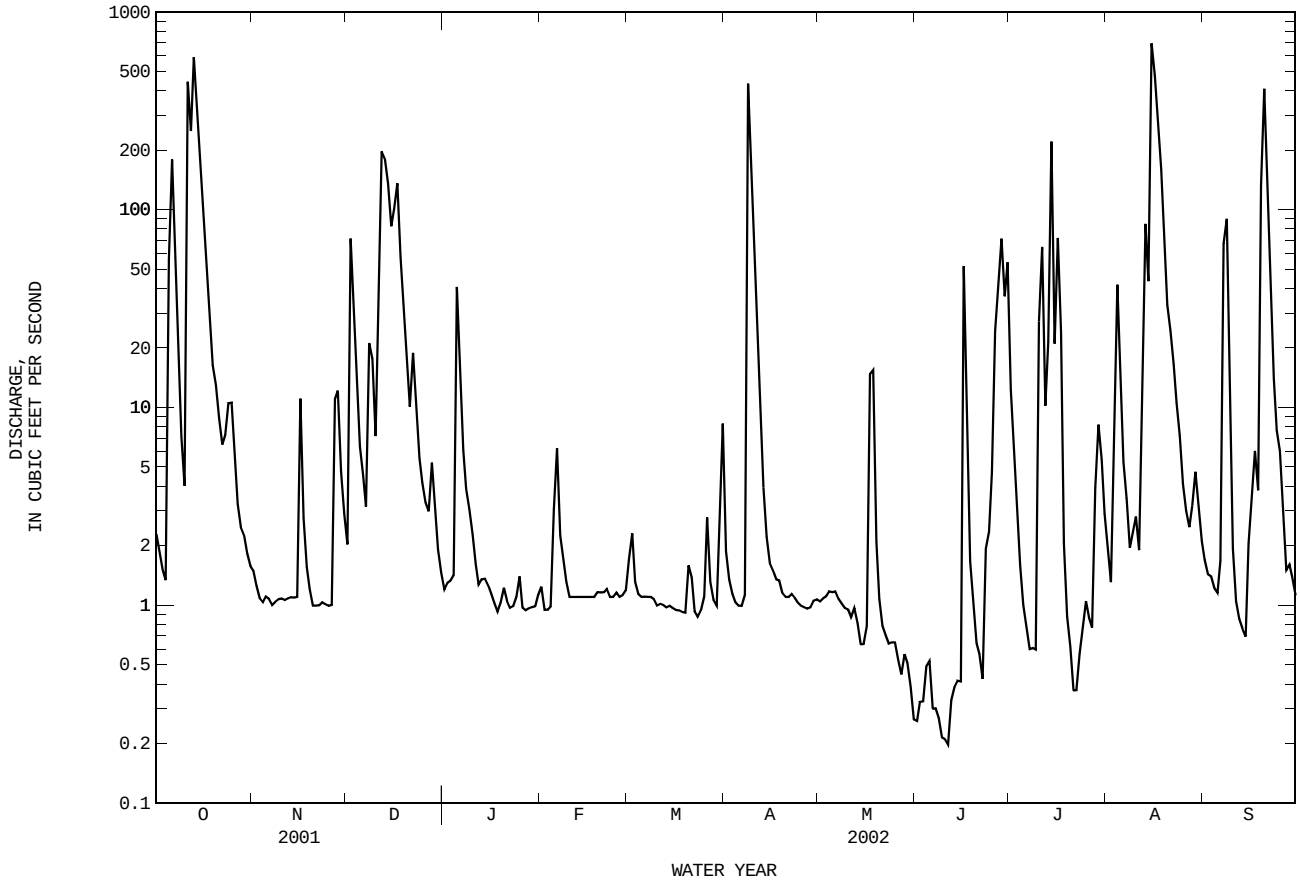
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2002, BY WATER YEAR (WY)

MEAN	32.56	29.94	24.77	22.98	22.78	17.37	17.37	25.09	28.95	9.600	13.43	22.73
MAX	257	250	131	91.0	120	106	119	89.5	106	45.3	65.2	128
(WY)	1999	1999	1992	1979	1992	2001	1991	1983	1986	1983	2002	1979
MIN	0.010	0.034	0.098	0.75	0.61	0.26	0.029	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1977 - 2002	
ANNUAL TOTAL	12632.22		8508.48			
ANNUAL MEAN	34.61		23.31		22.20	
HIGHEST ANNUAL MEAN					49.8	1999
LOWEST ANNUAL MEAN					4.45	1988
HIGHEST DAILY MEAN	1130	Jun 9	693	Aug 15	1550	Oct 20 1998
LOWEST DAILY MEAN	0.59	Jul 13	0.20	Jun 11	0.00	Nov 20 1977
ANNUAL SEVEN-DAY MINIMUM	0.66	Jul 10	0.26	Jun 6	0.00	Mar 16 1978
MAXIMUM PEAK FLOW			2260	Aug 15	2260	Aug 15 2002
MAXIMUM PEAK STAGE			9.35	Aug 15	bb16.72	Sep 20 1979
ANNUAL RUNOFF (AC-FT)	25060		16880		16080	
10 PERCENT EXCEEDS	97		55		52	
50 PERCENT EXCEEDS	3.4		1.4		1.9	
90 PERCENT EXCEEDS	0.87		0.67		0.07	

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, 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^2.

PERIOD OF RECORD.--July 1977 to Sept. 1980, 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), Dec. 2001 to current year.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,440 ft^3/s Oct. 11, 2001 (gage height 19.32 ft); maximum gage height 24.42 ft Sept. 19, 1979; no flow for several days during period July to Sept. 1977, and during the 1978 and 1980 water years.

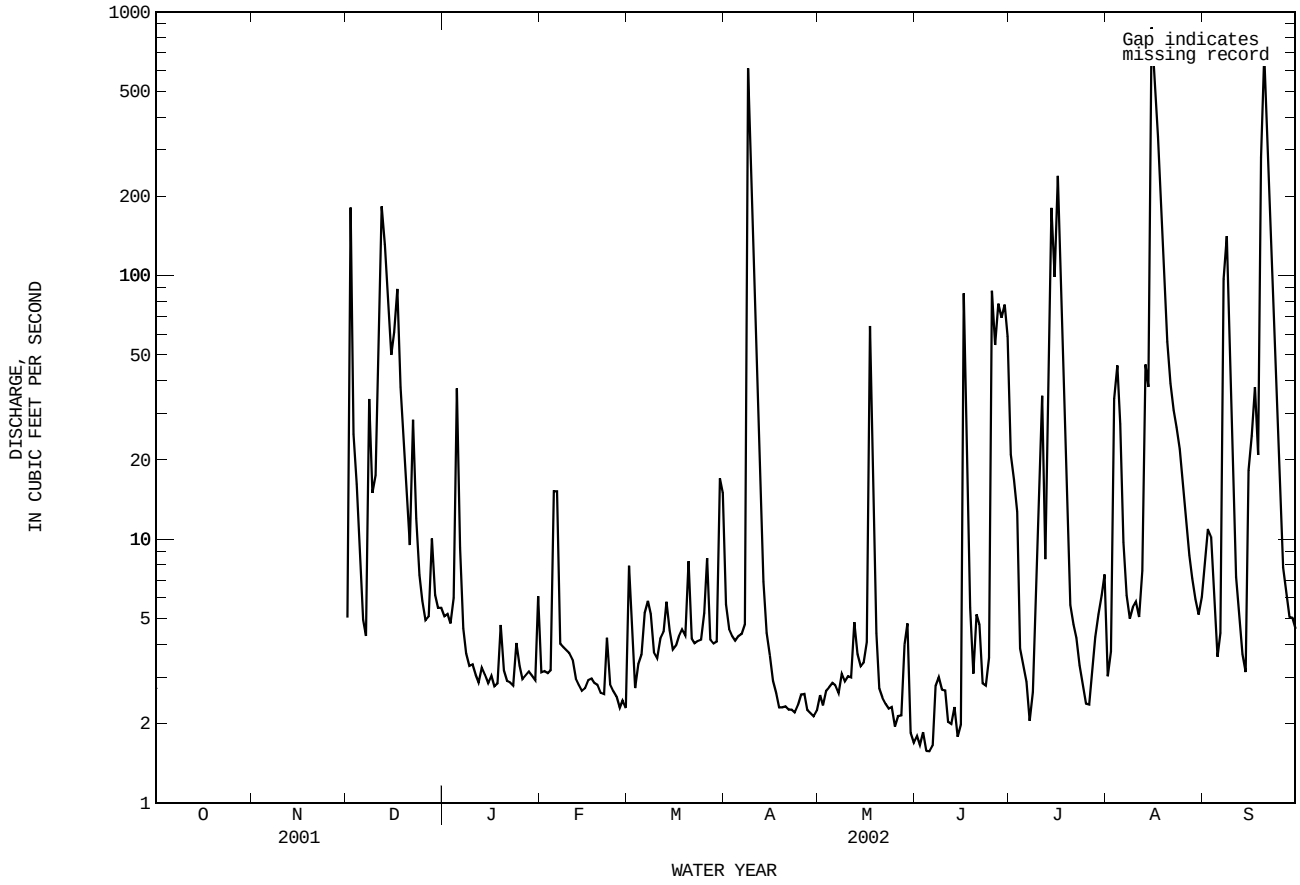
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,440 ft^3/s Oct. 11, 2001 (gage height 19.32 ft).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	5.0	5.1	3.1	7.9	5.7	2.6	1.8	21	3.0	8.1
2	---	---	e181	5.2	3.2	4.3	4.6	2.3	1.7	17	3.8	11
3	---	---	25	4.8	3.1	2.7	4.3	2.7	1.9	13	34	10
4	---	---	16	6.0	3.2	3.4	4.1	2.8	1.6	3.9	46	5.8
5	---	---	8.4	37	15	3.7	4.3	2.9	1.6	3.4	27	3.6
6	---	---	5.0	9.3	15	5.3	4.4	2.8	1.7	2.9	9.7	4.4
7	---	---	4.3	4.6	4.0	5.8	4.8	2.6	2.8	2.0	6.1	97
8	---	---	e34	3.7	3.9	5.2	611	3.1	3.0	2.6	5.0	141
9	---	---	e15	3.3	e3.8	3.7	184	2.9	2.7	7.1	5.5	45
10	---	---	17	3.4	e3.7	3.5	73	3.0	2.7	17	5.8	15
11	---	---	50	3.1	e3.5	4.2	36	3.0	2.0	35	5.1	7.2
12	---	---	e183	2.9	3.0	4.5	16	4.8	2.0	8.4	7.6	5.3
13	---	---	e131	3.3	2.8	5.8	6.9	3.7	2.3	58	46	3.7
14	---	---	77	3.1	2.7	4.5	4.4	3.3	1.8	181	38	3.1
15	---	---	50	2.8	2.7	3.8	3.6	3.4	2.0	99	873	18
16	---	---	61	3.0	2.9	4.0	2.9	4.1	86	239	531	25
17	---	---	89	2.8	3.0	4.3	2.6	64	26	94	336	38
18	---	---	38	2.8	2.9	4.6	2.3	21	5.5	28	175	21
19	---	---	22	4.7	2.8	4.3	2.3	4.4	3.1	11	93	281
20	---	---	14	3.2	2.6	8.3	2.3	2.7	5.2	5.6	56	689
21	---	---	9.5	2.9	2.6	4.2	2.3	2.5	4.7	4.8	39	189
22	---	---	28	2.9	4.2	4.0	2.3	2.4	2.8	4.2	31	79
23	---	---	12	2.8	2.8	4.1	2.2	2.3	2.8	3.3	27	39
24	---	---	7.3	4.0	2.7	4.2	2.4	2.3	3.6	2.8	22	22
25	---	---	5.8	3.3	2.5	5.3	2.6	1.9	88	2.4	16	13
26	---	---	4.9	2.9	2.3	8.5	2.6	2.1	55	2.4	12	7.8
27	---	---	5.1	3.0	2.5	4.2	2.3	2.2	78	3.1	8.7	6.3
28	---	---	10	3.1	2.3	4.0	2.2	4.0	69	4.3	7.1	5.1
29	---	---	6.2	3.0	---	4.1	2.1	4.8	78	5.2	5.9	5.0
30	---	---	5.5	2.9	---	17	2.2	1.8	59	6.1	5.2	4.6
31	---	---	5.5	6.1	---	15	---	1.7	---	7.4	6.1	---
TOTAL	---	---	1125.5	151.0	108.8	168.4	1002.7	170.1	598.3	894.9	2486.6	1803.0
MEAN	---	---	36.31	4.871	3.886	5.432	33.42	5.487	19.94	28.87	80.21	60.10
MAX	---	---	183	37	15	17	611	64	88	239	873	689
MIN	---	---	4.3	2.8	2.3	2.7	2.1	1.7	1.6	2.0	3.0	3.1

e Estimated

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, 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^2.

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.--No estimated daily contents. Records good. 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, 13,890 acre-ft, Oct. 14, 15, elevation, 93.26 ft; minimum contents, 0.24 acre-ft, on several days, elevation, 71.48 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.70	0.66	1.0	0.65	0.59	0.34	0.98	240	0.35	2.0	0.49	0.48
2	0.70	0.62	123	0.58	0.60	0.50	0.76	279	0.36	0.78	0.42	0.49
3	0.69	0.59	829	0.53	0.58	0.46	0.69	264	0.36	1.1	0.58	0.52
4	0.69	0.56	61	0.49	0.55	0.41	0.62	21	0.38	0.64	80	0.49
5	13	0.54	1.2	19	0.63	0.37	0.51	0.42	0.37	0.50	379	0.49
6	820	0.54	0.96	78	3.1	0.33	0.45	0.41	0.35	0.44	506	6.6
7	1660	0.52	0.83	2.3	1.4	0.31	0.40	0.38	0.59	0.44	320	186
8	1320	0.51	11	0.82	1.0	0.29	1440	0.38	0.47	0.44	104	742
9	509	0.49	58	0.70	0.87	0.29	6630	0.39	0.43	3.4	0.68	1410
10	12	0.49	3.3	0.61	0.82	0.27	7030	0.40	0.45	5.4	0.67	1670
11	246	0.48	8.1	0.58	0.80	0.25	5940	0.39	0.39	124	0.48	1360
12	4960	0.48	1940	0.55	0.73	0.24	4510	0.39	0.39	1.8	0.49	616
13	8670	0.47	5150	0.52	0.69	0.24	2900	0.41	0.39	5.5	0.91	48
14	13350	0.45	6640	0.49	0.65	0.24	1220	0.40	0.38	529	1.5	0.46
15	13570	0.45	7280	0.48	0.61	0.24	122	0.39	0.37	1290	677	0.53
16	12450	1.9	7750	0.46	0.59	0.24	0.81	0.41	28	1950	6940	1.1
17	10860	2.1	8350	0.46	0.59	0.24	0.73	26	31	2750	8840	1.5
18	9150	0.72	7630	0.45	0.58	0.24	0.68	369	0.85	2760	8710	1.7
19	7330	0.62	6780	0.44	0.58	0.24	0.64	602	0.48	1660	8050	11
20	5520	0.60	6140	0.47	0.59	0.29	0.59	549	0.46	386	6890	859
21	3680	0.57	5500	0.48	0.57	0.44	0.53	126	0.52	1.1	5270	1960
22	1990	0.55	5480	0.48	0.56	0.42	0.49	0.79	0.43	0.90	3980	748
23	1860	0.54	5550	0.48	0.55	0.40	0.45	0.55	0.42	0.69	4190	90
24	1960	0.54	4620	0.48	0.53	0.38	0.41	0.36	0.42	0.43	3510	16
25	1890	0.51	3400	0.54	0.53	0.36	20	0.36	0.97	0.43	2400	29
26	571	0.49	2000	0.56	0.46	0.40	66	0.36	4.3	0.42	1210	0.51
27	1.1	73	502	0.55	0.40	0.43	100	0.36	6.9	0.45	116	0.44
28	0.83	401	1.9	0.53	0.36	0.43	131	0.37	59	0.48	0.69	0.39
29	0.78	729	0.93	0.53	---	0.42	163	0.39	7.6	0.57	0.55	0.39
30	0.74	183	0.84	0.52	---	0.41	201	0.40	44	0.49	0.49	0.39
31	0.70	---	0.74	0.52	---	2.1	---	0.36	---	0.69	0.48	---
MEAN	3300	47	2770	3.7	0.73	0.39	1020	80	6.4	370	2010	325
MAX	13570	729	8350	78	3.1	2.1	7030	602	59	2760	8840	1960
MIN	0.69	0.45	0.74	0.44	0.36	0.24	0.40	0.36	0.35	0.42	0.42	0.39

CAL YR 2001 MAX 17580 MIN .45
WTR YR 2002 MAX 13570 MIN .24

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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^2.

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.--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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

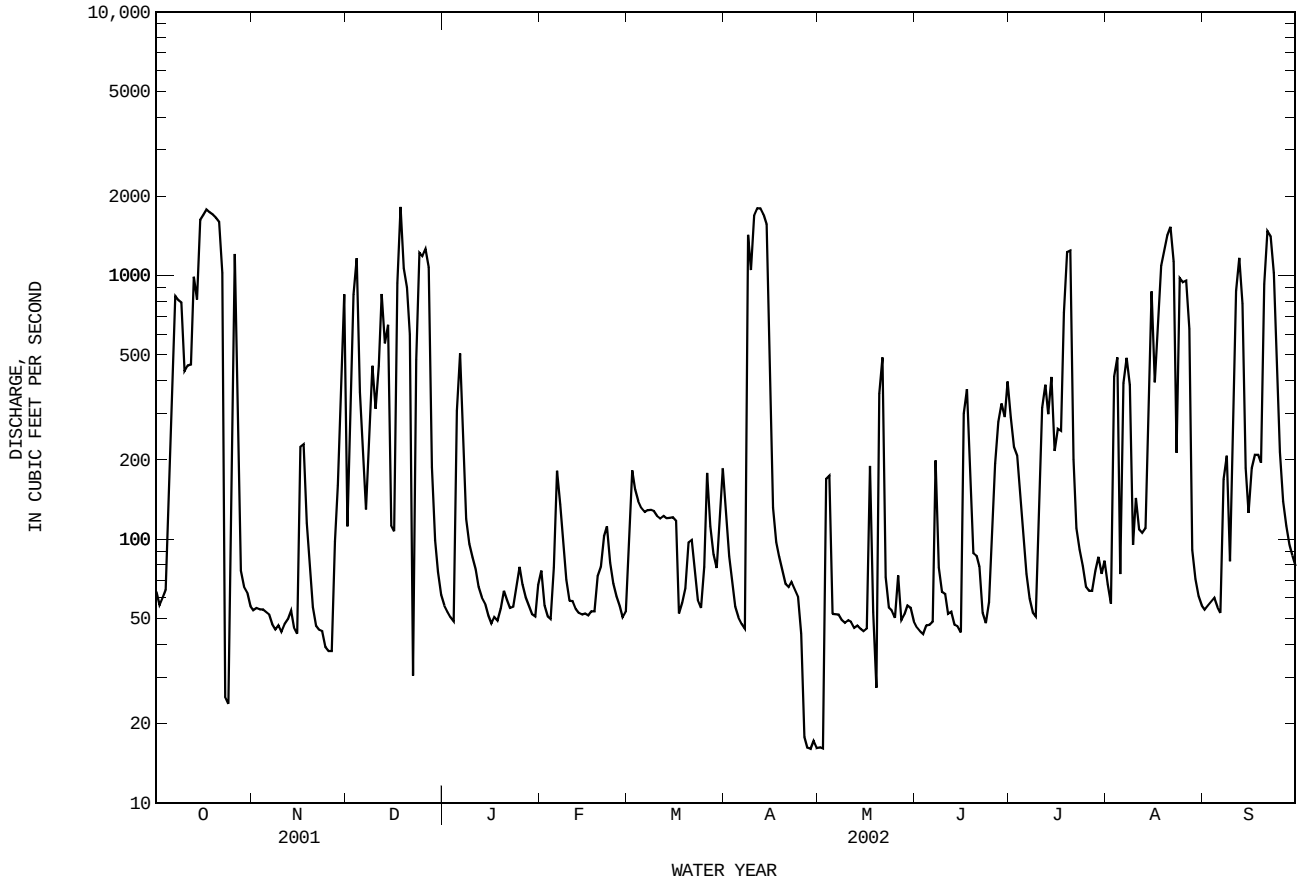
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	54	112	56	76	98	123	16	46	290	67	54
2	56	55	267	53	56	182	86	16	45	224	57	56
3	60	54	849	51	51	155	69	170	44	207	415	58
4	64	54	1160	49	50	140	55	174	47	142	489	60
5	169	53	361	306	78	131	50	52	47	100	74	55
6	360	52	199	506	182	127	48	52	49	74	391	53
7	836	48	130	242	136	129	46	52	199	60	489	169
8	808	46	245	120	94	130	1430	49	78	53	385	207
9	791	47	455	96	70	128	1050	48	63	51	95	82
10	434	45	313	85	58	123	1690	49	62	141	143	233
11	456	48	455	77	58	120	1800	49	52	315	109	875
12	460	50	852	66	54	123	1800	46	53	386	106	1170
13	990	54	554	60	53	120	1710	47	47	298	110	784
14	812	46	650	57	52	121	1560	46	47	413	256	186
15	1630	44	113	51	52	121	606	45	44	216	872	126
16	1700	224	107	48	51	118	132	46	300	263	393	186
17	1780	229	935	51	53	52	97	189	371	258	705	209
18	1740	115	1820	49	53	57	86	53	167	724	1090	209
19	1710	80	1070	54	73	65	77	27	89	1230	1240	195
20	1660	55	903	64	79	97	68	356	87	1250	1420	929
21	1600	47	598	59	103	100	66	490	79	201	1530	1480
22	1020	45	30	55	112	79	69	72	53	110	1130	1410
23	25	45	480	55	82	59	65	55	48	91	213	1020
24	24	39	1220	66	68	55	61	54	58	79	978	413
25	326	38	1180	79	61	79	44	50	93	66	944	214
26	1210	38	1260	67	56	178	18	73	193	64	958	139
27	341	98	1080	60	51	112	16	49	279	64	628	112
28	76	160	188	56	53	88	16	52	327	76	91	95
29	66	393	99	52	---	78	17	56	291	86	71	87
30	63	848	75	51	---	123	16	55	397	74	61	79
31	56	---	62	67	---	185	---	49	---	83	56	---
TOTAL	21386	3204	17822	2808	2015	3473	12971	2637	3755	7689	15566	10945
MEAN	689.9	106.8	574.9	90.58	71.96	112.0	432.4	85.06	125.2	248.0	502.1	364.8
MAX	1780	848	1820	506	182	185	1800	490	397	1250	1530	1480
MIN	24	38	30	48	50	52	16	16	44	51	56	53
AC-FT	42420	6360	35350	5570	4000	6890	25730	5230	7450	15250	30880	21710

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2002, BY WATER YEAR (WY)

MEAN	244.3	270.9	274.8	269.3	302.9	206.0	229.1	287.7	307.4	185.8	132.4	231.2
MAX	1177	1790	1113	1107	1508	1563	1438	1599	1135	971	664	1186
(WY)	1999	1947	1999	1992	1992	1992	1992	1968	1992	1993	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1945 - 2002	
ANNUAL TOTAL	144077		104271			
ANNUAL MEAN	394.7		285.7		244.5	
HIGHEST ANNUAL MEAN					784	1992
LOWEST ANNUAL MEAN					23.3	1951
HIGHEST DAILY MEAN	1820	Dec 18	1820	Dec 18	6790	Jun 28 1960
LOWEST DAILY MEAN	22	Jul 4	16	Apr 27	0.00	Jun 22 1948
ANNUAL SEVEN-DAY MINIMUM	37	Aug 16	16	Apr 26	0.00	Jun 22 1948
MAXIMUM PEAK FLOW			2360	Apr 8	11200	Aug 29 1945
MAXIMUM PEAK STAGE			64.50	Apr 8	81.23	Aug 29 1945
ANNUAL RUNOFF (AC-FT)	285800		206800		177200	
10 PERCENT EXCEEDS	1250		966		796	
50 PERCENT EXCEEDS	148		87		51	
90 PERCENT EXCEEDS	46		47		6.1	

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^2, 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 except those for estimated daily discharges, which are fair. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	75	200	83	105	194	159	42	66	363	77	73
2	78	76	524	79	90	159	97	42	63	315	72	73
3	78	77	774	80	82	114	83	136	63	272	e420	75
4	81	77	1270	77	81	92	75	223	65	170	e700	74
5	233	78	464	416	140	82	68	64	64	108	e200	73
6	449	76	315	525	279	74	68	65	81	81	e300	89
7	858	72	204	330	202	77	66	63	379	72	504	366
8	838	67	351	163	131	79	2370	61	119	68	480	356
9	816	70	520	119	101	81	1010	59	76	67	119	114
10	495	70	412	107	91	76	1610	61	68	259	155	196
11	662	71	673	101	87	71	1770	62	64	299	117	798
12	587	70	1830	91	86	72	1790	60	63	444	158	1110
13	1550	77	870	89	80	72	1710	61	61	474	133	849
14	747	66	698	86	77	72	1560	64	60	709	292	238
15	1580	65	223	81	77	70	728	62	57	379	1900	176
16	1630	352	164	76	77	69	145	61	423	491	796	231
17	1780	320	844	77	77	65	101	188	428	289	657	258
18	1730	168	1780	78	75	68	88	91	216	660	1060	253
19	1700	109	1200	89	125	74	81	55	100	1150	1160	294
20	1660	94	861	93	103	127	74	151	109	1290	1370	878
21	1600	87	660	87	169	115	71	389	87	304	1500	1390
22	1200	80	62	83	162	90	70	81	67	130	1420	1460
23	61	79	381	81	102	74	68	66	63	104	396	1020
24	55	72	1170	100	86	68	68	66	73	89	929	481
25	258	70	1150	101	78	79	65	64	127	81	907	253
26	1140	77	1210	92	76	294	48	295	292	82	910	159
27	516	185	1110	84	74	132	42	79	324	76	718	122
28	105	352	300	70	75	96	40	75	389	88	103	100
29	88	408	143	75	---	82	44	71	405	96	78	90
30	80	915	104	79	---	232	45	70	439	82	74	84
31	79	---	90	109	---	247	---	68	---	87	71	---
TOTAL	22819	4455	20557	3801	2988	3297	14214	2995	4891	9179	17776	11733
MEAN	736.1	148.5	663.1	122.6	106.7	106.4	473.8	96.61	163.0	296.1	573.4	391.1
MAX	1780	915	1830	525	279	294	2370	389	439	1290	1900	1460
MIN	55	65	62	70	74	65	40	42	57	67	71	73
AC-FT	45260	8840	40770	7540	5930	6540	28190	5940	9700	18210	35260	23270

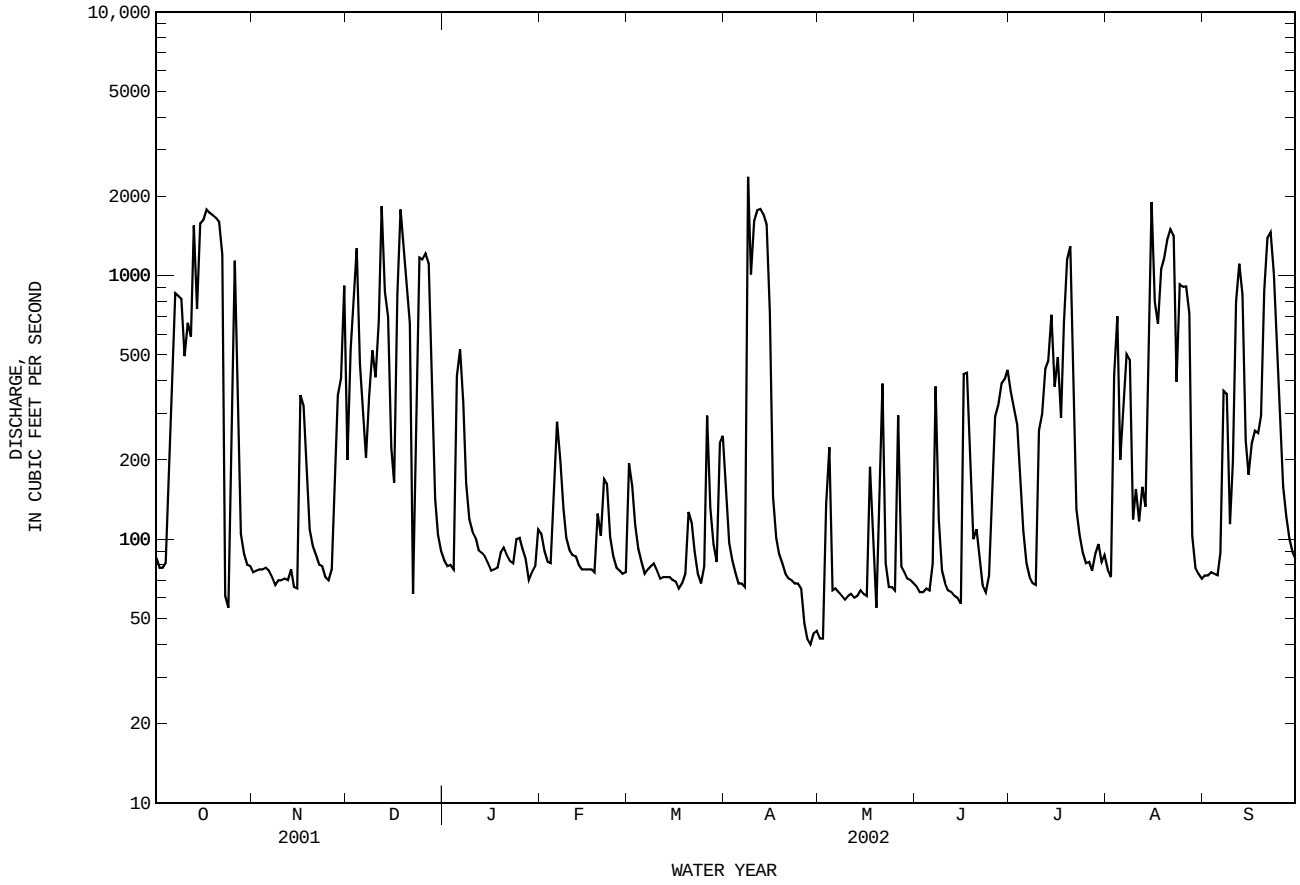
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2002, BY WATER YEAR (WY)

MEAN	333.7	382.1	391.0	381.3	380.0	328.2	333.9	358.7	435.9	256.6	201.9	346.4
MAX	1288	1609	1214	1133	1619	1701	1639	965	1129	956	784	1278
(WY)	1999	1999	1999	1992	1992	1992	1992	1992	1973	1993	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1971 - 2002	
ANNUAL TOTAL	166811		118705			
ANNUAL MEAN	457.0		325.2		343.6	
HIGHEST ANNUAL MEAN					854	1992
LOWEST ANNUAL MEAN					142	1988
HIGHEST DAILY MEAN	2880	Mar 28	2370	Apr 8	3820	Aug 31 1981
LOWEST DAILY MEAN	48	Jul 29	40	Apr 28	16	Jul 3 1995
ANNUAL SEVEN-DAY MINIMUM	64	Aug 19	43	Apr 26	19	Mar 14 1996
MAXIMUM PEAK FLOW			3390	Apr 8	7290	Mar 4 1992
MAXIMUM PEAK STAGE			58.15	Apr 8	68.30	Mar 4 1992
ANNUAL RUNOFF (AC-FT)	330900		235500		248900	
10 PERCENT EXCEEDS	1380		1010		1030	
50 PERCENT EXCEEDS	199		101		107	
90 PERCENT EXCEEDS	68		65		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^2.

PERIOD OF RECORD.--Oct. 1963 to Sept. 1976, Oct. 1976 to Sept. 1984 (gage heights only), Oct. 1984 to current year.
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.--No estimated daily discharges. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	68	197	92	102	194	177	47	73	353	90	77
2	78	70	571	89	87	150	120	48	71	326	84	76
3	79	71	671	89	81	108	100	138	71	263	431	81
4	82	68	1330	87	80	89	91	249	73	182	1090	85
5	199	67	456	447	132	79	82	79	73	126	449	85
6	478	65	275	515	243	75	79	79	93	100	245	94
7	818	62	180	331	187	78	77	77	333	87	474	415
8	811	60	308	163	126	79	2590	73	180	80	500	361
9	787	61	466	127	99	82	1060	72	89	78	159	136
10	513	60	373	117	85	74	1580	73	85	260	159	148
11	697	61	633	111	83	70	1770	75	79	292	134	729
12	653	63	2330	99	80	72	1800	72	77	443	158	1060
13	1620	69	907	93	76	73	1720	72	73	471	230	876
14	711	60	677	92	73	73	1580	74	72	901	253	235
15	1610	60	270	86	71	80	818	73	66	428	2040	183
16	1660	340	156	81	70	81	165	73	420	583	1140	209
17	1820	281	739	84	69	77	122	378	409	266	597	229
18	1790	151	1810	84	70	78	108	129	227	606	1040	231
19	1750	102	1310	94	116	83	101	61	119	1140	1120	362
20	1710	81	865	96	109	134	92	223	117	1320	1350	833
21	1640	73	723	92	146	127	91	527	111	368	1500	1350
22	1320	69	85	89	176	96	90	112	82	139	1520	1490
23	82	70	306	92	98	82	88	80	75	117	501	1030
24	58	63	1190	112	83	74	87	80	91	101	879	494
25	185	61	1170	103	76	78	82	78	231	92	870	238
26	1080	82	1200	94	72	308	61	293	348	91	847	160
27	607	175	1190	86	68	138	48	130	302	85	735	127
28	98	394	337	83	70	105	45	86	370	100	130	108
29	83	329	157	79	---	92	48	82	410	105	94	98
30	77	936	116	79	---	222	53	84	413	98	86	92
31	72	---	101	103	---	275	---	79	---	98	80	---
TOTAL	23253	4172	21099	3989	2828	3426	14925	3796	5233	9699	18985	11692
MEAN	750.1	139.1	680.6	128.7	101.0	110.5	497.5	122.5	174.4	312.9	612.4	389.7
MAX	1820	936	2330	515	243	308	2590	527	420	1320	2040	1490
MIN	58	60	85	79	68	70	45	47	66	78	80	76
AC-FT	46120	8280	41850	7910	5610	6800	29600	7530	10380	19240	37660	23190

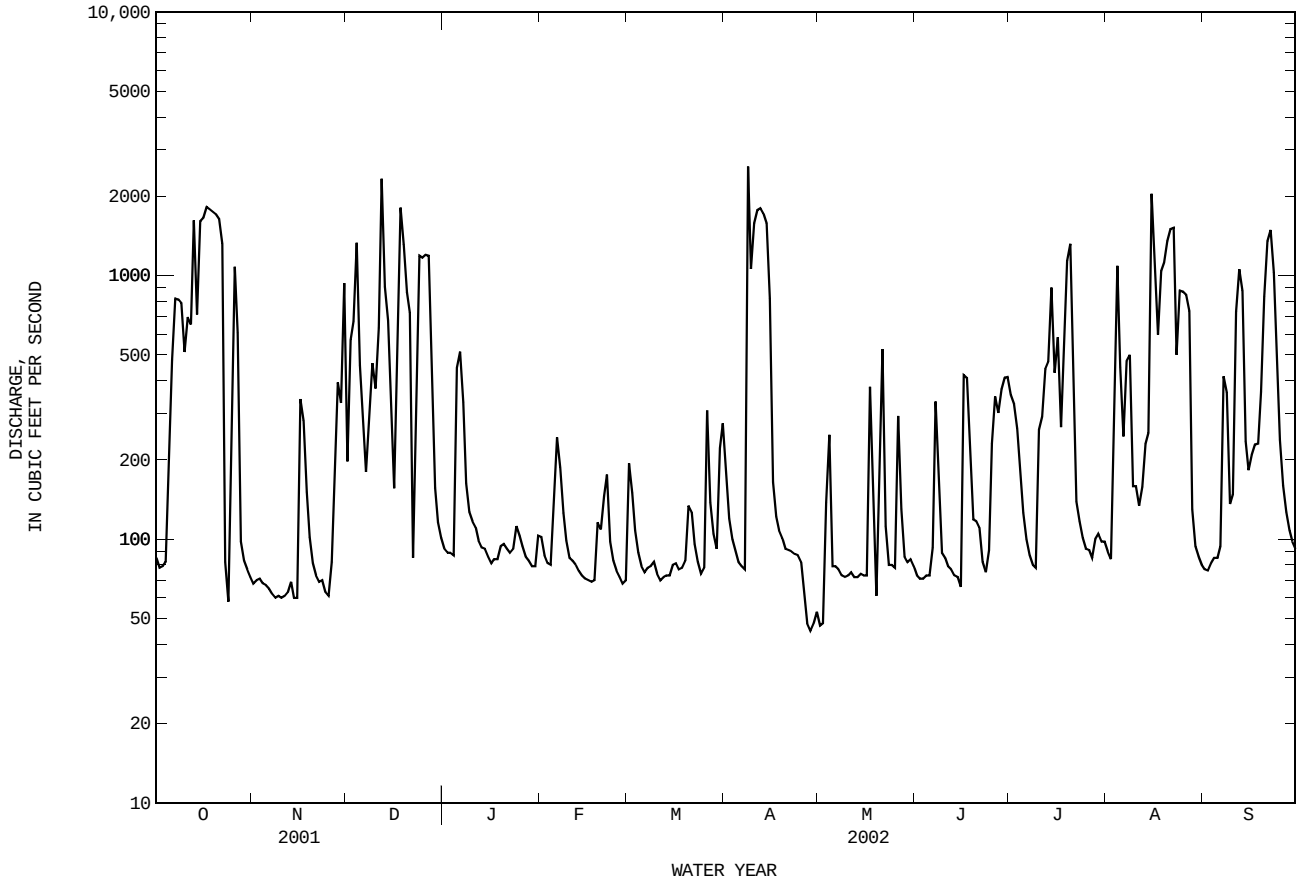
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002h, BY WATER YEAR (WY)

MEAN	330.9	373.8	341.9	331.4	354.7	363.3	337.8	407.2	449.4	237.2	200.9	296.5
MAX	1301	1668	1233	1156	1673	1804	1708	1584	1296	1027	612	958
(WY)	1999	1999	1999	1992	1992	1992	1992	1968	1992	1993	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1964 - 2002h	
ANNUAL TOTAL	174096		123097			
ANNUAL MEAN	477.0		337.3		335.3	
HIGHEST ANNUAL MEAN					907	1992
LOWEST ANNUAL MEAN					77.5	1965
HIGHEST DAILY MEAN	3760	Mar 28	2590	Apr 8	4740	Mar 5 1992
LOWEST DAILY MEAN	49	Jul 29	45	Apr 28	6.0	Dec 6 1964
ANNUAL SEVEN-DAY MINIMUM	62	Nov 6	50	Apr 26	7.0	Dec 2 1964
MAXIMUM PEAK FLOW			3750	Aug 15	7500	Mar 4 1992
MAXIMUM PEAK STAGE			50.50	Aug 15	61.23	Mar 4 1992
ANNUAL RUNOFF (AC-FT)	345300		244200		242900	
10 PERCENT EXCEEDS	1410		1060		1010	
50 PERCENT EXCEEDS	198		108		107	
90 PERCENT EXCEEDS	70		71		34	

h See PERIOD OF RECORD paragraph.

08073700 Buffalo Bayou at Piney Point, TX--Continued



08074000 Buffalo Bayou at Houston, TX
(Flood-hydrograph partial-record station)

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^2, unadjusted for basin boundary changes.

PERIOD OF RECORD.--May 1936 to Sept. 1957, Oct. 1957 to Dec. 1961 (high-water records and discharge measurements), Jan. 1962 to Sept. 1975, Oct. 1975 to current year (high-water records and discharge measurements).
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 good. 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. Discharge is computed using a stage-fall-discharge relation for all storms that produce peak discharges above 2,000 ft^3/s. Discharges below 1,000 ft^3/s are 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^3/s (197,100 acre-ft/yr).

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft^3/s, June 9, 2001, gage height, 36.58 ft; maximum gage height, 40.00 ft, June 9, 2001; minimum daily, 1.3 ft^3/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^3/s); furnished by engineer for Harris County. Flood of May 31, 1929, reached a gage height of 43.5 ft (discharge, 19,000 ft^3/s), at bridge on Capitol Avenue, affected by bridge; furnished by city of Houston.

EXTREMES FOR CURRENT YEAR.--Maximum, 7,160 ft^3/s, Aug. 15 at 2045 hours, gage height, 22.70 ft; minimum discharges not determined (affected by tides).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	1930	---	---	---	---	---	---	---	2140	---
5	---	---	1050	---	---	---	---	---	---	---	1360	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	4570	---	---	---	---	---
9	---	---	---	---	---	---	2370	---	---	---	---	---
10	---	---	---	---	---	---	1940	---	---	---	---	---
11	1010	---	782	---	---	---	2270	---	---	---	---	---
12	1400	---	5140	---	---	---	2340	---	---	---	---	---
13	2880	---	1870	---	---	---	2260	---	---	---	---	---
14	1490	---	1100	---	---	---	2130	---	---	2450	---	---
15	1930	---	759	---	---	---	1560	---	---	1120	3880	---
16	2170	---	---	---	---	---	---	---	---	1330	3720	---
17	2410	---	832	---	---	---	---	---	---	---	779	---
18	2420	---	2240	---	---	---	---	---	---	---	1320	---
19	2380	---	2170	---	---	---	---	---	---	---	1440	1060
20	2320	---	1290	---	---	---	---	---	---	---	1790	1840
21	2260	---	1280	---	---	---	---	---	---	---	1940	1680
22	2140	---	---	---	---	---	---	---	---	---	2410	2010
23	---	---	---	---	---	---	---	---	---	---	1540	1560
24	---	---	---	---	---	---	---	---	---	---	1300	930
25	---	---	---	---	---	---	---	---	---	---	1260	---
26	---	---	---	---	---	---	---	---	---	---	1190	---
27	---	---	---	---	---	---	---	---	---	---	1240	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

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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^2.

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.

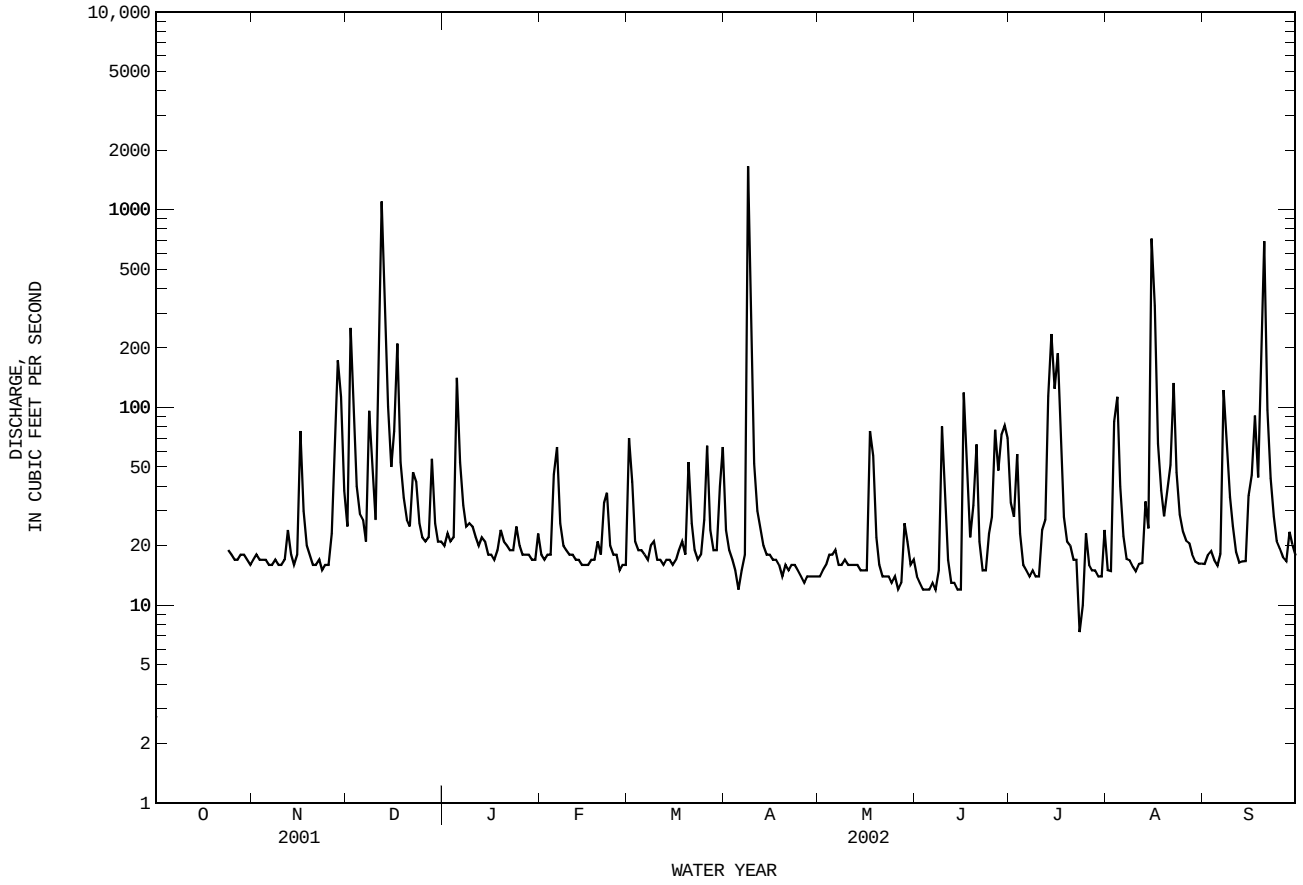
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,400 ft^3/s, June 9, 2001, gage height, 51.11 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,570 ft^3/s, Dec. 12, (gage height, 41.17 ft) and Apr. 8, (gage-height, 41.18 ft), minimum daily, 7.3 ft^3/s on July 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	17	25	20	18	70	24	14	14	33	15	16
2	---	18	252	23	17	42	19	15	13	28	15	18
3	---	17	96	21	18	21	17	16	12	58	85	19
4	---	17	40	22	18	19	15	18	12	23	113	17
5	---	17	29	141	46	19	12	18	12	16	40	16
6	---	16	27	53	63	18	15	19	13	15	22	18
7	---	16	21	32	26	17	18	16	12	14	17	123
8	---	17	96	25	20	20	1660	16	15	15	17	62
9	---	16	53	26	19	21	176	17	80	14	16	35
10	---	16	27	25	18	17	52	16	32	14	15	25
11	---	17	284	22	18	17	30	16	17	24	16	19
12	---	24	1100	20	17	16	24	16	13	27	16	16
13	---	18	362	22	17	17	20	16	13	114	34	17
14	---	16	101	21	16	17	18	15	12	235	24	17
15	---	18	50	18	16	16	18	15	12	124	714	36
16	---	76	76	18	16	17	17	15	119	188	326	46
17	---	30	210	17	17	19	17	76	46	73	65	91
18	---	20	53	19	17	21	16	57	22	28	38	44
19	---	18	35	24	21	18	14	22	32	21	28	136
20	---	16	27	21	18	53	16	16	65	20	39	693
21	---	16	25	20	33	26	15	14	21	17	51	97
22	---	17	47	19	37	19	16	14	15	17	133	44
23	---	15	42	19	20	17	16	14	15	7.3	47	28
24	19	16	26	25	18	18	15	13	23	10	29	21
25	18	16	22	20	18	27	14	14	28	23	24	19
26	17	23	21	18	15	64	13	12	77	16	21	17
27	17	68	22	18	16	24	14	13	48	15	21	17
28	18	173	55	18	16	19	14	26	73	15	18	23
29	18	113	26	17	---	19	14	21	81	14	17	20
30	17	38	21	17	---	40	14	16	70	14	16	18
31	16	---	21	23	---	63	---	17	---	24	16	---
TOTAL	---	915	3292	804	609	811	2343	603	1017	1256.3	2048	1768
MEAN	---	30.50	106.2	25.94	21.75	26.16	78.10	19.45	33.90	40.53	66.06	58.93
MAX	---	173	1100	141	63	70	1660	76	119	235	714	693
MIN	---	15	21	17	15	16	12	12	12	7.3	15	16
AC-FT	---	1810	6530	1590	1210	1610	4650	1200	2020	2490	4060	3510

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



08074150 Cole Creek at Deihl Road, Houston, TX
(Flood-hydrograph partial-record station)

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.--7.5 mi^2.

PERIOD OF RECORD.--Apr. 1964 to Sept. 1986, 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^3/s, (5,850 acre-ft/yr).

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 11	1100	567	73.07	Apr. 8	0730	1,460	76.48
Oct. 13	0500	863	74.37	June 9	1545	623	73.34
Dec. 11	2045	750	73.91	July 13	2130	870	74.40
Dec. 12	0045	*1,630	*77.03	Aug. 15	1130	1,090	75.22
Dec. 13	0930	627	73.36	Aug. 15	1630	965	74.77

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08074250 Brickhouse Gulley at Costa Rica Street, Houston, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°49′40", long 95°28′09", Harris County, Hydrologic Unit 12040104, 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^2.

PERIOD OF RECORD.--Aug. 1964 to Sept. 1981, 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 good. Low flow is partially sustained by wastewater effluent. No known regulation or diversions.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 13	0500	2,270	62.88	July 13	2145	2,810	64.28
Dec. 12	0115	*4,720	*67.12	Aug. 15	1145	2,410	63.27
Apr. 8	0800	3,030	64.79	Aug. 15	1645	2,340	63.08

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08074500 Whiteoak Bayou at Houston, TX

LOCATION.--Lat 29°46′30", long 95°23′49", Harris County, Hydrologic Unit 12040104, 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^2.

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^3/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^3/s) computed on basis of current-meter measurement at stage 1.0 ft below crest, furnished by city of Houston.

DISCHARGE FROM DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

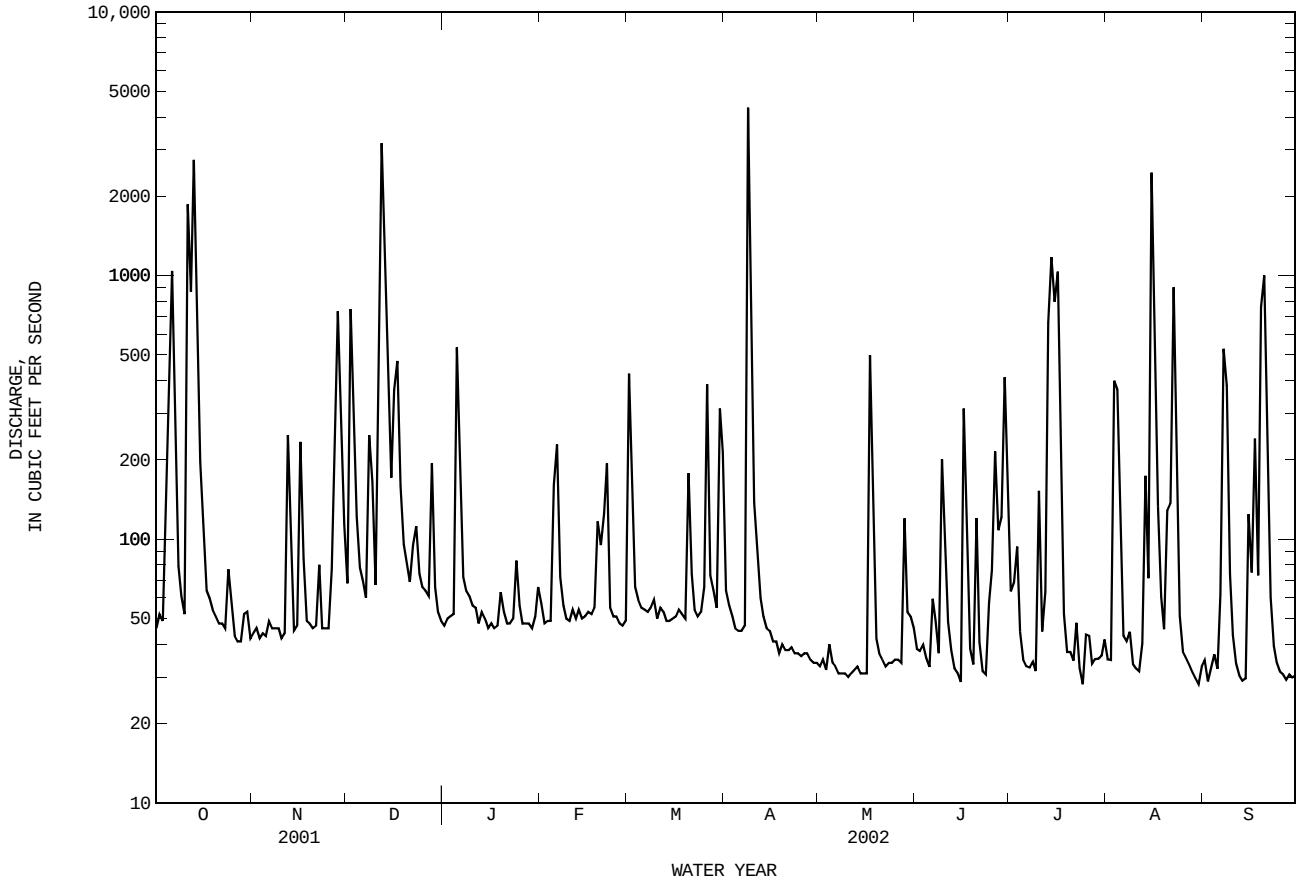
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	44	68	47	57	424	64	33	38	63	35	35
2	52	46	746	50	48	159	56	35	38	69	35	29
3	49	42	303	51	49	66	51	32	40	94	399	32
4	124	44	122	52	49	59	46	40	35	45	370	37
5	374	43	78	534	161	55	45	34	33	35	96	32
6	1040	49	69	168	229	54	45	33	59	33	43	62
7	188	46	60	72	72	53	47	31	49	33	41	528
8	79	46	248	64	56	55	4330	31	37	34	45	383
9	61	46	165	61	50	59	476	31	201	32	34	74
10	52	42	67	56	49	50	138	30	107	152	32	43
11	1860	44	986	55	54	55	88	31	49	45	32	34
12	869	248	3180	48	50	53	60	32	38	63	40	30
13	2750	95	1200	53	54	49	51	33	32	664	174	29
14	533	45	348	50	50	49	46	31	31	1170	71	30
15	196	47	171	46	51	50	45	31	29	796	2450	124
16	117	234	369	48	53	51	41	31	313	1040	702	75
17	64	84	474	46	52	54	41	499	93	295	133	241
18	60	49	159	47	55	52	37	150	38	52	60	73
19	54	48	96	63	117	50	40	42	34	37	46	762
20	51	46	80	53	95	178	38	37	120	37	128	1000
21	48	47	69	48	125	74	38	35	41	35	137	187
22	48	80	95	48	194	54	39	33	32	48	903	60
23	46	46	112	50	55	51	37	34	31	32	217	39
24	77	46	74	83	51	53	37	34	58	28	51	34
25	59	46	66	56	51	66	36	35	77	43	37	32
26	43	77	64	48	48	387	37	35	215	43	35	31
27	41	214	61	48	47	73	37	34	108	34	33	29
28	41	732	194	48	49	64	35	120	121	35	32	31
29	52	359	66	46	---	55	34	53	412	35	30	30
30	53	114	53	51	---	313	34	51	172	36	28	30
31	42	---	49	66	---	214	---	46	---	42	33	---
TOTAL	9169	3149	9892	2256	2071	3079	6149	1757	2681	5200	6502	4156
MEAN	295.8	105.0	319.1	72.77	73.96	99.32	205.0	56.68	89.37	167.7	209.7	138.5
MAX	2750	732	3180	534	229	424	4330	499	412	1170	2450	1000
MIN	41	42	49	46	47	49	34	30	29	28	28	29
AC-FT	18190	6250	19620	4470	4110	6110	12200	3490	5320	10310	12900	8240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2002, BY WATER YEAR (WY)

MEAN	95.56	114.9	104.0	115.6	113.7	101.4	95.80	130.2	132.1	80.04	78.35	102.2
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1936 - 2002	
ANNUAL TOTAL	97020		56061			
ANNUAL MEAN	265.8		153.6		105.2	
HIGHEST ANNUAL MEAN					267	1992
LOWEST ANNUAL MEAN					10.9	1951
HIGHEST DAILY MEAN	19100	Jun 9	4330	Apr 8	19100	Jun 9 2001
LOWEST DAILY MEAN	29	Jun 2	28	Jul 24	0.20	Aug 7 1940
ANNUAL SEVEN-DAY MINIMUM	33	May 28	31	Sep 24	0.26	Aug 12 1951
MAXIMUM PEAK FLOW			10600	Dec 12	28100	Jun 9 2001
MAXIMUM PEAK STAGE			35.77	Dec 12	52.84	Jun 9 2001
ANNUAL RUNOFF (AC-FT)	192400		111200		76180	
10 PERCENT EXCEEDS	468		313		212	
50 PERCENT EXCEEDS	63		51		31	
90 PERCENT EXCEEDS	41		33		2.3	

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^2.

PERIOD OF RECORD.--Nov. 1992 to current year (gage heights only).
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. Mostly tidal, affected by 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, 18.30 ft, Dec. 12; minimum gage height, -0.02 ft, Feb. 26.

GAGE HEIGHT FROM DCP, in FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	4.40	3.28	4.99	3.29	4.66	2.57	4.26	2.05	2.56	0.99	7.27	4.33
2	4.43	3.22	4.84	2.89	5.25	4.34	3.77	1.56	3.81	2.17	6.01	2.01
3	4.53	3.25	4.83	2.96	5.22	2.59	3.02	1.29	3.81	2.67	2.32	0.57
4	4.65	3.32	4.82	2.72	4.86	3.30	4.14	2.71	3.78	2.10	3.99	1.40
5	8.70	3.01	4.86	2.81	4.82	2.88	6.33	2.91	4.77	3.14	4.12	2.04
6	8.13	2.59	4.87	2.94	4.65	2.76	3.04	1.26	4.27	2.31	4.31	2.59
7	4.56	3.17	4.64	2.72	4.44	2.54	2.25	0.68	3.48	1.34	4.41	2.53
8	4.92	3.56	4.52	2.76	4.24	1.89	3.49	1.67	4.05	1.90	4.79	2.91
9	5.51	3.78	4.56	2.68	3.28	1.89	3.64	1.79	4.29	2.65	4.69	2.17
10	5.56	3.83	4.50	2.68	3.99	2.68	3.65	1.82	3.84	0.77	4.56	2.16
11	9.89	4.18	4.24	2.75	11.97	2.76	3.52	1.42	3.22	1.14	4.71	3.16
12	6.77	4.24	4.57	3.04	18.30	5.85	3.42	1.28	3.80	2.25	4.37	2.23
13	12.55	4.24	4.86	3.07	7.66	3.95	3.79	1.76	3.84	2.07	4.18	2.81
14	6.42	3.09	5.24	3.44	4.52	2.04	4.01	1.89	3.95	2.38	4.58	3.24
15	5.81	3.42	5.84	4.13	5.26	3.33	4.02	2.15	3.96	2.70	4.51	3.52
16	5.24	3.19	5.68	3.47	8.33	3.55	4.21	2.63	3.64	2.17	4.33	3.12
17	5.65	4.13	4.95	2.57	6.84	2.24	4.00	2.53	3.78	2.33	4.32	3.17
18	5.54	3.84	4.37	2.34	4.58	3.23	3.88	2.45	4.72	2.81	4.58	3.00
19	5.39	3.62	4.30	2.14	4.83	2.26	3.87	1.62	4.83	3.44	5.23	2.98
20	5.09	3.54	3.26	1.67	3.88	2.68	3.91	2.65	4.16	2.44	4.56	2.53
21	5.25	3.88	4.06	2.71	4.32	3.16	4.12	2.80	4.62	2.61	3.62	1.44
22	5.22	3.54	4.84	3.31	4.70	3.54	4.17	2.82	4.09	1.89	4.24	1.40
23	4.95	3.24	5.09	3.80	4.24	2.57	4.16	2.53	4.39	2.32	4.77	2.69
24	4.94	3.20	4.98	3.06	4.04	2.71	4.18	2.42	4.46	2.40	4.99	3.20
25	4.62	3.18	4.44	3.07	4.13	2.80	3.30	1.06	4.57	2.50	4.70	2.87
26	5.00	3.24	5.18	4.01	3.91	2.20	4.01	1.94	3.72	-0.02	4.29	1.82
27	5.04	3.91	5.29	3.36	4.14	2.38	4.26	2.12	3.26	0.81	4.76	2.60
28	4.82	3.60	5.52	2.82	4.77	2.40	4.53	2.44	4.54	2.95	4.73	3.16
29	4.41	3.40	3.84	1.95	4.25	2.20	4.24	2.48	---	---	4.73	3.25
30	4.63	3.05	4.62	2.56	4.46	2.24	4.48	2.86	---	---	8.31	2.71
31	4.97	3.61	---	---	4.39	2.01	4.46	1.89	---	---	4.53	2.75
MONTH	12.55	2.59	5.84	1.67	18.30	1.89	6.33	0.68	4.83	-0.02	8.31	0.57

08074598 Whiteoak Bayou at Main Street, Houston, TX--Continued

GAGE HEIGHT FROM DCP, in FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4.41	1.96	5.18	2.76	4.89	3.13	5.02	3.32	3.85	2.62	4.75	2.99
2	4.83	2.72	5.10	2.83	5.07	3.17	4.77	3.32	3.99	2.36	4.93	2.99
3	3.93	2.21	4.96	2.80	5.15	3.67	4.70	3.35	6.66	2.36	5.18	3.06
4	4.25	2.29	4.59	2.51	4.94	3.79	4.38	3.01	5.27	3.19	5.66	3.53
5	4.52	2.62	4.89	3.24	5.00	3.67	4.09	2.33	4.87	2.64	5.83	3.45
6	5.24	3.01	4.99	3.70	5.12	3.21	3.83	2.04	4.12	2.39	6.66	4.02
7	5.55	3.97	5.05	3.96	4.64	3.05	4.22	1.93	4.50	2.07	7.62	5.66
8	18.21	5.14	5.62	4.41	4.70	3.14	4.57	2.48	4.97	2.49	6.71	5.17
9	8.29	3.81	5.45	3.74	5.52	3.13	5.14	2.89	4.81	2.70	6.02	4.85
10	5.17	3.97	4.92	3.49	5.27	3.16	4.69	2.52	5.54	3.10	5.82	4.23
11	5.19	4.40	5.63	3.79	5.48	3.34	4.74	2.42	5.57	3.97	5.58	3.45
12	5.15	4.18	5.83	3.90	4.96	3.02	4.55	2.48	5.33	3.79	5.09	3.18
13	5.08	3.94	4.39	2.77	5.01	2.74	12.14	2.28	5.33	3.95	4.87	3.14
14	5.02	3.68	5.18	1.85	4.32	2.56	12.19	3.75	4.95	3.40	5.04	3.28
15	5.05	3.54	5.45	3.41	4.34	2.15	4.82	3.13	15.26	4.00	4.99	2.76
16	5.21	3.08	5.47	3.50	5.08	3.23	6.25	3.71	10.45	3.50	4.74	2.72
17	4.83	2.84	7.85	3.07	4.06	2.40	4.49	2.90	5.12	3.19	4.90	3.11
18	4.92	2.70	4.11	2.11	4.49	3.06	4.21	2.71	5.01	3.07	4.76	3.09
19	4.88	2.75	4.40	2.33	4.88	3.52	4.30	2.71	5.01	3.27	12.30	3.32
20	5.15	2.99	4.87	2.93	4.81	2.96	4.42	2.67	5.09	3.37	8.02	4.12
21	5.12	3.22	5.26	3.47	4.60	2.80	4.19	2.45	5.14	3.42	5.08	3.54
22	4.50	2.60	5.28	3.87	4.68	2.63	4.11	2.11	10.52	3.53	5.02	3.98
23	4.64	2.85	5.33	3.76	4.60	2.79	4.06	1.96	6.24	4.02	5.34	4.18
24	4.63	3.09	5.04	3.43	4.90	2.57	4.05	1.88	4.52	3.15	5.80	4.19
25	4.43	3.02	4.85	3.03	4.98	2.50	4.33	2.09	4.33	3.16	5.89	4.04
26	4.67	3.19	4.69	2.56	5.16	2.82	4.37	2.53	5.64	3.04	4.73	2.61
27	5.55	3.15	5.08	3.02	5.22	2.76	4.48	2.53	5.64	3.03	4.59	3.13
28	5.22	3.23	6.27	2.70	4.53	2.81	4.46	2.83	4.21	2.94	4.96	3.45
29	4.57	2.46	5.33	2.91	6.08	2.93	4.33	3.09	4.21	2.86	5.17	3.02
30	5.21	2.70	5.25	2.55	5.16	3.75	4.11	3.10	4.32	2.95	4.78	3.02
31	---	---	4.89	2.83	---	---	3.94	2.74	4.51	3.02	---	---
MONTH	18.21	1.96	7.85	1.85	6.08	2.15	12.19	1.88	15.26	2.07	12.30	2.61
YEAR	18.30	-0.02										

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^2.

WATER-ELEVATION RECORDS

PERIOD OF RECORD.--Jan. 1987 to current year (elevations only).

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

REMARKS.--Records fair. 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, 5.0 ft, Sept. 7; minimum elevation, -2.3 ft, Feb. 26.

ELEVATION FROM DCP, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1.8	0.7	1.3	---	---	---	2.4	0.5	1.6	---	---	---
2	1.8	0.8	1.3	---	---	---	2.5	0.5	1.7	---	---	---
3	1.9	0.8	1.3	---	---	---	2.4	1.0	1.7	---	---	---
4	1.9	0.7	1.3	---	---	---	2.3	0.7	1.6	---	---	---
5	2.6	0.6	1.5	---	---	---	2.4	0.8	1.8	---	---	---
6	2.5	-0.2	0.8	---	---	---	2.4	0.6	1.6	---	---	---
7	1.7	0.4	1.3	---	---	---	2.1	0.3	1.3	0.1	-1.8	---
8	2.0	1.4	2.0	---	---	---	1.9	-0.7	0.8	1.1	-0.6	0.3
9	---	---	---	---	---	---	0.9	-0.6	0.3	1.3	-0.4	0.3
10	---	---	---	---	---	---	1.6	0.3	1.0	1.4	-0.4	0.6
11	---	---	---	---	---	---	3.0	0.5	1.6	1.2	-0.9	0.3
12	---	---	---	---	---	---	3.6	1.7	2.7	1.1	-0.9	0.3
13	---	---	---	---	---	---	2.2	0.5	1.5	1.5	-0.4	0.5
14	---	---	---	---	---	---	1.7	-0.3	0.7	1.7	-0.3	0.9
15	---	---	---	---	---	---	2.8	1.1	1.8	1.7	-0.1	0.9
16	---	---	---	---	---	---	3.3	1.0	2.1	1.9	0.4	1.3
17	---	---	---	---	---	---	2.6	0.1	1.2	1.7	0.3	1.1
18	---	---	---	---	---	---	1.6	0.1	0.9	1.6	0.2	0.9
19	---	---	---	---	---	---	1.9	-0.2	0.8	1.5	-0.7	0.4
20	---	---	---	0.9	0.1	---	1.3	0.2	0.7	1.6	0.3	1.1
21	---	---	---	1.7	0.9	1.4	1.7	0.7	1.3	1.8	0.6	1.1
22	---	---	---	2.2	1.1	1.8	2.2	1.2	1.7	1.9	0.6	1.3
23	---	---	---	2.7	1.7	2.2	1.7	0.3	0.8	1.9	0.3	1.2
24	---	---	---	2.6	1.3	1.9	1.1	0.0	0.7	1.9	0.1	0.9
25	---	---	---	2.1	1.1	1.6	1.2	0.1	0.7	1.0	-1.2	-0.2
26	---	---	---	2.8	1.8	2.2	1.0	-0.4	0.3	1.7	-0.3	0.8
27	---	---	---	2.7	1.1	1.7	1.1	-0.4	0.1	1.9	-0.1	1.1
28	---	---	---	1.9	0.2	1.0	1.5	-0.3	0.8	2.2	0.3	1.3
29	---	---	---	1.5	-0.7	0.4	1.4	-0.4	0.7	1.9	0.3	1.3
30	---	---	---	2.1	0.1	1.1	1.5	0.5	0.9	2.2	0.6	1.6
31	---	---	---	---	---	---	1.5	0.5	1.0	2.2	-0.2	1.2
MONTH	---	---	---	---	---	---	3.6	-0.7	1.2	---	---	---

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

ELEVATION FROM DCP, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.2	-1.3	-0.7	4.5	2.0	3.2	2.1	-0.3	1.1	2.8	0.6	1.8
2	1.4	-0.1	0.7	3.6	-0.3	2.0	2.6	0.5	1.7	2.7	0.6	1.6
3	1.5	0.4	1.0	0.0	-1.7	-1.1	1.7	0.0	1.0	2.6	0.6	1.5
4	1.5	-0.2	0.8	1.6	-0.9	0.6	2.0	0.1	1.1	2.2	0.2	1.3
5	2.4	0.9	1.5	1.8	-0.2	0.9	2.3	0.4	1.4	2.6	1.0	1.7
6	1.9	-0.1	0.8	2.0	0.3	1.3	3.0	0.8	1.9	2.6	1.5	2.0
7	1.1	-0.9	0.0	2.1	0.3	1.2	3.2	1.8	2.6	2.7	1.8	2.3
8	1.8	-0.3	0.8	2.5	0.6	1.7	4.1	2.7	3.3	3.3	2.1	2.8
9	2.0	0.4	1.3	2.4	0.1	1.1	2.8	1.3	2.1	3.1	1.3	2.4
10	1.6	-1.4	-0.1	2.2	0.0	0.7	2.5	1.2	1.9	2.6	1.2	2.0
11	0.8	-1.1	-0.2	2.4	1.0	1.8	2.5	1.6	2.0	3.2	1.6	2.6
12	1.4	0.0	0.8	2.1	0.0	1.0	2.4	1.3	1.9	3.5	1.7	2.7
13	1.5	-0.1	0.8	1.8	0.6	1.2	2.4	1.0	1.7	1.9	0.5	1.1
14	1.7	0.2	0.9	2.3	1.0	1.6	2.4	0.8	1.8	2.8	-0.4	1.4
15	1.7	0.5	1.1	2.2	1.3	1.7	2.6	0.8	1.9	3.1	1.1	2.4
16	1.3	0.0	0.5	2.0	0.9	1.5	3.0	0.9	2.0	3.1	1.2	2.3
17	1.4	0.0	0.7	2.1	0.9	1.6	2.6	0.7	1.8	2.8	0.8	1.7
18	2.4	0.6	1.6	2.3	0.8	1.7	---	0.5	---	1.7	-0.2	0.7
19	2.5	1.2	1.9	2.9	0.8	1.9	---	---	---	2.1	0.1	1.3
20	1.9	0.2	1.2	2.2	0.2	1.3	---	---	---	2.6	0.7	1.8
21	2.5	0.4	1.3	1.3	-0.8	0.3	---	---	---	2.9	1.1	1.9
22	1.7	-0.4	0.6	2.0	-0.8	0.7	2.2	0.4	1.6	3.0	1.6	2.2
23	2.1	0.1	1.1	2.5	0.5	1.6	2.4	0.7	1.6	3.0	1.5	2.4
24	2.1	0.2	1.3	2.7	1.0	1.9	2.4	0.9	1.7	2.7	1.2	2.0
25	2.2	0.3	1.4	2.5	0.7	1.7	2.2	0.8	1.5	2.5	0.8	1.7
26	1.4	-2.3	-0.7	1.4	-0.5	0.6	2.4	1.0	1.8	2.4	0.4	1.6
27	0.9	-1.5	-0.6	2.4	0.4	1.4	3.2	1.0	2.3	2.8	0.5	1.8
28	2.2	0.7	1.4	2.5	1.0	1.8	2.9	1.0	1.9	3.3	0.5	1.9
29	---	---	---	2.4	1.1	1.6	2.4	0.2	1.5	2.8	0.7	1.7
30	---	---	---	2.8	0.5	1.7	2.9	0.5	1.8	2.8	0.3	1.6
31	---	---	---	1.9	0.5	1.1	---	---	---	2.5	0.6	1.6
MONTH	2.5	-2.3	0.8	4.5	-1.7	1.3	---	---	---	3.5	-0.4	1.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	2.6	0.9	1.8	2.7	1.0	1.8	1.6	0.4	1.2	2.5	0.8	1.8
2	2.8	0.9	1.9	2.4	1.1	1.7	1.7	0.1	1.1	2.6	0.8	2.0
3	2.9	1.4	2.1	2.4	1.1	1.8	1.8	0.1	1.2	2.9	0.9	2.3
4	2.6	1.5	2.1	2.0	0.7	1.6	2.2	0.2	1.5	3.3	1.3	2.5
5	2.6	1.4	2.0	1.8	---	---	2.3	0.3	1.6	3.4	1.2	2.6
6	2.6	0.9	1.8	1.5	-0.2	0.9	1.9	0.1	1.1	4.3	1.8	3.3
7	2.3	0.8	1.6	1.9	-0.2	1.2	2.0	-0.2	1.2	5.0	3.2	4.0
8	2.4	0.7	1.8	2.3	0.3	1.6	2.5	0.2	1.6	4.0	2.9	3.5
9	2.6	0.9	2.0	2.8	0.7	1.9	2.5	0.3	1.6	3.7	2.6	3.2
10	3.0	0.9	2.1	2.3	0.3	1.5	3.2	0.9	2.3	3.6	2.0	2.7
11	3.2	1.1	2.3	2.3	0.0	1.2	3.2	1.7	2.6	3.3	1.1	2.2
12	2.7	0.8	1.9	2.2	0.1	1.4	3.0	1.6	2.4	2.7	0.7	1.8
13	2.7	0.5	1.7	2.6	0.1	1.4	3.0	1.6	2.2	2.4	0.8	1.8
14	2.0	0.4	1.3	2.4	0.4	1.3	2.5	1.2	2.1	2.8	1.1	2.1
15	2.0	-0.1	1.2	2.0	0.7	1.3	4.3	1.8	3.1	2.7	0.4	1.8
16	2.3	0.2	1.4	2.6	1.1	1.7	3.1	1.2	2.3	2.4	0.5	1.7
17	1.7	0.1	1.0	2.2	0.7	1.7	2.8	0.9	2.1	2.6	0.9	1.9
18	2.1	0.8	1.4	2.0	0.4	1.4	2.7	0.8	2.0	2.5	0.8	1.9
19	2.6	1.3	1.9	1.9	0.1	1.2	2.6	0.8	1.9	3.2	1.2	2.4
20	2.5	0.7	1.8	1.9	0.0	1.2	2.6	0.8	1.9	2.6	1.5	2.0
21	2.2	0.5	1.5	1.8	0.0	1.1	2.5	0.6	1.9	2.5	0.9	1.8
22	2.3	0.3	1.7	1.9	-0.1	1.2	2.4	0.8	1.8	2.4	1.3	1.7
23	2.3	0.5	1.6	1.8	-0.2	1.1	2.2	0.8	1.6	3.0	1.6	2.3
24	2.5	0.3	1.6	1.8	-0.3	1.1	2.1	0.8	1.6	3.6	1.9	2.5
25	2.5	0.2	1.6	2.1	-0.1	1.2	2.0	0.7	1.5	3.6	1.8	2.6
26	2.7	0.5	1.7	2.1	0.3	1.3	2.9	0.6	1.3	2.4	0.4	1.4
27	2.8	0.5	1.7	2.2	0.4	1.5	2.7	0.6	1.3	2.3	0.9	1.8
28	2.3	0.5	1.4	2.2	0.6	1.5	1.9	0.7	1.4	2.7	1.2	2.1
29	3.1	0.7	1.9	2.1	0.9	1.5	1.9	0.6	1.4	2.9	0.8	2.0
30	2.8	1.4	2.1	1.8	0.9	1.3	2.0	0.8	1.5	2.5	0.8	1.8
31	---	---	---	1.6	0.6	1.3	2.2	0.8	1.6	---	---	---
MONTH	3.2	-0.1	1.7	2.8	---	---	4.3	-0.2	1.7	5.0	0.4	2.2

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 water-temperature and pH are good, specific conductance fair, and 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, >20,000 microsiemens/cm, Oct. 12, 13, 14, Dec. 13, 1988, Jan. 23, 1989; minimum, 60 microsiemens/cm, June 26, 1989.
pH: Maximum, 8.6 units, June 9, 2001; minimum, 6.5 units, Nov. 4, 5, 1999, Apr. 5, 6, 13, 14, 2000.
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, 11,900 microsiemens/cm, Nov. 12; minimum, 152 microsiemens/cm, Dec. 12.
pH: Maximum, 7.7 units, June 8, 13, July 29, 30; minimum, 6.8 units, on several days.
WATER TEMPERATURE: Maximum, 33.3°C, Aug. 2; minimum, 12.2°C, Jan. 7.
DISSOLVED OXYGEN: Maximum, 11.3 mg/L, June 12, 13; minimum, 0.5 mg/L, Mar. 17.

SPECIFIC CONDUCTANCE FROM THE DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5950	2030	4050	4090	2290	3030	1130	632	919	5620	2350	3480
2	8520	3420	5390	---	---	---	2250	404	1300	4120	2370	3590
3	8130	3160	5460	---	---	---	492	305	380	---	---	---
4	6900	2960	4900	---	---	---	657	406	555	---	---	---
5	6380	2440	4210	---	---	---	793	354	459	---	---	---
6	2440	393	686	7310	2780	3810	1890	435	973	---	---	---
7	2480	469	784	5560	2320	3460	1860	973	1450	---	---	---
8	1420	430	819	5580	2800	4110	4150	1410	2270	6550	2920	4380
9	1800	399	722	9160	3790	5640	1990	1020	1480	5560	2480	3410
10	1650	463	757	9250	3820	6550	2570	1360	1780	4580	2590	3190
11	3180	488	1190	10400	3460	6290	5610	749	2870	5960	2130	3590
12	1330	290	614	11900	4960	7680	1110	152	366	7170	2770	4290
13	1060	284	512	9350	3640	5480	239	154	193	6660	2860	4290
14	284	219	234	9360	5020	7550	233	215	226	10100	3360	5490
15	296	241	271	9630	5670	7530	365	229	280	10400	4930	7600
16	271	229	245	7620	3110	5190	525	273	399	10400	3270	6590
17	275	228	248	3800	1560	2790	363	262	291	6030	2870	4150
18	256	233	243	4500	1710	2860	349	298	323	5880	3380	4460
19	267	222	245	3400	2210	2830	329	230	272	6170	3170	4430
20	382	254	302	5760	2290	4350	303	229	261	6560	3220	4880
21	439	287	366	10600	4960	7220	420	260	346	7900	3140	4820
22	808	277	437	7500	3310	5680	463	305	387	10700	4490	5650
23	1020	319	551	4370	2090	3180	509	381	468	6580	3400	4960
24	1760	635	1280	4510	2100	2950	715	451	519	9180	4300	6220
25	2460	976	1490	5150	2000	3570	726	426	579	7240	3160	4890
26	3610	844	1560	10500	4070	6160	1250	542	718	7990	3290	5380
27	1140	453	759	9390	3080	5450	965	458	661	8370	3700	5720
28	2910	458	1090	5450	631	2210	1100	542	735	8080	4540	5950
29	3070	1230	1920	1350	553	835	2060	894	1210	6030	4840	5370
30	3830	1250	2050	1290	524	831	4740	1290	2150	7620	4100	5210
31	4000	1340	2500	---	---	---	6190	1750	3790	8640	4660	6720
MONTH	8520	219	1480	---	---	---	6190	152	923	---	---	---

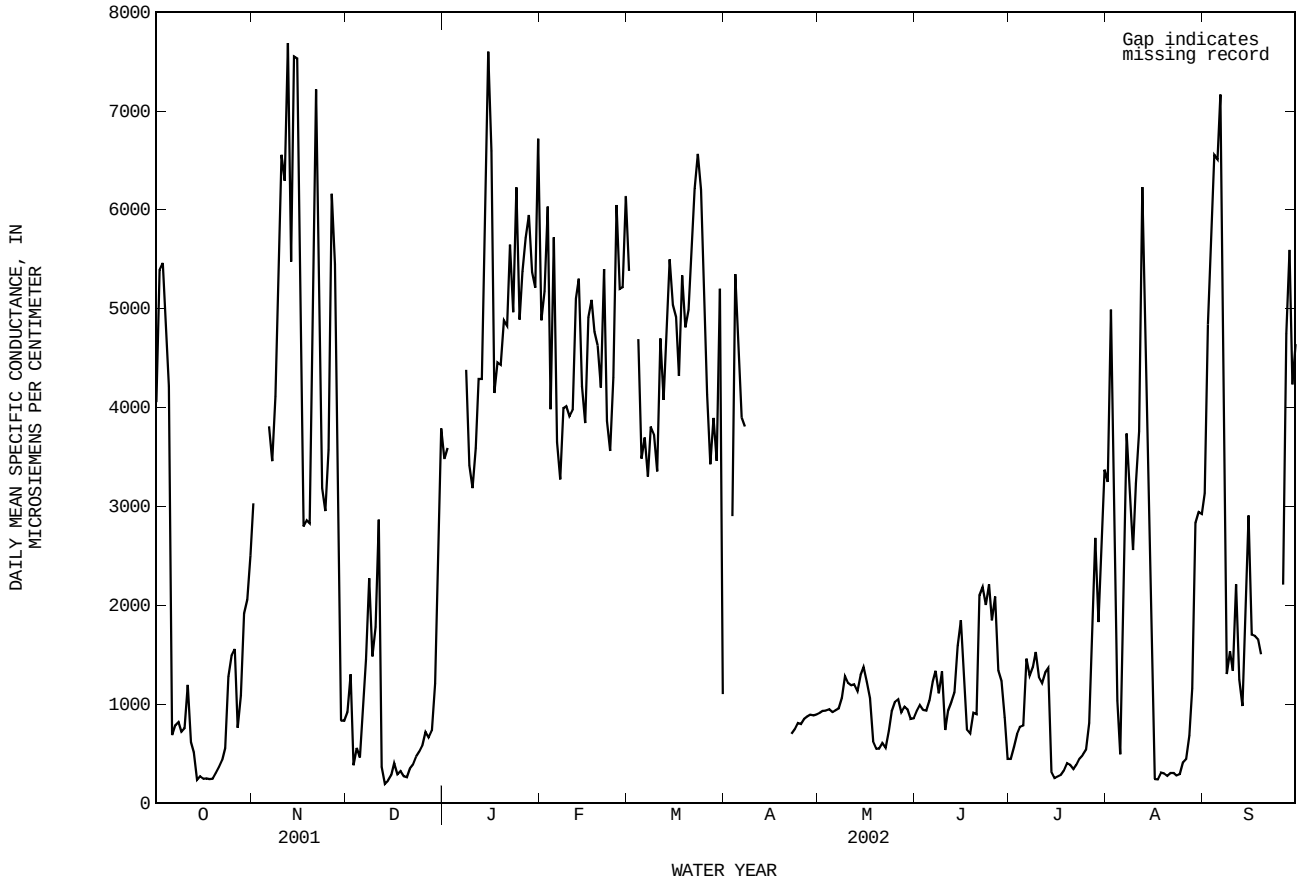
08074710 Buffalo Bayou at Turning Basin, Houston, TX--Continued

SPECIFIC CONDUCTANCE FROM THE DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6470	3640	4880	7740	2140	5380	---	1110	---	936	891	911
2	7840	3830	5180	---	---	---	3190	---	---	954	910	932
3	10200	3490	6030	---	---	---	5310	1580	2900	955	915	934
4	7110	3130	3980	7030	2380	4690	8510	3500	5350	975	913	947
5	8520	4310	5720	6090	2540	3480	6340	3400	4720	929	899	918
6	5600	2420	3650	5140	2840	3700	4910	2960	3900	952	911	934
7	5980	2250	3270	4700	2520	3300	4670	3010	3810	974	932	955
8	6350	2620	3990	5240	2880	3810	5000	---	---	1420	959	1060
9	6420	2910	4010	9010	2410	3730	---	---	---	1510	1030	1280
10	5700	3090	3910	6060	2250	3350	---	---	---	1370	1030	1210
11	5420	2830	3970	7080	3210	4700	---	---	---	1290	1050	1190
12	6880	3450	5100	7070	3120	4070	---	---	---	1310	1070	1200
13	7730	4150	5300	6760	3800	4770	---	---	---	1360	1000	1130
14	6080	3450	4210	7000	4570	5500	---	---	---	1460	1050	1300
15	5830	2980	3840	11200	4170	5040	---	---	---	1470	1250	1380
16	7100	3660	4910	6610	2960	4910	---	---	---	1340	1060	1230
17	7660	3570	5090	6080	3660	4320	---	---	---	1210	808	1060
18	6580	3450	4770	8340	3300	5340	---	---	---	816	483	624
19	5800	3740	4630	6720	4230	4810	---	---	---	580	516	549
20	5900	2850	4200	6110	4130	4990	---	---	---	573	518	548
21	6800	4370	5400	10500	3470	5590	---	---	---	645	529	606
22	5950	3190	3870	8680	4130	6210	714	688	698	672	532	558
23	5760	2340	3560	8720	3690	6560	798	700	743	1020	592	731
24	8020	2530	4300	8340	4330	6200	847	737	809	1050	799	929
25	9900	3940	6050	7320	3910	5180	868	784	799	1320	819	1020
26	6240	3110	5200	6870	2640	4130	895	806	849	1170	918	1050
27	6850	3560	5210	7950	2440	3420	926	839	873	1090	747	916
28	7790	5110	6130	5500	2820	3890	949	867	894	1670	775	975
29	---	---	---	5590	2430	3460	901	880	887	1190	673	946
30	---	---	---	8270	1240	5200	910	881	894	1240	597	850
31	---	---	---	2670	640	1100	---	---	---	1160	565	858
MONTH	10200	2250	4660	---	---	---	---	---	---	1670	483	959

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1220	746	936	616	381	446	3720	2700	3250	4480	2460	3130
2	1200	831	989	763	486	566	7780	3250	4990	8490	2120	4840
3	1020	864	942	862	589	699	5190	1320	3710	8950	4230	5720
4	1010	830	935	1130	595	768	1450	656	1030	10600	4340	6550
5	1120	975	1040	1190	640	783	983	327	491	9040	4840	6510
6	1690	973	1230	2050	920	1460	3140	685	1670	9540	5290	7170
7	1690	1090	1340	1430	920	1290	6810	1520	3740	5920	1230	3290
8	1480	947	1110	1610	1220	1370	7230	1810	3090	3190	888	1300
9	2130	687	1330	1740	1330	1530	5440	1520	2560	3770	706	1530
10	927	569	738	1600	1000	1270	6760	1860	3230	2820	818	1340
11	1040	749	934	1940	746	1210	8300	1740	3760	3940	953	2210
12	1310	719	1020	1910	815	1320	10500	3600	6230	1600	856	1250
13	1260	814	1120	2020	651	1360	10700	3860	5210	1140	691	979
14	2460	842	1590	1850	190	315	7480	2540	3720	4930	596	2150
15	2540	1300	1850	276	211	250	4830	483	2190	5930	1750	2910
16	2060	714	1280	288	257	269	483	158	243	2520	1320	1700
17	1360	410	740	321	263	283	290	190	237	2700	1170	1690
18	1100	537	702	367	294	324	384	269	306	2220	1400	1650
19	1260	612	912	467	344	402	326	264	301	3140	747	1500
20	1430	660	895	409	342	384	302	247	275	---	---	---
21	3210	856	2100	421	327	343	364	255	304	---	---	---
22	3560	1260	2180	432	362	383	459	238	303	---	---	---
23	3140	1440	2000	532	398	450	372	189	278	---	---	---
24	3540	1480	2210	527	449	486	324	223	289	---	---	---
25	2260	1380	1850	679	499	536	613	305	410	---	---	---
26	4760	1020	2090	1040	630	809	643	360	447	4460	1220	2210
27	2010	765	1340	2760	1030	1580	1470	421	683	9140	3570	4750
28	1630	956	1230	4060	1710	2680	3620	613	1160	10900	3170	5590
29	1300	533	862	2600	1440	1830	5660	1680	2830	6050	3220	4230
30	777	304	446	3690	1730	2530	4840	2000	2940	7040	3280	4640
31	---	---	---	4340	2540	3370	3610	2460	2920	---	---	---
MONTH	4760	304	1260	4340	190	1010	10700	158	2030	---	---	---

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



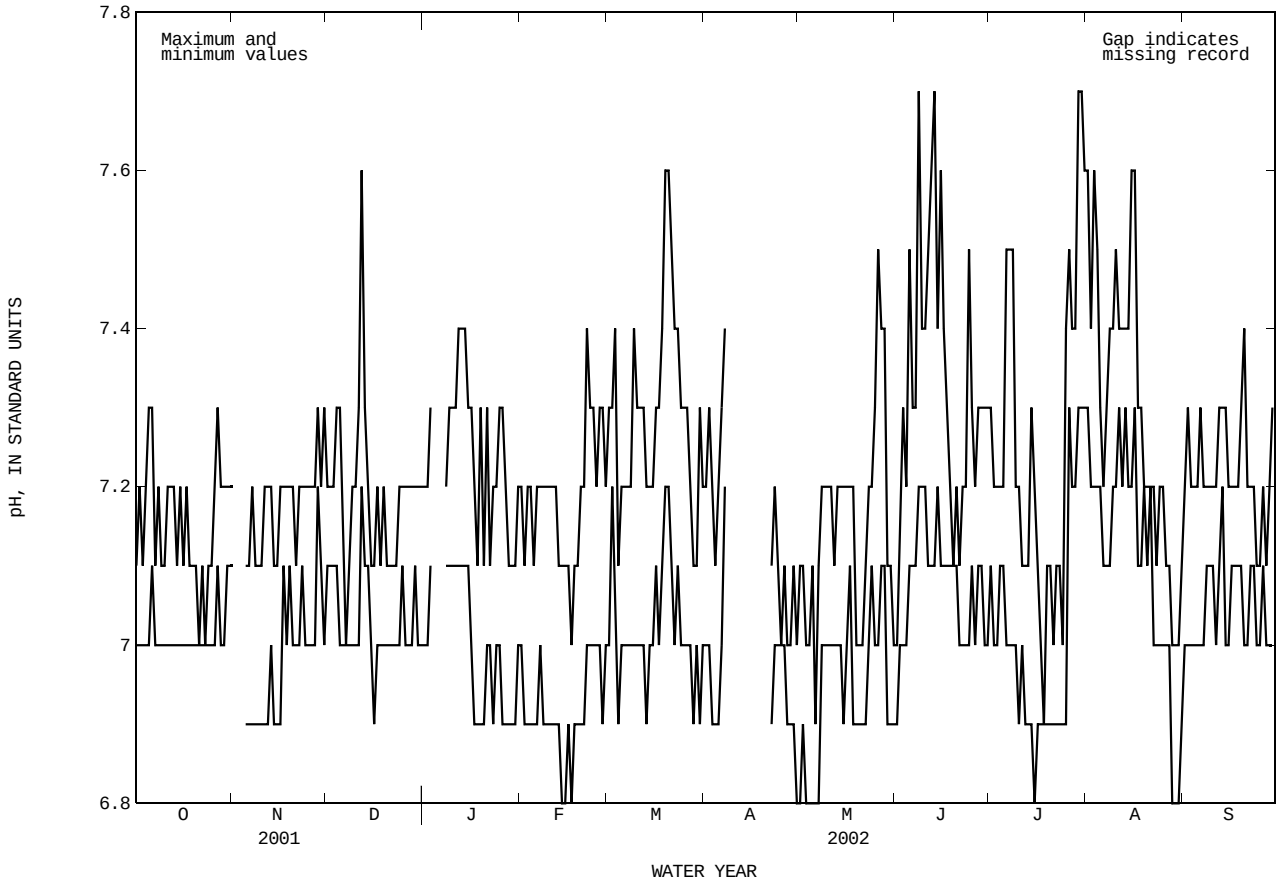
PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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

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

PH, WH, FIELD FROM DCP, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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



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

WATER TEMPERATURE FROM THE DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

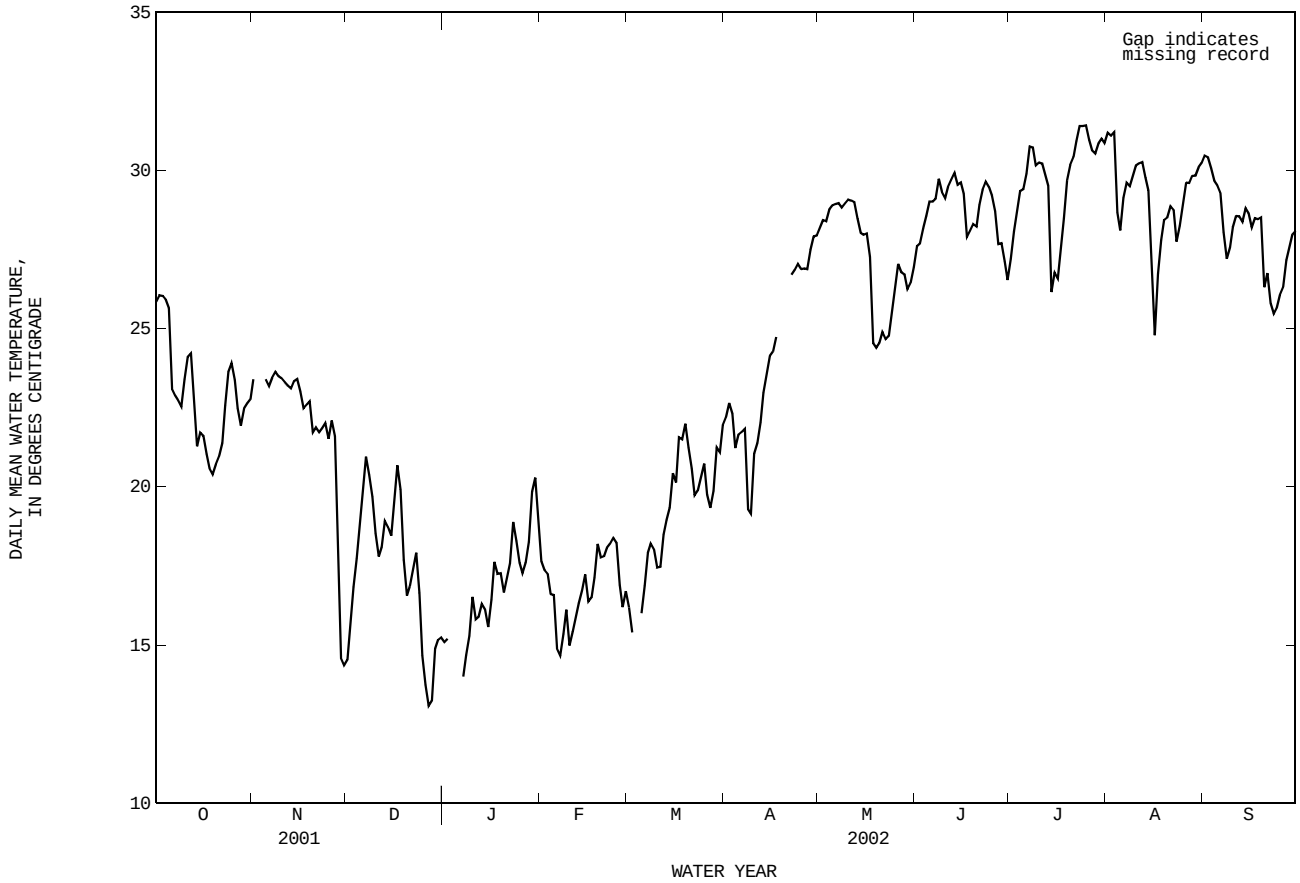
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	27.4	24.4	25.9	24.2	22.4	23.4	15.8	13.8	14.5	16.8	13.7	15.1
2	27.4	25.1	26.0	---	---	---	17.1	14.3	15.8	15.6	14.1	15.2
3	27.4	25.1	26.0	---	---	---	17.4	16.4	16.8	---	---	---
4	26.5	25.5	25.9	---	---	---	18.2	17.1	17.7	---	---	---
5	26.0	24.2	25.7	24.1	22.6	23.4	19.5	17.8	18.9	---	---	---
6	24.2	22.5	23.1	24.4	22.4	23.2	21.0	18.8	20.0	---	---	---
7	23.8	22.3	22.9	24.5	22.8	23.5	21.9	19.8	21.0	15.6	12.2	14.0
8	23.7	22.2	22.7	24.7	22.8	23.6	21.3	19.4	20.4	15.9	13.5	14.7
9	23.1	21.9	22.5	24.2	23.1	23.5	20.3	19.1	19.7	17.5	14.7	15.3
10	24.5	22.3	23.4	24.2	22.6	23.4	19.2	17.8	18.5	17.9	15.2	16.5
11	24.7	23.6	24.1	24.0	22.7	23.3	18.8	15.9	17.8	17.8	15.1	15.8
12	24.5	24.0	24.2	23.9	22.7	23.2	18.8	16.5	18.1	17.3	14.9	15.9
13	24.5	21.3	23.0	23.7	22.7	23.1	19.2	18.7	18.9	17.5	15.2	16.3
14	21.9	20.9	21.3	23.9	22.8	23.3	19.0	18.4	18.7	17.8	14.3	16.1
15	22.7	21.2	21.7	24.2	22.8	23.4	19.1	18.2	18.5	16.9	14.2	15.6
16	21.9	21.4	21.6	23.8	22.4	23.0	20.6	18.3	19.4	18.5	14.6	16.4
17	21.5	20.7	21.0	23.1	22.1	22.5	21.2	19.2	20.7	18.3	16.2	17.6
18	21.4	20.3	20.6	23.3	22.1	22.6	20.6	19.3	19.9	18.7	16.3	17.3
19	20.8	19.9	20.4	23.8	21.8	22.7	19.3	16.4	17.7	18.5	16.3	17.3
20	21.6	20.5	20.7	22.5	20.6	21.7	17.5	16.3	16.6	17.6	15.6	16.7
21	21.5	20.6	21.0	22.8	21.0	21.9	17.4	16.3	16.9	18.0	16.0	17.2
22	21.8	20.9	21.4	22.7	20.8	21.7	18.7	16.3	17.4	19.4	15.4	17.6
23	23.6	21.7	22.6	22.6	21.1	21.8	18.7	17.2	17.9	19.3	17.9	18.9
24	25.1	22.5	23.6	22.5	21.3	22.0	17.8	15.7	16.6	19.7	17.0	18.3
25	24.9	23.1	23.9	22.2	20.8	21.5	16.2	14.0	14.7	18.6	16.9	17.6
26	23.9	22.6	23.4	23.3	20.9	22.1	14.4	13.1	13.7	18.5	16.2	17.3
27	23.4	21.6	22.5	23.0	20.8	21.6	14.1	12.6	13.1	18.9	16.4	17.6
28	23.2	21.2	21.9	21.0	15.3	18.3	14.2	12.8	13.2	19.2	16.9	18.3
29	23.3	21.8	22.5	15.8	13.5	14.6	15.6	14.1	14.9	21.0	18.4	19.8
30	23.8	21.9	22.6	15.6	13.6	14.4	16.2	14.2	15.2	21.2	18.9	20.3
31	24.2	21.8	22.8	---	---	---	16.4	14.4	15.2	20.2	17.8	19.0
MONTH	27.4	19.9	22.9	---	---	---	21.9	12.6	17.4	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	18.8	16.7	17.7	17.1	15.0	16.2	23.6	21.4	22.2	28.8	27.8	28.2
2	19.1	16.2	17.4	15.8	15.0	15.4	23.9	21.8	22.6	28.9	28.0	28.4
3	18.1	16.4	17.2	---	---	---	23.0	21.4	22.3	28.9	28.1	28.4
4	18.0	15.9	16.6	---	---	---	22.0	20.6	21.2	29.3	28.3	28.8
5	17.6	15.6	16.6	17.2	14.8	16.0	22.9	20.8	21.7	30.0	28.4	28.9
6	16.5	14.1	14.9	18.3	16.2	16.9	22.2	21.1	21.7	29.9	28.4	28.9
7	15.5	13.6	14.7	18.7	17.2	17.9	22.6	21.1	21.8	29.6	28.6	29.0
8	16.5	14.4	15.4	18.8	17.5	18.2	21.9	18.1	19.3	29.6	28.5	28.8
9	17.0	15.2	16.1	19.5	15.4	18.0	20.2	18.5	19.2	29.9	28.4	29.0
10	17.3	13.4	15.0	18.7	16.4	17.5	22.6	19.8	21.0	29.8	28.6	29.1
11	16.5	14.2	15.4	18.7	15.9	17.5	22.1	21.0	21.4	29.5	28.7	29.1
12	16.7	14.2	15.9	19.2	16.5	18.5	23.0	21.3	22.0	29.4	28.7	29.0
13	17.7	15.2	16.3	21.4	16.8	18.9	24.5	22.4	23.0	29.0	28.0	28.5
14	17.5	15.2	16.7	21.0	17.9	19.3	24.8	23.1	23.6	28.7	27.6	28.0
15	18.2	16.0	17.2	21.4	16.6	20.4	25.1	23.7	24.1	28.4	27.6	28.0
16	17.8	15.4	16.4	20.8	19.2	20.1	24.8	24.0	24.3	28.6	27.7	28.0
17	17.9	15.4	16.5	22.8	19.7	21.6	25.8	24.1	24.7	28.0	25.7	27.3
18	17.6	16.0	17.1	22.4	18.9	21.5	---	---	---	25.7	24.0	24.6
19	18.8	17.0	18.2	22.5	20.5	22.0	---	---	---	25.0	23.6	24.4
20	18.6	16.9	17.8	22.1	20.5	21.2	---	---	---	25.1	24.0	24.5
21	18.9	16.8	17.8	22.4	18.2	20.6	---	---	---	25.7	24.6	24.9
22	19.0	17.3	18.1	20.8	19.0	19.7	27.6	26.1	26.7	24.9	24.4	24.7
23	20.2	17.3	18.2	20.8	19.3	19.9	28.1	26.2	26.8	25.3	24.4	24.8
24	19.9	17.1	18.4	20.7	19.5	20.3	28.2	26.3	27.0	26.3	24.7	25.4
25	19.4	16.6	18.2	21.2	19.7	20.7	27.4	26.6	26.9	27.8	25.3	26.2
26	18.8	15.2	16.9	20.7	19.1	19.7	27.4	26.3	26.9	28.4	26.2	27.0
27	17.6	15.1	16.2	20.5	18.1	19.3	27.2	26.6	26.9	27.8	26.0	26.8
28	18.4	15.0	16.7	20.8	18.8	19.9	28.4	26.8	27.5	27.5	26.1	26.7
29	---	---	---	22.2	20.1	21.3	29.3	27.4	27.9	26.8	26.0	26.2
30	---	---	---	21.8	20.2	21.1	28.5	27.6	27.9	27.1	26.0	26.5
31	---	---	---	22.3	21.5	21.9	---	---	---	27.7	26.6	26.9
MONTH	20.2	13.4	16.8	---	---	---	---	---	---	30.0	23.6	27.3

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

WATER TEMPERATURE FROM THE DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.8	26.9	27.6	27.9	26.8	27.2	32.7	30.3	31.2	31.7	29.5	30.5
2	28.3	27.1	27.7	29.5	27.4	28.1	33.3	30.5	31.1	31.5	29.9	30.4
3	29.2	27.5	28.2	29.8	28.0	28.7	32.8	30.5	31.2	30.4	29.5	30.1
4	29.4	27.9	28.6	30.1	28.6	29.3	30.5	27.5	28.7	30.0	29.3	29.7
5	30.7	28.2	29.0	30.6	28.9	29.4	29.6	27.0	28.1	30.3	28.6	29.5
6	31.2	28.2	29.0	31.6	28.9	29.9	30.8	27.9	29.1	29.8	28.6	29.3
7	30.4	28.3	29.1	32.1	29.7	30.8	30.8	28.4	29.6	29.1	27.2	28.0
8	31.3	28.8	29.7	32.0	30.0	30.7	30.0	29.0	29.5	28.0	26.6	27.2
9	29.8	28.6	29.3	30.5	29.8	30.2	31.2	29.0	29.8	28.1	27.2	27.6
10	30.2	28.4	29.1	31.4	29.9	30.3	31.2	29.3	30.1	29.3	27.4	28.2
11	29.9	29.1	29.5	31.1	29.7	30.2	31.2	29.2	30.2	29.4	28.0	28.6
12	30.9	29.0	29.7	30.2	29.4	29.9	30.8	30.0	30.3	29.6	28.1	28.6
13	31.4	29.1	29.9	30.2	28.7	29.5	30.2	29.3	29.8	29.4	28.0	28.4
14	30.4	29.1	29.5	29.0	25.3	26.2	29.8	29.0	29.4	30.0	28.1	28.8
15	30.9	29.2	29.6	27.4	26.3	26.8	29.1	24.4	27.0	29.2	28.2	28.7
16	29.9	28.0	29.3	26.8	26.4	26.6	25.6	24.3	24.8	28.6	27.9	28.2
17	28.8	26.8	27.9	29.6	26.7	27.6	28.6	25.5	26.7	29.2	28.0	28.5
18	29.4	27.4	28.1	29.8	27.7	28.5	29.0	27.0	27.8	29.4	27.8	28.5
19	28.9	27.8	28.3	31.5	28.3	29.7	29.8	27.9	28.4	29.4	27.0	28.5
20	28.6	28.0	28.2	31.5	29.5	30.2	29.2	27.9	28.5	27.2	25.9	26.3
21	30.3	28.1	28.9	31.6	30.0	30.4	29.6	28.4	28.9	27.5	26.3	26.8
22	30.7	28.4	29.4	32.2	30.3	30.9	29.2	28.1	28.7	26.7	25.3	25.8
23	30.9	28.7	29.7	32.4	30.9	31.4	28.4	27.1	27.8	25.8	25.1	25.5
24	30.0	28.9	29.5	32.2	30.9	31.4	29.0	27.5	28.2	26.1	25.2	25.6
25	29.6	28.9	29.2	32.6	30.7	31.4	30.3	27.8	28.9	26.6	25.6	26.1
26	29.1	28.0	28.7	31.8	30.6	31.0	30.5	29.1	29.6	27.3	25.5	26.3
27	28.4	26.8	27.7	31.1	30.2	30.6	30.0	29.3	29.6	28.2	26.1	27.2
28	28.0	27.5	27.7	31.0	30.2	30.5	31.8	29.1	29.8	29.3	26.7	27.6
29	27.7	26.7	27.1	31.8	30.1	30.9	31.0	29.0	29.8	29.2	27.0	28.0
30	27.3	26.0	26.5	31.6	30.6	31.0	31.4	29.0	30.1	29.4	27.2	28.1
31	---	---	---	32.2	30.1	30.9	31.2	29.4	30.2	---	---	---
MONTH	31.4	26.0	28.7	32.6	25.3	29.7	33.3	24.3	29.1	31.7	25.1	28.0



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

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

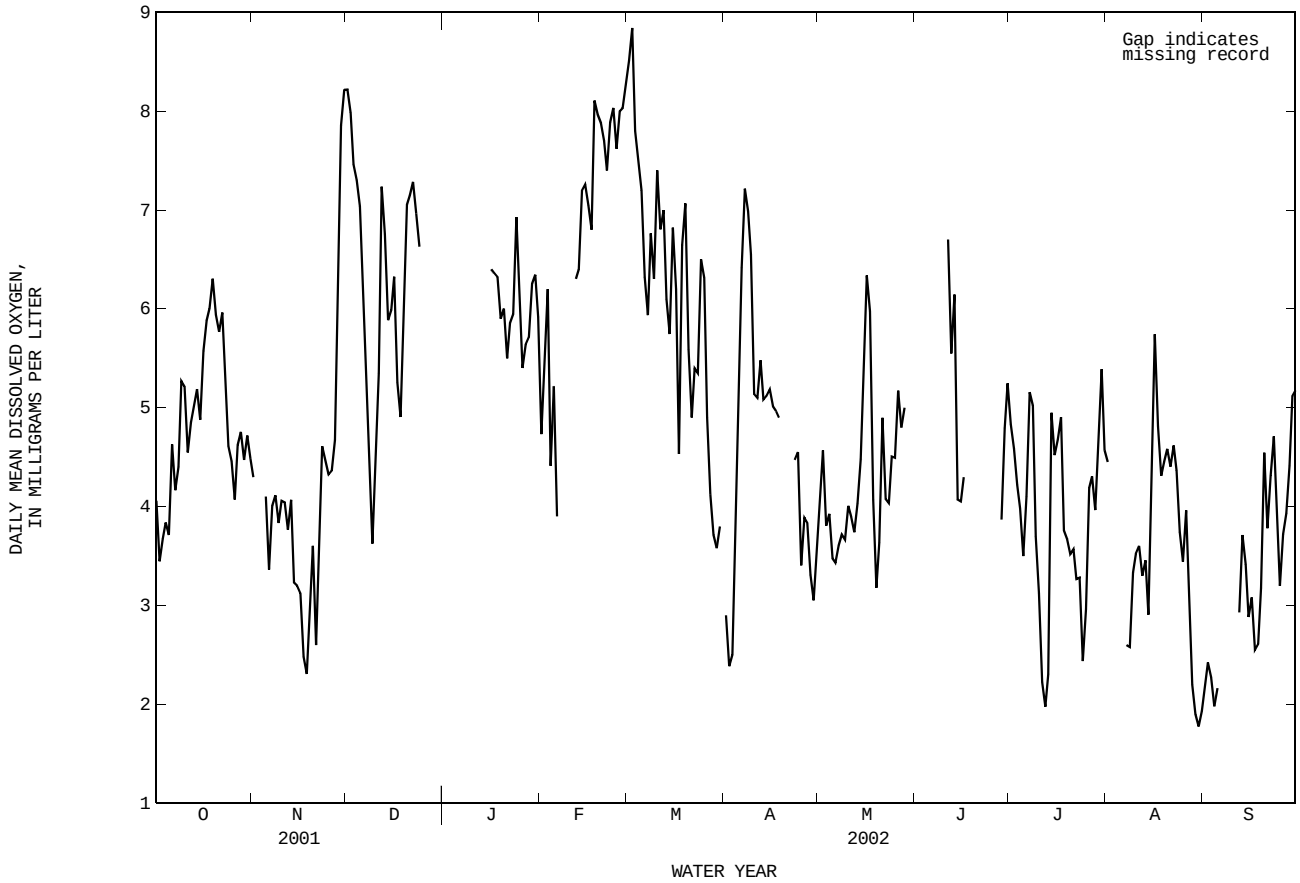
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5.5	2.9	4.1	5.2	3.6	4.3	8.9	7.8	8.2	---	---	---
2	5.6	2.6	3.4	---	---	---	8.7	7.2	8.0	---	---	---
3	5.0	2.7	3.7	---	---	---	8.3	6.3	7.5	---	---	---
4	5.2	2.7	3.8	---	---	---	7.9	6.6	7.3	---	---	---
5	4.7	3.0	3.7	5.3	2.3	4.1	8.1	6.5	7.0	---	---	---
6	5.6	3.4	4.6	5.3	1.8	3.4	7.0	5.3	6.2	---	---	---
7	5.0	3.3	4.2	5.8	2.2	4.0	5.7	4.7	5.3	---	---	---
8	5.7	3.4	4.4	5.7	3.0	4.1	5.3	3.0	4.4	---	---	---
9	6.2	4.4	5.3	5.3	2.0	3.8	4.4	3.0	3.6	---	---	---
10	6.1	4.2	5.2	5.6	2.6	4.1	5.2	3.6	4.4	---	---	---
11	5.4	3.7	4.5	5.3	2.1	4.0	7.2	4.3	5.3	---	---	---
12	5.6	3.9	4.9	5.2	2.3	3.8	7.6	6.7	7.2	---	---	---
13	6.1	3.8	5.0	5.3	3.0	4.1	7.6	6.0	6.8	---	---	---
14	6.0	4.7	5.2	4.0	2.5	3.2	6.9	5.3	5.9	---	---	---
15	6.1	4.0	4.9	4.0	2.0	3.2	7.4	5.0	6.0	---	---	---
16	6.6	4.9	5.6	3.8	2.1	3.1	7.3	5.4	6.3	7.8	4.5	6.4
17	7.6	5.0	5.9	3.6	1.5	2.5	6.8	4.1	5.3	7.5	3.5	6.4
18	6.9	5.3	6.0	3.1	1.4	2.3	5.9	3.9	4.9	7.3	4.6	6.3
19	8.1	5.2	6.3	4.4	1.6	2.9	8.0	4.7	6.2	7.3	2.9	5.9
20	6.8	5.3	5.9	4.5	2.1	3.6	7.8	6.6	7.1	7.2	3.8	6.0
21	6.6	5.1	5.8	3.9	1.6	2.6	7.8	6.5	7.1	7.0	3.8	5.5
22	6.7	5.2	6.0	5.0	1.8	3.5	7.9	6.7	7.3	7.4	4.3	5.9
23	6.3	4.5	5.4	5.3	3.8	4.6	7.6	6.4	7.0	7.2	4.6	5.9
24	5.3	4.0	4.6	5.2	2.6	4.5	7.3	6.1	6.6	7.6	5.1	6.9
25	5.2	3.5	4.5	5.1	3.2	4.3	---	---	---	7.6	4.4	6.2
26	5.2	2.7	4.1	5.5	3.5	4.4	---	---	---	6.9	3.3	5.4
27	6.1	2.5	4.6	5.4	3.5	4.7	---	---	---	7.2	3.5	5.6
28	5.9	3.7	4.8	8.0	4.4	5.9	---	---	---	7.1	4.0	5.7
29	5.8	3.1	4.5	8.8	6.5	7.9	---	---	---	7.6	3.8	6.3
30	5.4	4.0	4.7	9.0	7.3	8.2	---	---	---	8.2	3.7	6.3
31	5.2	3.8	4.5	---	---	---	---	---	---	6.4	5.2	5.9
MONTH	8.1	2.5	4.8	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6.1	1.9	4.7	9.4	7.6	8.5	4.2	2.1	2.9	4.8	2.5	4.1
2	6.8	2.1	5.5	9.4	8.1	8.8	4.2	0.9	2.4	5.5	3.4	4.6
3	6.8	4.9	6.2	8.3	4.8	7.8	4.2	1.3	2.5	5.0	2.2	3.8
4	6.8	2.3	4.4	8.2	5.0	7.5	4.5	2.4	3.4	5.5	2.7	3.9
5	7.3	3.0	5.2	8.1	2.6	7.2	5.9	3.3	4.4	4.5	2.1	3.5
6	6.6	1.2	3.9	8.2	2.2	6.3	8.1	4.6	6.4	5.0	1.9	3.4
7	---	---	---	8.1	1.3	5.9	8.5	6.3	7.2	5.2	2.3	3.6
8	---	---	---	7.9	4.9	6.8	8.2	5.1	7.0	5.6	2.9	3.7
9	---	---	---	8.4	2.6	6.3	7.4	5.7	6.5	5.1	2.4	3.7
10	---	---	---	8.2	4.5	7.4	6.4	4.1	5.1	5.1	2.9	4.0
11	---	---	---	8.0	5.1	6.8	5.9	4.2	5.1	5.2	3.0	3.9
12	7.8	4.2	6.3	8.0	5.3	7.0	5.9	4.9	5.5	4.6	2.7	3.7
13	7.9	4.4	6.4	7.8	3.0	6.1	5.7	4.6	5.1	5.6	2.7	4.0
14	8.3	6.1	7.2	7.8	1.8	5.7	5.8	4.5	5.1	6.6	2.9	4.5
15	8.9	4.2	7.3	8.3	2.0	6.8	5.9	4.5	5.2	6.6	3.7	5.2
16	8.2	3.6	7.0	8.9	3.3	6.2	5.5	4.6	5.0	7.2	5.3	6.3
17	8.2	5.2	6.8	7.7	0.5	4.5	5.6	4.2	5.0	6.9	5.1	6.0
18	9.8	5.2	8.1	9.1	3.1	6.6	5.6	3.2	4.9	5.1	2.9	4.1
19	8.9	5.9	8.0	9.8	4.2	7.1	---	---	---	3.7	2.6	3.2
20	8.7	7.0	7.9	6.8	4.8	5.6	---	---	---	4.6	2.3	3.6
21	8.9	5.8	7.7	5.8	3.3	4.9	---	---	---	5.5	3.3	4.9
22	8.4	3.9	7.4	6.2	3.5	5.4	---	---	---	5.0	3.4	4.1
23	8.4	7.5	7.9	6.5	1.6	5.4	6.0	3.2	4.5	5.1	3.1	4.0
24	8.6	7.3	8.0	7.6	5.0	6.5	5.4	3.6	4.5	6.1	3.1	4.5
25	8.2	6.7	7.6	7.8	4.8	6.3	5.0	2.7	3.4	6.3	3.0	4.5
26	9.4	6.1	8.0	5.7	3.4	4.9	5.4	2.2	3.9	7.8	3.1	5.2
27	8.7	4.8	8.0	5.6	2.1	4.1	5.2	2.6	3.8	6.7	2.8	4.8
28	8.6	7.5	8.3	5.2	2.1	3.7	4.8	2.1	3.3	6.2	4.0	5.0
29	---	---	---	4.9	1.7	3.6	5.2	1.9	3.1	---	---	---
30	---	---	---	5.1	2.1	3.8	4.5	2.4	3.5	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

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

OXYGEN DISSOLVED FROM DCP, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	5.5	4.1	4.8	6.5	2.8	4.5	4.9	0.6	2.2
2	---	---	---	5.3	3.9	4.6	---	---	---	5.0	1.2	2.4
3	---	---	---	5.0	3.4	4.2	---	---	---	3.3	0.9	2.3
4	---	---	---	4.9	3.0	4.0	---	---	---	3.0	0.7	2.0
5	---	---	---	4.6	2.8	3.5	---	---	---	3.9	1.0	2.2
6	---	---	---	8.8	1.5	4.1	---	---	---	---	---	---
7	---	---	---	8.7	2.1	5.2	3.1	1.8	2.6	---	---	---
8	---	---	---	8.3	2.8	5.0	3.4	1.7	2.6	---	---	---
9	---	---	---	5.4	2.3	3.7	4.5	2.6	3.3	---	---	---
10	---	---	---	5.9	2.2	3.1	4.9	2.0	3.5	---	---	---
11	8.6	3.8	6.7	3.5	1.1	2.2	5.9	1.3	3.6	---	---	---
12	11.3	2.5	5.5	2.9	1.4	2.0	4.9	1.7	3.3	4.0	2.2	2.9
13	11.3	1.6	6.1	3.7	1.1	2.3	4.5	2.9	3.5	4.2	3.2	3.7
14	8.3	1.6	4.1	5.8	2.7	4.9	3.4	2.5	2.9	4.4	1.9	3.4
15	6.8	1.5	4.1	5.1	3.7	4.5	6.1	2.7	4.4	3.9	1.6	2.9
16	6.5	2.8	4.3	5.9	3.6	4.7	6.1	5.4	5.7	3.6	2.5	3.1
17	---	---	---	5.8	4.1	4.9	5.5	4.4	4.8	3.2	1.7	2.5
18	---	---	---	4.2	3.2	3.8	4.8	3.9	4.3	3.3	1.8	2.6
19	---	---	---	4.3	3.2	3.7	5.0	3.8	4.5	4.2	2.6	3.2
20	---	---	---	4.4	2.8	3.5	5.0	4.2	4.6	5.3	3.4	4.5
21	---	---	---	4.1	3.2	3.6	4.8	4.1	4.4	4.4	3.0	3.8
22	---	---	---	4.1	2.6	3.3	5.1	4.1	4.6	5.1	3.0	4.3
23	---	---	---	4.8	2.5	3.3	5.2	3.4	4.4	5.0	4.3	4.7
24	---	---	---	3.4	1.8	2.4	4.6	2.9	3.7	4.8	3.3	4.0
25	---	---	---	5.3	1.6	3.0	4.3	2.5	3.4	3.8	2.1	3.2
26	---	---	---	6.4	2.6	4.2	4.6	3.6	4.0	6.4	1.5	3.7
27	---	---	---	6.0	2.7	4.3	4.1	2.1	3.2	5.2	1.8	3.9
28	5.3	2.8	3.9	4.6	3.0	4.0	2.9	1.7	2.2	6.0	1.8	4.4
29	6.0	3.6	4.8	7.1	3.4	4.7	2.6	1.2	1.9	6.7	3.1	5.1
30	6.1	4.5	5.2	8.1	4.1	5.4	2.9	0.9	1.8	8.4	3.2	5.2
31	---	---	---	7.0	3.1	4.6	2.8	1.0	1.9	---	---	---
MONTH	---	---	---	8.8	1.1	3.9	---	---	---	---	---	---



08074800 Keegans Bayou at Roark Road near Houston, TX
(Flood-hydrograph partial-record station)

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^2. Oct. 1, 1976, to Dec. 31, 1977, 12.0 mi^2; Aug. 1964 to Sept. 30, 1976, 11.6 mi^2. Drainage area changes were the result of ditch relocations or extensions.

PERIOD OF RECORD.--Aug. 1964 to Sept. 1981, 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^3/s, (8,910 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,880 ft^3/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^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 12	0130	*2,590	*74.17	Apr. 8	0915	2,050	72.96

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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.--53.2 mi^2. Prior to Jan. 1, 1978, 51.7 mi^2. Change due to new ditch draining an area formerly in lower portion of basin.

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.

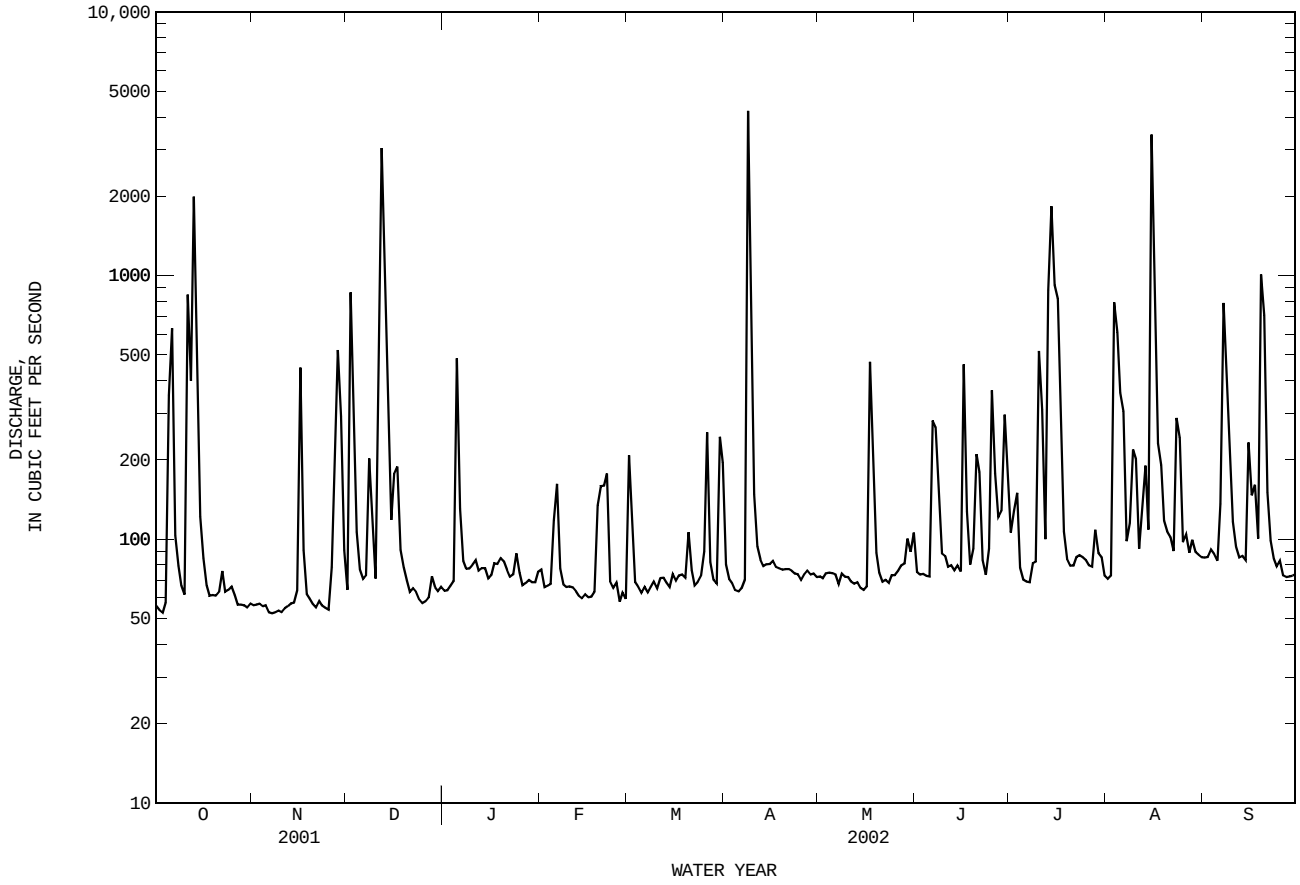
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft^3/s, Mar. 4, 1992, gage height, 65.42 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,730 ft^3/s, Dec. 12, gage height, 58.56 ft; minimum daily discharge, 52 ft^3/s, Nov. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	56	64	64	77	208	80	72	75	106	71	85
2	54	56	864	64	66	108	71	71	73	128	73	86
3	53	57	318	67	67	69	68	74	74	150	791	92
4	57	56	107	69	68	66	64	75	73	78	611	88
5	352	56	77	485	118	63	63	74	72	70	359	83
6	631	53	71	130	162	66	65	74	282	69	306	136
7	104	52	73	83	78	63	70	68	267	69	98	787
8	79	53	202	77	67	66	4220	74	151	81	115	423
9	67	54	115	78	66	69	440	72	88	82	219	245
10	62	53	71	80	66	65	148	72	86	518	202	117
11	847	55	880	83	66	71	94	69	79	310	92	94
12	400	56	3040	76	64	72	84	68	80	100	138	85
13	1990	57	764	78	61	69	79	69	76	881	190	86
14	337	57	288	78	60	66	80	65	80	1830	109	83
15	122	64	118	71	62	74	81	64	75	921	3420	233
16	85	447	177	73	60	70	83	66	460	816	895	147
17	67	91	189	81	61	73	79	471	127	211	231	161
18	61	62	91	81	63	74	78	249	80	107	191	101
19	62	60	78	85	134	72	77	89	92	84	117	1010
20	61	57	69	83	159	106	77	75	210	79	107	708
21	63	55	63	76	160	76	77	69	180	80	102	150
22	76	58	65	72	177	67	76	70	83	86	90	99
23	63	56	63	74	69	69	74	68	73	87	288	84
24	64	55	59	88	65	73	74	73	92	85	242	79
25	66	54	57	75	68	90	70	73	367	83	97	83
26	61	78	58	67	58	255	74	76	178	80	104	73
27	57	171	60	68	63	82	76	80	121	79	89	72
28	57	522	72	70	59	70	74	81	128	109	100	72
29	56	292	66	69	---	68	74	101	297	89	90	73
30	55	91	64	69	---	245	72	90	172	85	87	74
31	57	---	66	75	---	195	---	106	---	73	85	---
TOTAL	6222	2984	8349	2789	2344	2880	6842	2898	4291	7626	9709	5709
MEAN	200.7	99.47	269.3	89.97	83.71	92.90	228.1	93.48	143.0	246.0	313.2	190.3
MAX	1990	522	3040	485	177	255	4220	471	460	1830	3420	1010
MIN	53	52	57	64	58	63	63	64	72	69	71	72
AC-FT	12340	5920	16560	5530	4650	5710	13570	5750	8510	15130	19260	11320

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^2.

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.--Records fair. No known regulation or diversions. Low flow is sustained mostly from wastewater effluent from Houston suburbs.

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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	122	138	117	137	710	152	138	120	220	114	125
2	114	115	1610	117	125	245	133	136	119	175	115	127
3	110	119	564	122	128	148	124	137	123	226	1510	137
4	171	117	222	125	129	138	118	135	121	129	998	138
5	e890	114	163	1020	212	133	114	136	121	116	586	127
6	e1350	110	189	257	315	139	116	133	e460	111	436	240
7	199	113	152	156	154	140	121	125	440	111	226	1170
8	146	112	325	134	132	146	8030	128	242	167	389	672
9	126	112	223	136	129	153	721	128	145	143	299	323
10	120	111	146	134	128	157	258	128	146	683	348	178
11	e2400	112	1470	141	127	183	178	124	126	477	207	142
12	e950	112	5180	133	124	207	151	126	125	169	454	128
13	e3950	112	1530	134	125	146	143	136	119	2040	583	127
14	575	111	492	134	126	142	147	126	124	3310	310	123
15	247	119	241	124	128	158	139	125	123	1530	7820	345
16	180	800	830	123	131	152	136	127	e750	1530	1440	220
17	147	174	581	126	132	161	133	1090	222	350	334	258
18	135	122	205	123	136	160	132	394	145	193	283	158
19	129	116	159	144	243	151	132	164	145	155	180	1960
20	125	113	148	134	307	229	136	137	227	137	166	1350
21	123	115	137	129	356	164	138	128	296	131	154	228
22	153	1000	136	127	362	143	137	127	149	174	182	151
23	129	174	129	128	150	140	136	126	130	153	345	134
24	129	122	121	154	142	144	136	124	154	138	334	126
25	131	117	115	138	144	167	132	127	570	134	152	133
26	123	142	117	123	132	385	133	245	470	152	150	122
27	121	360	119	126	139	160	146	146	239	125	150	117
28	123	994	135	129	137	135	146	133	267	157	139	116
29	120	544	126	124	---	137	146	162	726	141	130	117
30	120	193	119	127	---	788	144	159	300	129	124	118
31	116	---	126	132	---	390	---	170	---	116	126	---
TOTAL	13568	6797	15948	5071	4730	6551	12708	5520	7444	13522	18784	9410
MEAN	437.7	226.6	514.5	163.6	168.9	211.3	423.6	178.1	248.1	436.2	605.9	313.7
MAX	3950	1000	5180	1020	362	788	8030	1090	750	3310	7820	1960
MIN	110	110	115	117	124	133	114	124	119	111	114	116
AC-FT	26910	13480	31630	10060	9380	12990	25210	10950	14770	26820	37260	18660

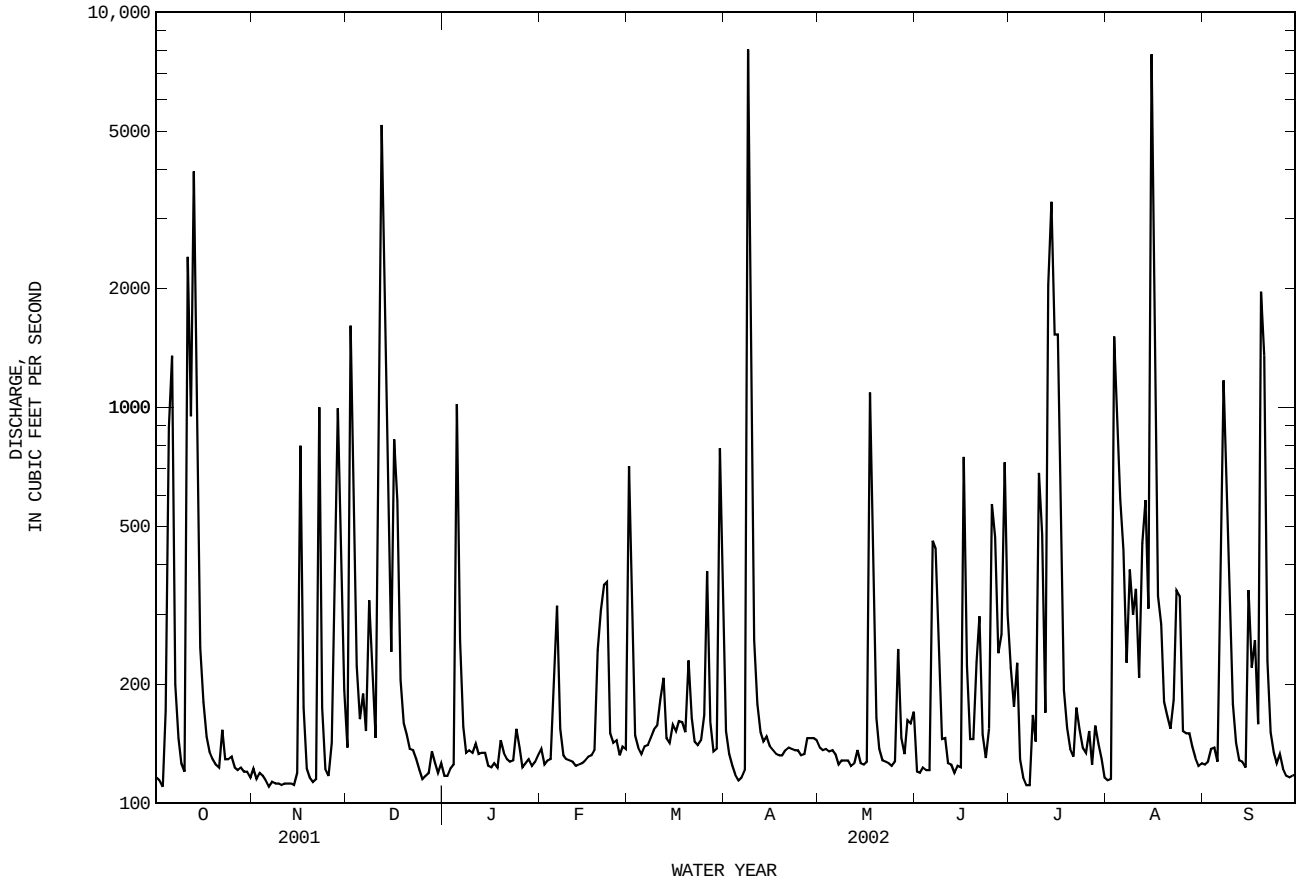
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2002, BY WATER YEAR (WY)

MEAN	163.0	180.0	163.7	190.6	179.5	147.5	158.9	188.3	218.3	135.3	145.9	184.0
MAX	1029	836	626	760	893	627	713	636	1058	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1936 - 2002	
ANNUAL TOTAL	153233		120053			
ANNUAL MEAN	419.8		328.9		171.0	
HIGHEST ANNUAL MEAN					430	1992
LOWEST ANNUAL MEAN					15.1	1940
HIGHEST DAILY MEAN	14000	Jun 9	8030	Apr 8	16300	Oct 18 1994
LOWEST DAILY MEAN	105	May 24	110	Oct 3	0.10	Oct 11 1937
ANNUAL SEVEN-DAY MINIMUM	107	May 19	112	Nov 6	0.19	Oct 6 1937
MAXIMUM PEAK FLOW			17900	Aug 15	33000	Jun 9 2001
MAXIMUM PEAK STAGE			45.52	Aug 15	54.13	Jun 9 2001
ANNUAL RUNOFF (AC-FT)	303900		238100		123900	
10 PERCENT EXCEEDS	856		582		301	
50 PERCENT EXCEEDS	140		139		76	
90 PERCENT EXCEEDS	112		118		5.9	

e Estimated

08075000 Brays Bayou at Houston, TX--Continued



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^2.

PERIOD OF RECORD.--Aug. 1964 to Sept. 1978, Dec. 1978 to Aug. 1979 (discharge measurements and supplemental peak discharges only), Oct. 1980 to Sept. 1991, Oct. 1991 to Sept. 1992 (annual maximum), Oct. 1992 to Sept. 1996 (peak discharges greater than base discharge), Oct. 1996 to current year.

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 FROM DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	8.1	16	13	9.3	86	11	5.8	7.2	14	12	7.4
2	8.0	7.4	264	13	9.6	21	8.3	5.4	7.4	9.6	12	7.4
3	8.3	7.0	116	12	9.5	9.1	7.2	6.1	7.6	9.3	51	9.0
4	11	7.2	35	12	9.6	8.2	6.8	5.9	6.5	10	55	11
5	48	7.0	22	147	12	7.9	6.6	5.9	7.6	8.8	30	5.9
6	181	7.1	29	32	16	7.6	6.9	5.9	9.6	8.4	15	12
7	15	7.1	23	17	12	6.7	7.5	5.6	20	8.4	13	104
8	12	7.3	26	13	10	6.6	1420	6.3	11	8.7	13	73
9	8.2	6.6	22	11	11	7.1	77	6.0	9.2	9.7	12	43
10	8.0	6.5	17	12	10	7.4	29	5.9	8.7	11	12	22
11	319	6.6	114	13	10	7.8	18	6.6	9.2	16	11	12
12	104	5.9	1070	13	9.0	7.5	14	7.1	9.3	11	13	11
13	973	6.8	280	12	9.6	7.6	13	7.2	8.6	511	51	12
14	96	6.4	79	11	9.1	7.5	11	7.0	9.0	473	28	12
15	29	6.1	35	9.9	9.8	7.4	10	6.5	9.8	378	2980	22
16	16	75	162	9.7	9.0	7.4	9.6	6.7	46	315	891	19
17	12	12	223	11	11	7.4	9.2	46	13	54	142	20
18	10	8.6	40	11	9.4	7.2	7.4	23	9.2	26	67	23
19	9.3	7.3	25	10	13	7.3	7.3	9.1	8.6	19	25	168
20	9.0	6.9	20	11	11	8.3	7.2	8.0	8.6	16	24	519
21	8.8	7.1	17	10	21	7.5	6.1	9.8	8.3	16	24	43
22	8.6	66	18	10	20	7.1	5.9	7.3	8.3	15	23	24
23	8.8	30	16	9.6	10	7.1	5.4	7.6	8.0	16	21	18
24	8.5	9.8	13	14	10	7.3	5.9	7.8	8.1	15	16	16
25	8.0	7.9	12	11	10	7.7	6.4	7.4	12	15	13	16
26	8.1	13	12	9.9	9.3	8.7	7.2	6.6	11	15	13	11
27	8.0	83	13	9.8	9.1	8.5	5.9	6.8	11	13	11	9.3
28	8.1	107	13	9.9	9.2	7.9	5.6	7.1	12	18	10	7.0
29	8.0	84	12	9.5	---	7.1	5.4	7.5	49	17	8.7	7.6
30	7.9	24	14	8.8	---	28	6.1	7.2	22	17	8.3	8.0
31	8.7	---	12	11	---	41	---	7.2	---	13	7.9	---
TOTAL	1979.3	644.7	2770	507.1	308.5	380.9	1746.9	268.3	375.8	2086.9	4612.9	1272.6
MEAN	63.85	21.49	89.35	16.36	11.02	12.29	58.23	8.655	12.53	67.32	148.8	42.42
MAX	973	107	1070	147	21	86	1420	46	49	511	2980	519
MIN	7.9	5.9	12	8.8	9.0	6.6	5.4	5.4	6.5	8.4	7.9	5.9
AC-FT	3930	1280	5490	1010	612	756	3460	532	745	4140	9150	2520

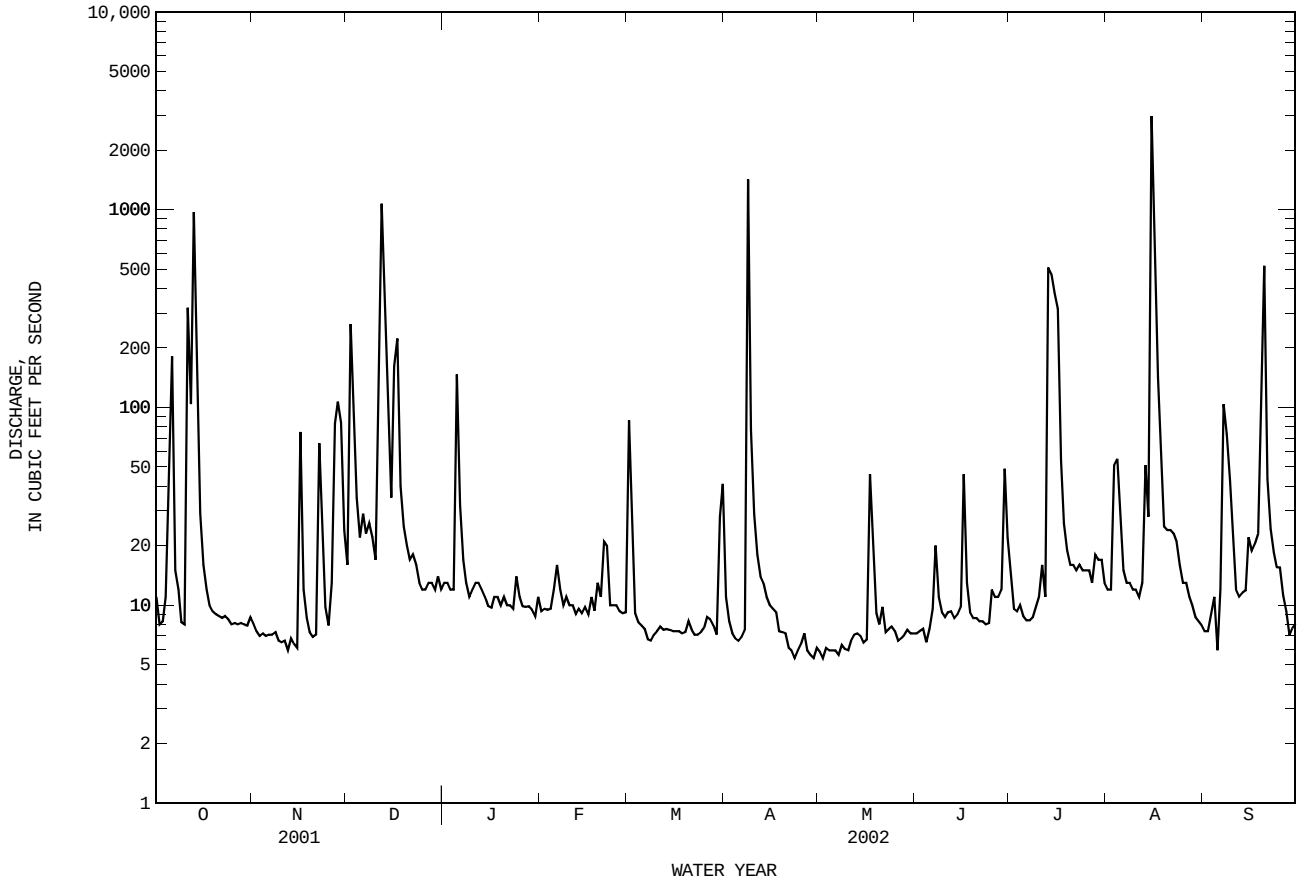
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002h, BY WATER YEAR (WY)

MEAN	29.59	29.36	29.46	39.52	33.67	26.28	31.33	39.69	53.03	19.85	30.75	38.53
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	8.65	6.18	3.69	5.35	8.19
(WY)	1965	1968	1971	1965	1976	1965	1965	2002	1967	1965	1965	1965

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1964 - 2002h	
ANNUAL TOTAL	25365.7		16953.9			
ANNUAL MEAN	69.50		46.45		33.12	
HIGHEST ANNUAL MEAN					68.9	2001
LOWEST ANNUAL MEAN					10.7	1967
HIGHEST DAILY MEAN	4650	Jun 9	2980	Aug 15	4650	Jun 9 2001
LOWEST DAILY MEAN	5.9	Nov 12	5.4	Apr 23	1.5	Jul 26 1965
ANNUAL SEVEN-DAY MINIMUM	6.4	Nov 9	5.8	Apr 27	2.2	Jul 22 1965
MAXIMUM PEAK FLOW			6380	Aug 15	9030	Jun 9 2001
MAXIMUM PEAK STAGE			53.08	Aug 15	57.12	Jun 15 1976
ANNUAL RUNOFF (AC-FT)	50310		33630		23990	
10 PERCENT EXCEEDS	105		52		45	
50 PERCENT EXCEEDS	10		10		11	
90 PERCENT EXCEEDS	7.3		6.8		6.1	

h See PERIOD OF RECORD paragraph.

08075400 Sims Bayou at Hiram Clarke Street, Houston, TX--Continued



08075500 Sims Bayou at Houston, TX
(Flood-hydrograph partial-record station)

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^2.

PERIOD OF RECORD.--Oct. 1952 to Sept. 1995, 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 Houston suburbs and from industrial wastes. Stage-discharge relation is tidally affected at low flow.

AVERAGE DISCHARGE.--43 years (water years 1953-95), 96.5 ft^3/s (69,900 acre-ft).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,800 ft^3/s, June 9, 2001, Tropical Storm Allison (gage height, 27.91 ft); Maximum gage height, 33.23 ft, Aug. 18, 1983, Hurricane Alica; minimum daily, 0.9 ft^3/s, Aug. 7, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 13	1330	4,010	11.10	Apr. 8	0900	9,830	16.91
Dec. 12	0615	5,510	12.81	July 14	0015	3,880	10.94
Dec. 16	2330	3,460	10.41	Aug. 15	1815	*10,800	*17.71

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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^2.

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^3/s, June 9, 1975; maximum gage height, 26.52 ft, June 9, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 16.62 ft, Apr. 8; minimum gage height, 3.66 ft, Nov. 20.

GAGE HEIGHT FROM DCP, in FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	5.77	4.45	6.07	4.41	5.74	3.95	5.44	3.92	4.53	3.95	12.23	5.37
2	5.54	4.36	5.85	4.04	6.59	5.32	4.92	3.89	4.91	3.85	7.06	4.06
3	5.62	4.35	6.05	4.14	6.07	4.23	4.24	3.81	4.95	3.88	4.07	3.89
4	5.77	4.47	6.05	3.90	5.66	4.05	5.26	3.99	4.89	3.76	5.07	3.81
5	9.31	4.31	5.98	4.00	5.74	4.06	8.99	4.56	5.84	4.20	5.16	3.78
6	8.46	4.14	6.01	4.10	5.74	4.44	4.56	4.09	5.36	3.98	5.37	3.82
7	5.57	4.11	5.81	3.91	5.57	4.07	4.09	3.96	4.54	3.78	5.45	3.83
8	5.91	4.49	5.66	3.96	5.36	4.09	4.68	3.86	5.20	3.80	5.82	3.99
9	6.50	4.78	5.70	3.90	4.49	3.94	4.84	3.87	5.35	3.88	5.78	3.91
10	6.59	4.95	5.62	3.89	5.14	3.97	4.86	3.87	4.99	3.69	5.63	3.75
11	9.89	5.28	5.37	3.91	6.77	4.00	4.70	3.86	4.42	3.69	5.77	4.30
12	6.76	5.14	5.52	4.14	8.66	5.76	4.63	3.86	4.93	3.76	5.48	3.85
13	11.12	5.21	5.97	4.18	12.27	4.93	4.96	3.83	4.99	3.76	5.21	3.96
14	5.69	4.27	6.34	4.52	5.53	4.37	5.22	3.89	4.98	3.79	5.60	4.30
15	6.58	4.28	6.88	5.21	6.41	4.55	5.20	3.89	5.09	3.89	5.54	4.63
16	5.89	3.93	6.77	4.47	12.19	4.51	5.38	3.93	4.77	3.72	5.39	4.23
17	6.35	4.61	6.02	3.87	9.22	4.38	5.21	3.93	4.81	3.69	5.46	4.27
18	6.20	4.29	5.53	3.83	5.30	4.13	5.09	3.90	5.75	3.93	5.62	4.13
19	6.07	4.03	5.44	3.81	5.49	4.05	5.00	3.88	6.17	4.49	6.30	4.11
20	5.80	4.02	4.37	3.66	4.99	4.04	5.04	3.90	5.29	3.84	5.57	3.90
21	6.01	4.39	5.17	3.83	5.46	4.23	5.27	4.02	5.66	3.80	4.73	3.76
22	6.00	4.20	5.62	4.37	6.32	4.89	5.26	4.01	5.50	4.03	5.33	3.74
23	6.05	4.39	6.10	4.92	5.45	4.11	5.26	3.87	5.47	3.80	5.87	3.84
24	6.06	4.32	6.05	4.12	5.00	3.93	5.28	3.91	5.51	3.79	6.04	4.28
25	5.72	4.34	5.51	4.15	5.09	3.91	4.46	3.77	5.63	3.85	5.86	4.03
26	6.02	4.41	6.19	5.05	4.84	3.86	5.14	3.79	4.82	3.72	4.84	3.86
27	5.93	4.91	12.12	5.10	5.11	3.82	5.35	3.81	4.39	3.72	5.70	3.84
28	5.92	4.77	9.58	4.62	5.53	3.90	5.62	3.85	5.63	4.11	5.85	4.33
29	5.57	4.50	7.73	4.51	5.44	3.90	5.32	3.79	---	---	5.75	4.33
30	5.76	4.20	5.52	4.04	5.59	3.89	5.56	3.94	---	---	6.76	3.86
31	6.06	4.67	---	---	5.59	3.95	8.97	4.53	---	---	5.56	3.95
MONTH	11.12	3.93	12.12	3.66	12.27	3.82	8.99	3.77	6.17	3.69	12.23	3.74

08075650 Berry Bayou at Forest Oaks Street, Houston, TX--Continued

GAGE HEIGHT FROM DCP, in FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.42	3.79	6.21	3.95	6.03	4.24	6.08	4.41	5.00	3.85	5.88	4.18
2	5.90	3.89	6.11	3.99	6.16	4.27	5.82	4.44	5.09	3.79	6.08	4.17
3	5.09	3.73	6.04	4.01	6.20	4.82	5.70	4.48	5.16	3.80	6.33	4.28
4	5.32	3.72	5.65	3.75	6.02	4.92	5.43	4.05	5.58	3.79	6.76	4.76
5	5.66	3.83	5.98	4.35	6.06	4.81	5.23	3.78	5.67	3.89	6.90	4.63
6	6.27	4.12	5.97	4.76	6.14	4.64	4.90	3.77	5.27	3.81	7.73	5.20
7	6.55	5.09	6.09	5.08	5.71	4.25	5.32	3.75	5.45	3.84	8.46	6.65
8	16.62	6.25	6.69	5.51	5.82	4.03	5.64	3.79	5.94	3.78	7.42	6.28
9	6.42	4.65	6.53	4.88	6.17	4.24	6.26	4.07	5.85	3.77	7.10	5.99
10	5.91	4.55	6.03	4.58	6.32	4.23	5.67	3.78	6.64	4.16	6.98	5.40
11	5.85	4.87	6.63	4.95	6.62	4.48	5.74	3.81	6.60	5.11	6.71	4.46
12	5.77	4.64	6.88	5.05	6.06	4.16	5.59	3.91	6.45	4.91	6.12	4.06
13	5.78	4.34	5.38	3.98	6.06	3.90	8.20	3.74	7.43	5.08	5.83	4.16
14	5.71	4.14	6.21	3.72	5.44	3.79	6.40	4.39	5.99	4.60	6.18	4.43
15	5.91	4.15	6.48	4.55	5.47	3.69	7.34	4.24	15.24	5.12	6.10	4.08
16	6.28	4.19	6.51	4.58	5.86	4.35	7.83	4.80	8.67	4.59	5.88	4.06
17	5.94	4.01	10.02	4.43	5.17	3.84	5.58	4.12	6.19	4.25	5.99	4.26
18	5.79	3.90	5.17	4.04	5.58	4.13	5.32	3.90	6.00	4.14	5.87	4.21
19	6.02	4.61	5.54	3.77	5.97	4.72	5.23	3.89	6.02	4.14	6.94	4.49
20	6.22	4.16	5.97	4.06	5.91	4.07	5.26	3.83	5.98	4.13	6.67	4.90
21	6.20	4.32	6.32	4.40	5.70	3.95	5.21	3.80	5.91	4.01	5.93	4.29
22	5.61	3.84	6.35	4.88	5.74	3.85	5.26	3.77	5.77	4.15	5.87	4.65
23	5.78	4.00	6.43	4.88	5.73	3.96	5.20	3.76	5.76	4.09	6.36	4.83
24	5.74	4.22	6.09	4.51	5.94	3.79	5.21	3.72	5.53	4.17	6.95	5.27
25	5.58	4.12	5.93	4.19	5.99	3.75	5.46	3.71	5.35	4.10	6.98	5.19
26	5.80	4.35	5.79	3.82	6.10	3.93	5.50	3.75	6.39	4.01	5.98	3.87
27	6.59	4.31	6.18	3.88	6.24	3.86	5.57	3.79	6.39	4.02	5.74	4.31
28	6.26	4.33	7.02	3.89	5.67	3.89	5.62	4.02	5.37	4.11	6.12	4.60
29	5.70	3.76	6.28	4.12	7.08	4.01	5.44	4.20	5.36	4.04	6.35	4.18
30	6.19	3.88	6.38	3.80	6.21	4.81	5.23	4.24	5.46	4.16	5.94	4.19
31	---	---	5.93	4.09	---	---	5.07	3.92	5.67	4.14	---	---
MONTH	16.62	3.72	10.02	3.72	7.08	3.69	8.20	3.71	15.24	3.77	8.46	3.87

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^2.

PERIOD OF RECORDS.--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.--No estimated daily discharges. Records fair. No known regulation or diversions.

DISCHARGE FROM DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

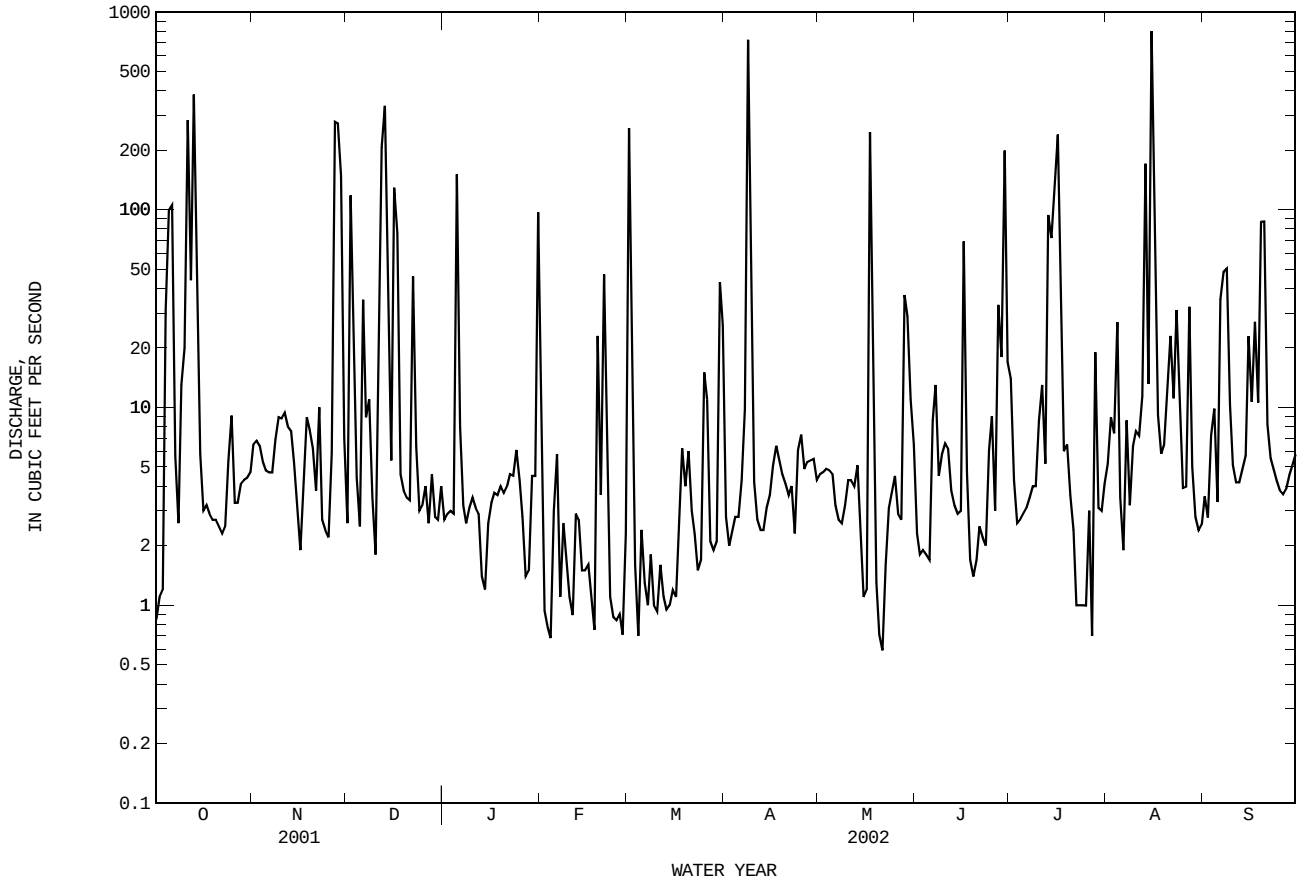
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.85	6.5	2.6	2.7	3.9	258	2.8	4.6	2.3	14	5.2	3.5
2	1.1	6.8	118	2.9	0.94	16	2.0	4.7	1.8	4.3	8.9	2.8
3	1.2	6.4	21	3.0	0.77	1.6	2.4	4.9	1.9	2.6	7.4	7.2
4	31	5.3	4.4	2.9	0.68	0.70	2.8	4.8	1.8	2.7	27	9.9
5	99	4.8	2.5	151	3.0	2.4	2.8	4.6	1.7	2.9	3.5	3.3
6	105	4.7	35	8.0	5.8	1.3	4.3	3.2	8.6	3.1	1.9	35
7	5.7	4.7	8.9	3.2	1.1	1.0	9.8	2.7	13	3.5	8.6	49
8	2.6	6.9	11	2.6	2.6	1.8	722	2.6	4.5	4.0	3.2	50
9	13	8.9	3.5	3.1	1.8	1.0	20	3.2	5.8	4.0	6.4	10
10	20	8.8	1.8	3.5	1.1	0.93	4.2	4.3	6.6	8.6	7.6	5.1
11	283	9.4	24	3.1	0.89	1.6	2.7	4.3	6.2	13	7.2	4.2
12	44	8.0	207	2.9	2.9	1.1	2.4	4.0	3.8	5.2	11	4.2
13	382	7.6	335	1.4	2.7	0.95	2.4	5.1	3.2	94	171	4.9
14	25	5.3	23	1.2	1.5	1.0	3.1	2.3	2.9	72	13	5.7
15	5.8	3.0	5.4	2.6	1.5	1.2	3.6	1.1	3.0	132	798	23
16	3.0	1.9	129	3.3	1.6	1.1	5.1	1.2	69	240	73	11
17	3.2	3.9	76	3.7	1.1	2.5	6.4	247	4.7	29	9.2	27
18	2.9	8.9	4.6	3.6	0.75	6.2	5.5	8.3	1.7	6.0	5.8	11
19	2.7	7.7	3.8	4.0	23	4.0	4.6	1.3	1.4	6.5	6.5	87
20	2.7	6.2	3.5	3.7	3.6	6.0	4.1	0.71	1.7	3.6	12	87
21	2.5	3.8	3.4	4.0	47	3.0	3.6	0.59	2.5	2.4	23	8.2
22	2.3	10	46	4.6	14	2.3	4.0	1.6	2.2	1.0	11	5.5
23	2.5	2.7	6.3	4.5	1.1	1.5	2.3	3.1	2.0	1.0	31	4.8
24	5.4	2.4	3.0	6.1	0.87	1.7	6.1	3.7	6.1	1.0	13	4.3
25	9.1	2.2	3.2	4.3	0.84	15	7.3	4.5	9.0	0.99	3.9	3.8
26	3.3	5.9	4.0	2.8	0.90	11	4.9	2.9	3.0	3.0	4.0	3.6
27	3.3	278	2.6	1.4	0.71	2.1	5.3	2.7	33	0.70	32	3.9
28	4.1	273	4.6	1.5	2.3	1.9	5.4	37	18	19	5.0	4.6
29	4.3	148	2.8	4.5	---	2.1	5.5	29	199	3.1	2.8	5.1
30	4.4	7.0	2.7	4.5	---	43	4.3	11	17	3.0	2.4	5.8
31	4.7	---	4.0	97	---	26	---	6.5	---	4.1	2.6	---
TOTAL	1079.65	858.7	1102.6	347.6	128.95	419.98	861.7	417.50	437.4	690.29	1317.1	490.4
MEAN	34.83	28.62	35.57	11.21	4.605	13.55	28.72	13.47	14.58	22.27	42.49	16.35
MAX	382	278	335	151	47	258	722	247	199	240	798	87
MIN	0.85	1.9	1.8	1.2	0.68	0.70	2.0	0.59	1.4	0.70	1.9	2.8
AC-FT	2140	1700	2190	689	256	833	1710	828	868	1370	2610	973

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2002, BY WATER YEAR (WY)

MEAN	15.78	16.05	13.57	18.73	12.52	12.23	13.25	17.71	28.21	13.66	14.11	20.02
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1972 - 2002	
ANNUAL TOTAL	11546.50		8151.87			
ANNUAL MEAN	31.63		22.33		16.31	
HIGHEST ANNUAL MEAN					32.1	1979
LOWEST ANNUAL MEAN					4.97	1988
HIGHEST DAILY MEAN	1720	Jun 9	798	Aug 15	1720	Jun 9 2001
LOWEST DAILY MEAN	0.53	May 23	0.59	May 21	0.00	Aug 5 1972
ANNUAL SEVEN-DAY MINIMUM	0.60	May 18	1.1	Mar 9	0.04	Jul 27 1986
MAXIMUM PEAK FLOW			2210	Apr 8	6870	Jun 9 2001
MAXIMUM PEAK STAGE			15.57	Apr 8	23.38	Jun 9 2001
ANNUAL RUNOFF (AC-FT)	22900		16170		11820	
10 PERCENT EXCEEDS	64		35		27	
50 PERCENT EXCEEDS	3.8		4.1		2.3	
90 PERCENT EXCEEDS	1.5		1.3		0.56	

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^2.

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.--No estimated daily discharges. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

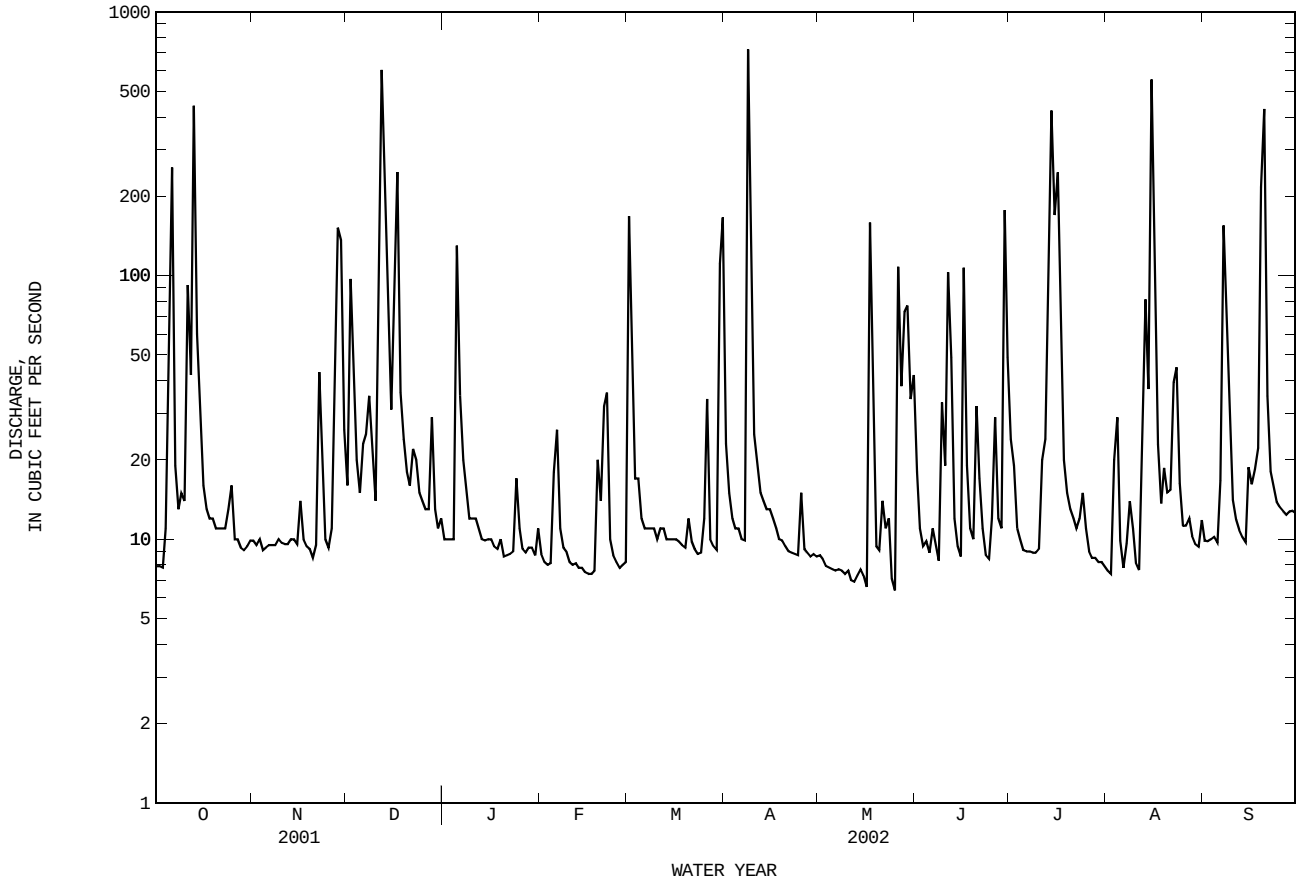
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	9.9	16	10	8.8	168	23	8.7	18	24	7.6	9.9
2	7.9	9.5	97	10	8.2	46	15	8.4	11	19	7.4	9.8
3	7.8	10	50	10	8.0	17	12	7.9	9.4	11	20	10
4	11	9.1	20	10	8.1	17	11	7.8	9.8	10	29	10
5	73	9.3	15	130	18	12	11	7.7	8.9	9.1	9.9	9.7
6	257	9.5	23	35	26	11	10	7.6	11	9.0	7.8	17
7	19	9.5	25	20	11	11	9.9	7.7	9.6	9.0	9.7	155
8	13	9.5	35	16	9.3	11	721	7.6	8.3	8.9	14	75
9	15	10	21	12	9.0	11	82	7.4	33	8.9	11	29
10	14	9.7	14	12	8.2	10	25	7.6	19	9.2	8.1	14
11	92	9.6	77	12	8.0	11	19	7.0	103	20	7.6	12
12	42	9.6	602	11	8.1	11	15	6.9	49	24	31	11
13	441	10	177	10	7.8	10	14	7.3	12	89	81	10
14	60	10	71	9.9	7.8	10	13	7.7	9.4	423	37	9.7
15	32	9.6	31	10	7.5	10	13	7.3	8.6	170	554	19
16	16	14	112	10	7.4	10	12	6.6	107	246	159	16
17	13	10	247	9.4	7.4	9.8	11	159	19	82	23	18
18	12	9.4	36	9.2	7.6	9.5	10	33	11	20	14	22
19	12	9.2	24	10	20	9.3	9.9	9.4	10	15	19	216
20	11	8.5	18	8.6	14	12	9.4	9.1	32	13	15	428
21	11	9.5	16	8.7	32	9.8	9.0	14	17	12	15	35
22	11	43	22	8.8	36	9.2	8.9	11	11	11	39	18
23	11	19	20	9.0	10	8.8	8.8	12	8.7	12	45	16
24	13	10	15	17	8.7	8.9	8.7	7.1	8.4	15	16	14
25	16	9.3	14	11	8.2	12	15	6.4	12	11	11	13
26	10	11	13	9.2	7.8	34	9.2	108	29	9.0	11	13
27	10	52	13	8.9	8.0	10	8.9	38	12	8.5	12	12
28	9.3	152	29	9.3	8.2	9.4	8.6	73	11	8.5	10	13
29	9.1	136	13	9.3	---	9.1	8.8	77	177	8.2	9.6	13
30	9.4	26	11	8.7	---	111	8.6	34	49	8.2	9.4	13
31	9.9	---	12	11	---	166	---	42	---	7.9	12	---
TOTAL	1276.3	663.7	1889	476.0	329.1	804.8	1140.7	754.2	834.1	1331.4	1255.1	1261.1
MEAN	41.17	22.12	60.94	15.35	11.75	25.96	38.02	24.33	27.80	42.95	40.49	42.04
MAX	441	152	602	130	36	168	721	159	177	423	554	428
MIN	7.8	8.5	11	8.6	7.4	8.8	8.6	6.4	8.3	7.9	7.4	9.7
AC-FT	2530	1320	3750	944	653	1600	2260	1500	1650	2640	2490	2500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002, BY WATER YEAR (WY)

MEAN	25.51	21.56	22.39	28.24	24.50	26.12	23.54	30.30	40.53	17.23	17.86	28.39
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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1964 - 2002	
ANNUAL TOTAL	18966.3		12015.5			
ANNUAL MEAN	51.96		32.92		25.50	
HIGHEST ANNUAL MEAN					48.6	2001
LOWEST ANNUAL MEAN					4.69	1964
HIGHEST DAILY MEAN	2950	Jun 9	721	Apr 8	2950	Jun 9 2001
LOWEST DAILY MEAN	4.7	Jun 2	6.4	May 25	0.88	Aug 24 1971
ANNUAL SEVEN-DAY MINIMUM	5.4	May 29	7.2	May 10	1.0	Jul 2 1965
MAXIMUM PEAK FLOW			1420	Apr 8	3230	Jun 9 2001
MAXIMUM PEAK STAGE			34.32	Apr 8	41.97	Jun 9 2001
ANNUAL RUNOFF (AC-FT)	37620		23830		18480	
10 PERCENT EXCEEDS	88		73		40	
50 PERCENT EXCEEDS	11		11		7.3	
90 PERCENT EXCEEDS	6.4		8.1		3.3	

08075770 Hunting Bayou at Interstate Highway 610, Houston, TX--Continued



08075900 Greens Bayou near U.S. Highway 75 near Houston, TX
(Flood-hydrograph partial-record station)

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^2.

PERIOD OF RECORD.--Aug. 1965 to Sept. 1980, Oct. 1980 to Mar. 1981 (discharge measurements and supplemental peak discharges only). Mar. 1981 to Sept. 1992, 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 poor. No known regulation or diversions.

AVERAGE DISCHARGE.--26 years (water year 1966-80, 1982-1992), 40.5 ft^3/s (29,370 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft^3/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^3/s, Oct. 21, 22, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 6	0015	2,380	77.87	July 13	2230	3,720	80.15
Oct. 11	1315	*5,680	*82.92	Aug. 15	1330	4,140	80.79
Oct. 13	0715	3,190	79.29	Sept. 19	1800	1,900	76.91
Dec. 12	0130	3,900	80.42	Sept. 20	0245	2,800	78.62
Apr. 8	0830	5,260	82.36				

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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^2. Oct. 1952 to Sept. 30, 1973, 72.7 mi^2; Oct. 1, 1973, to Sept. 30, 1988, 69.6 mi^2. Basin boundary changes due to relocation of drainage ditches.

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 Reliant Energy (which is obtained from ground-water sources), and wastewater effluent from Houston suburbs. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	38	40	41	40	327	41	36	44	82	35	34
2	33	41	330	40	34	119	34	35	34	75	33	32
3	33	41	154	41	36	45	31	35	33	47	205	35
4	48	40	51	42	35	39	31	37	33	44	349	34
5	229	39	41	360	87	35	30	34	31	36	67	34
6	977	35	53	117	112	35	29	34	30	46	48	37
7	107	35	45	57	48	34	30	33	34	33	47	857
8	53	35	165	48	38	34	2880	34	34	33	38	300
9	45	35	90	46	37	34	391	33	192	39	35	122
10	43	34	45	49	35	33	116	33	141	73	34	84
11	1830	37	359	44	34	32	70	32	44	56	33	44
12	1020	38	2110	40	35	33	53	32	37	39	79	37
13	1880	36	865	39	34	32	48	33	34	451	76	36
14	435	35	254	41	34	32	44	33	35	1400	76	35
15	157	34	114	39	35	34	44	29	32	310	1370	71
16	92	77	354	39	35	36	43	31	385	507	550	85
17	57	47	485	40	36	36	42	199	96	181	114	190
18	48	35	98	40	37	35	44	135	e45	74	76	85
19	44	35	65	49	45	34	40	46	125	53	76	756
20	43	32	54	44	46	91	40	38	61	141	56	1420
21	41	30	50	40	54	47	38	35	42	65	118	152
22	42	32	63	39	95	34	41	33	36	53	136	68
23	43	31	74	39	34	32	42	34	34	49	238	47
24	43	30	46	54	30	33	39	32	76	46	53	41
25	42	29	43	48	31	35	45	33	187	48	43	38
26	40	40	41	35	31	107	39	32	99	51	42	38
27	40	100	42	36	33	39	36	32	78	42	36	39
28	40	221	171	37	30	34	37	47	66	44	36	38
29	41	138	56	36	---	34	37	55	446	42	36	37
30	40	64	45	36	---	122	36	51	183	40	35	36
31	37	---	44	41	---	165	---	66	---	67	33	---
TOTAL	7659	1494	6447	1697	1211	1812	4471	1402	2747	4267	4203	4862
MEAN	247.1	49.80	208.0	54.74	43.25	58.45	149.0	45.23	91.57	137.6	135.6	162.1
MAX	1880	221	2110	360	112	327	2880	199	446	1400	1370	1420
MIN	33	29	40	35	30	32	29	29	30	33	33	32
AC-FT	15190	2960	12790	3370	2400	3590	8870	2780	5450	8460	8340	9640

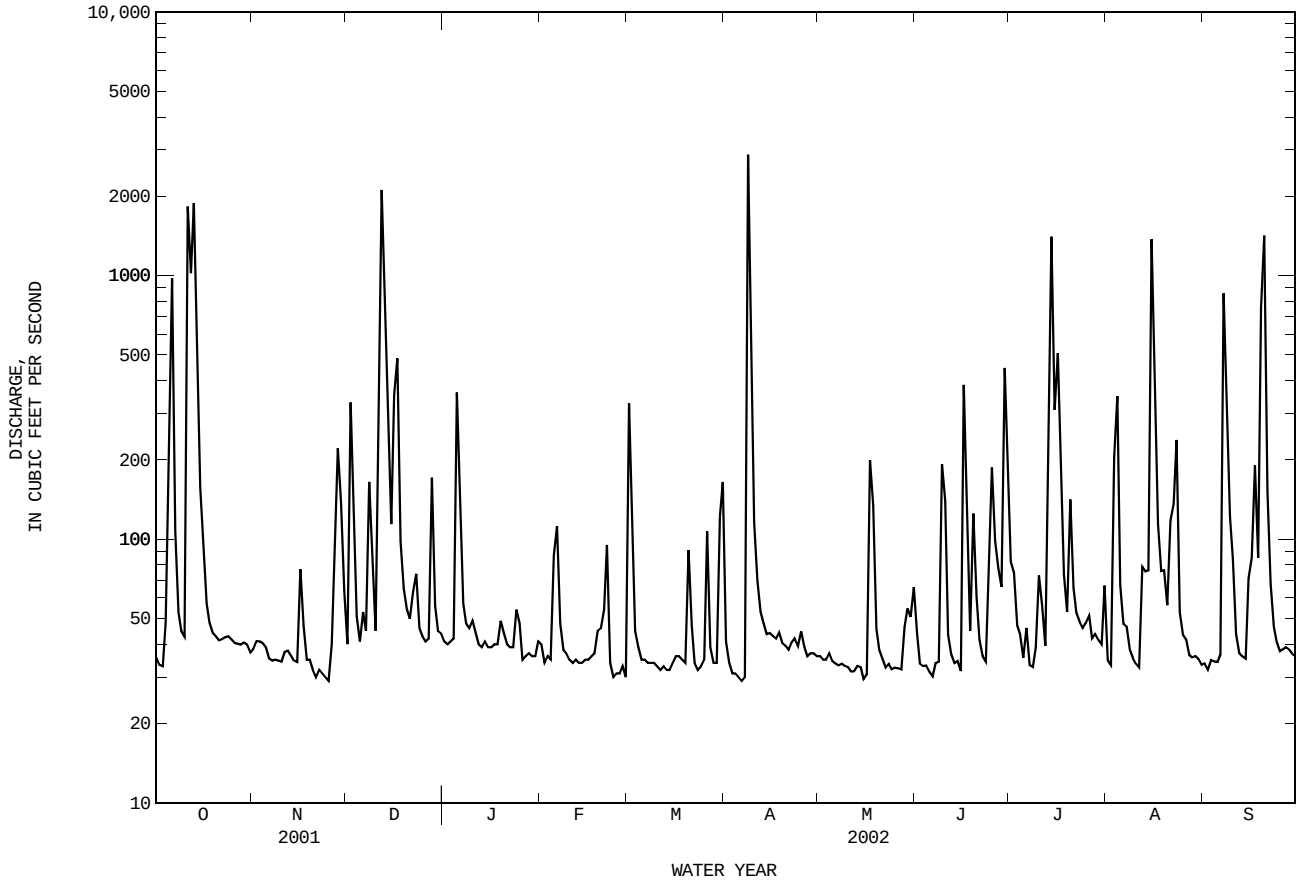
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2002, BY WATER YEAR (WY)

MEAN	76.13	72.95	75.38	79.41	90.05	72.96	82.42	114.4	122.4	56.03	51.27	82.61
MAX	353	338	293	284	353	374	328	480	1211	291	330	443
(WY)	1985	1975	1992	1991	1961	1997	1973	1989	2001	1961	1983	1961
MIN	0.000	0.000	0.000	0.058	0.35	0.045	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1953 - 2002	
ANNUAL TOTAL	77235		42272			
ANNUAL MEAN	211.6		115.8		81.17	
HIGHEST ANNUAL MEAN					194	2001
LOWEST ANNUAL MEAN					6.82	1956
HIGHEST DAILY MEAN	22300	Jun 9	2880	Apr 8	22300	Jun 9 2001
LOWEST DAILY MEAN	29	Nov 25	29	Nov 25	0.00	Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	31	Nov 19	31	Nov 19	0.00	Oct 1 1952
MAXIMUM PEAK FLOW			5990	Apr 8	26500	Jun 9 2001
MAXIMUM PEAK STAGE			60.20	Apr 8	67.81	Jun 9 2001
ANNUAL RUNOFF (AC-FT)	153200		83850		58800	
10 PERCENT EXCEEDS	288		188		142	
50 PERCENT EXCEEDS	44		41		25	
90 PERCENT EXCEEDS	33		33		2.5	

e Estimated

08076000 Greens Bayou near Houston, TX--Continued



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^2.

PERIOD OF RECORD.--Feb. 1986 to Sept. 1993, 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	12	16	16	16	181	21	10	16	22	8.0	16
2	13	12	68	16	13	55	18	10	9.9	18	8.7	16
3	13	11	37	18	13	18	16	11	9.6	16	70	17
4	13	12	16	18	13	15	15	10	9.4	15	65	16
5	64	12	14	173	26	14	15	10	9.5	14	13	16
6	410	11	13	49	31	14	15	11	8.6	14	10	16
7	33	11	17	24	16	14	15	10	9.0	14	19	401
8	18	12	45	19	14	15	1350	9.8	9.0	14	17	317
9	21	11	25	18	13	14	274	9.5	42	14	11	41
10	17	11	14	16	13	13	51	9.4	20	15	9.4	29
11	1020	12	101	17	13	14	23	9.4	13	15	9.1	19
12	1220	12	1610	16	13	15	21	9.3	12	14	14	16
13	1740	12	600	15	13	13	18	9.6	12	213	65	16
14	332	12	212	14	12	14	14	9.5	12	740	48	15
15	64	12	50	14	13	15	14	9.1	12	83	428	17
16	28	11	279	14	13	14	15	9.5	90	230	183	20
17	18	11	623	15	13	14	13	42	23	97	44	78
18	16	12	84	14	13	15	12	31	14	25	22	58
19	15	12	33	15	16	14	12	12	47	16	20	463
20	14	11	23	14	15	23	12	10	29	12	17	830
21	14	11	20	14	15	15	12	9.8	22	11	17	67
22	14	11	21	14	23	13	12	9.4	18	9.9	16	25
23	13	11	21	14	13	13	12	9.4	15	9.5	20	19
24	13	11	17	16	13	13	12	9.5	15	9.0	16	16
25	13	11	16	16	13	15	12	9.6	22	9.5	16	15
26	12	13	15	13	13	24	12	9.6	23	9.5	16	16
27	11	18	15	14	14	14	11	9.5	18	9.1	16	15
28	12	189	87	15	13	15	11	14	16	9.6	17	15
29	13	151	24	14	---	14	11	17	291	9.6	16	14
30	12	23	18	14	---	93	10	13	92	9.1	16	15
31	12	---	16	21	---	102	---	19	---	8.8	16	---
TOTAL	5222	681	4150	680	419	835	2059	381.9	939.0	1705.6	1263.2	2634
MEAN	168.5	22.70	133.9	21.94	14.96	26.94	68.63	12.32	31.30	55.02	40.75	87.80
MAX	1740	189	1610	173	31	181	1350	42	291	740	428	830
MIN	11	11	13	13	12	13	10	9.1	8.6	8.8	8.0	14
AC-FT	10360	1350	8230	1350	831	1660	4080	757	1860	3380	2510	5220

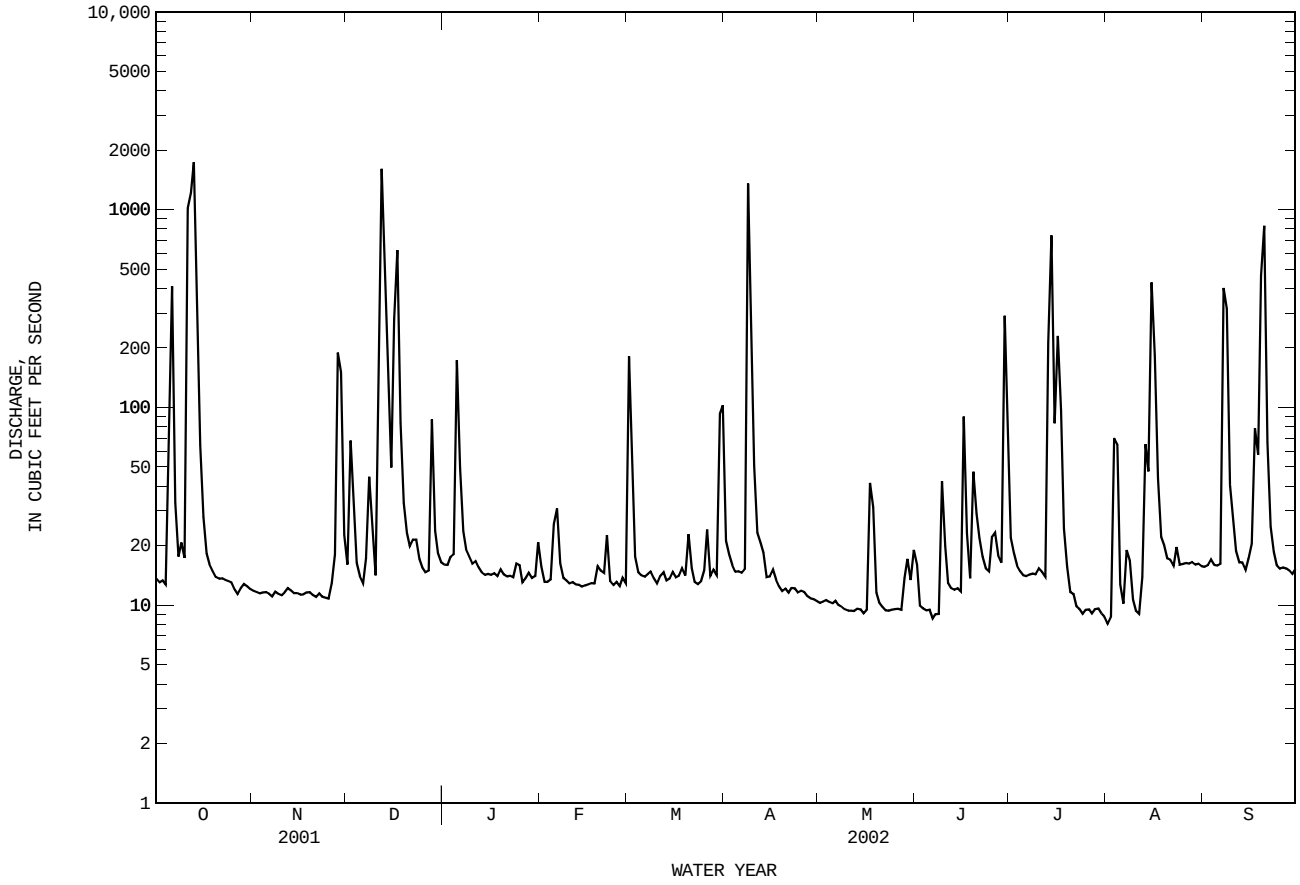
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2002h, BY WATER YEAR (WY)

MEAN	32.37	40.17	64.36	61.26	48.42	73.27	50.59	67.63	173.7	30.81	21.28	28.71
MAX	168	89.7	187	158	174	238	144	265	595	113	40.7	87.8
(WY)	2002	1987	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	10.5	8.82	6.48	5.13	6.74
(WY)	1988	1989	1989	2002	1989	1987	1987	1988	1990	1986	1990	1988

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1985 - 2002h	
ANNUAL TOTAL	37357.8		20969.7			
ANNUAL MEAN	102.4		57.45		57.96	
HIGHEST ANNUAL MEAN					96.5	1992
LOWEST ANNUAL MEAN					20.7	1990
HIGHEST DAILY MEAN	9400	Jun 9	1740	Oct 13	9400	Jun 9 2001
LOWEST DAILY MEAN	9.5	Jan 6	8.0	Aug 1	3.0	Sep 28 1990
ANNUAL SEVEN-DAY MINIMUM	10	Jan 3	9.0	Jul 27	3.1	Sep 25 1990
MAXIMUM PEAK FLOW			3110	Dec 12	12400	Jun 9 2001
MAXIMUM PEAK STAGE			53.12	Dec 12	59.41	Jun 9 2001
ANNUAL RUNOFF (AC-FT)	74100		41590		41990	
10 PERCENT EXCEEDS	128		73		89	
50 PERCENT EXCEEDS	15		15		12	
90 PERCENT EXCEEDS	11		9.9		6.2	

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^2. Prior to Oct. 1, 1973, 24.7 mi^2. Oct. 1, 1973 to Sept. 30, 1977, 28.3 mi^2. Oct. 1, 1977 to Sept. 30, 1988, 27.6 mi^2. Changes were the result of drainage ditch extensions or relocations.

PERIOD OF RECORD.--Oct. 1952 to Sept. 1993, 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	11	13	17	14	156	18	12	12	25	10	8.7
2	12	11	110	16	13	54	15	12	10	22	11	8.5
3	12	11	61	15	12	21	13	12	9.9	12	64	8.8
4	18	11	22	15	12	17	12	12	9.7	10	47	8.8
5	82	11	16	197	27	15	12	12	9.6	10	14	8.8
6	314	11	18	66	37	15	12	12	9.9	9.8	10	11
7	36	11	15	31	19	15	13	11	9.6	10	11	170
8	19	11	31	24	15	14	1310	11	9.4	10	14	183
9	17	10	26	21	14	14	211	11	26	9.7	11	57
10	15	10	16	20	13	13	69	11	93	12	10	15
11	528	12	165	19	13	13	40	11	19	14	11	12
12	280	11	1130	17	13	13	29	11	12	9.5	28	11
13	795	10	500	17	12	13	24	11	9.9	107	21	11
14	196	10	193	16	12	12	21	11	9.9	397	19	10
15	62	9.9	72	15	12	13	19	10	9.3	88	514	20
16	32	13	273	15	12	13	18	10	89	173	190	17
17	21	11	319	15	12	14	17	101	24	66	33	36
18	17	11	56	14	13	14	16	42	12	20	17	27
19	15	10	34	16	18	14	16	14	11	14	14	304
20	14	9.1	25	15	21	23	15	11	14	15	15	343
21	14	8.8	22	14	18	15	15	10	11	13	21	39
22	14	12	24	14	39	12	14	9.8	9.5	12	33	18
23	13	9.6	28	14	16	12	14	9.7	9.0	11	55	15
24	13	9.1	22	17	14	12	13	9.7	9.5	24	18	13
25	12	11	17	16	14	12	14	9.9	36	13	12	11
26	12	11	15	14	12	83	12	11	17	11	10	11
27	11	21	15	14	12	16	12	9.7	14	12	10	11
28	11	199	97	14	12	13	13	19	13	11	9.6	10
29	10	88	29	13	---	12	12	20	111	11	8.6	10
30	10	22	20	13	---	98	12	36	43	11	8.7	11
31	11	---	18	16	---	76	---	41	---	11	8.4	---
TOTAL	2629	606.5	3402	740	451	837	2031	533.8	682.2	1174.0	1258.3	1419.6
MEAN	84.81	20.22	109.7	23.87	16.11	27.00	67.70	17.22	22.74	37.87	40.59	47.32
MAX	795	199	1130	197	39	156	1310	101	111	397	514	343
MIN	10	8.8	13	13	12	12	12	9.7	9.0	9.5	8.4	8.5
AC-FT	5210	1200	6750	1470	895	1660	4030	1060	1350	2330	2500	2820

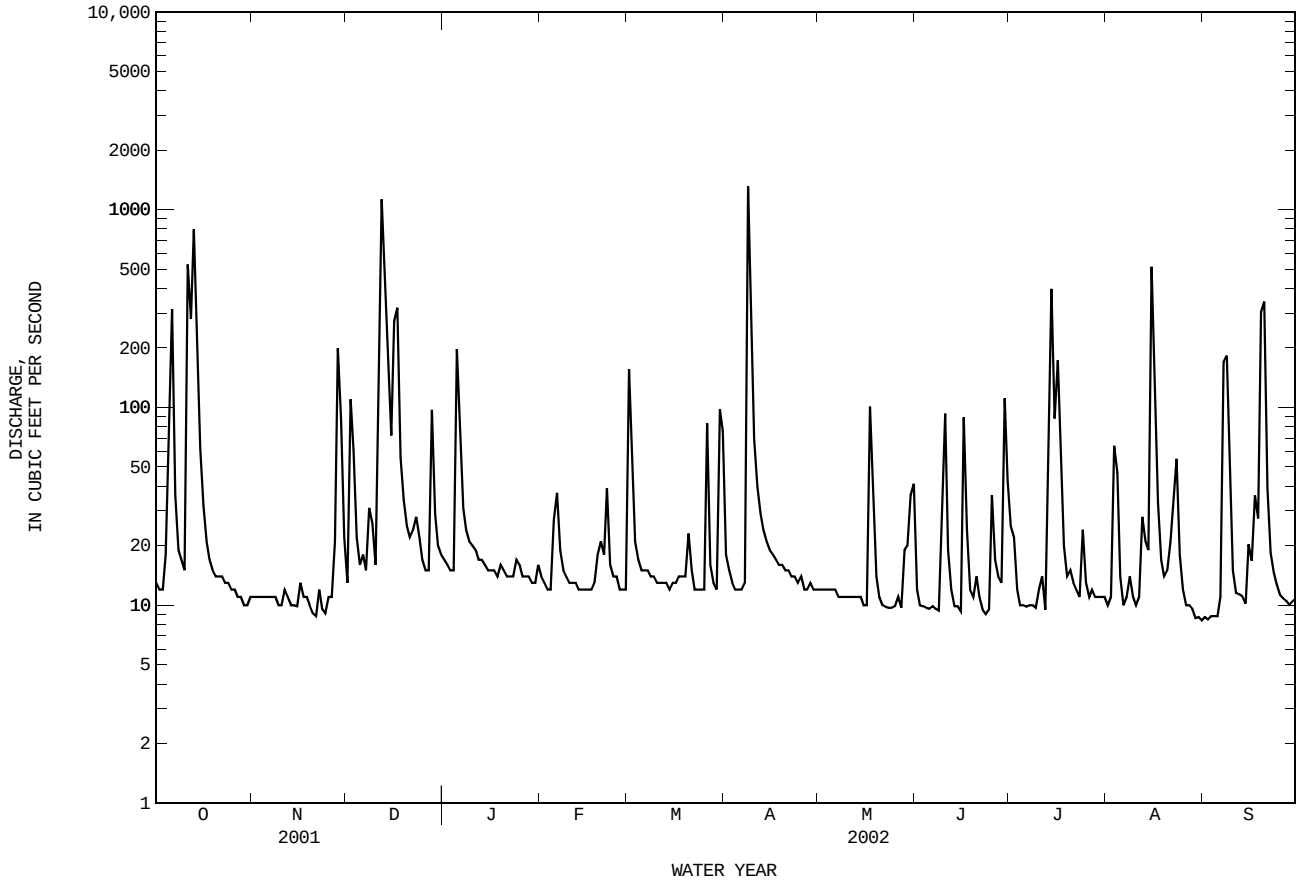
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2002h, BY WATER YEAR (WY)

MEAN	24.94	28.48	31.03	35.59	39.51	31.72	31.76	42.63	41.30	24.34	21.70	31.31
MAX	138	98.4	114	123	127	145	127	174	245	149	174	185
(WY)	1985	1975	1992	1974	1961	1992	1973	1970	1973	1961	1983	1979
MIN	0.000	0.38	0.67	0.30	1.05	0.38	0.67	0.99	0.077	0.42	0.78	0.25
(WY)	1953	1956	1955	1957	1957	1955	1955	1956	1954	1956	1963	1956

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 1953 - 2002h	
ANNUAL TOTAL	15764.4			
ANNUAL MEAN	43.19		31.77	
HIGHEST ANNUAL MEAN			71.0	1992
LOWEST ANNUAL MEAN			2.99	1956
HIGHEST DAILY MEAN	1310	Apr 8	2800	May 18 1989
LOWEST DAILY MEAN	8.4	Aug 31	0.00	Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	8.6	Aug 29	0.00	Oct 1 1952
MAXIMUM PEAK FLOW	2530	Apr 8	7320	Jun 9 2001
MAXIMUM PEAK STAGE	58.02	Apr 8	a64.89	Jun 9 2001
ANNUAL RUNOFF (AC-FT)	31270		23020	
10 PERCENT EXCEEDS	78		51	
50 PERCENT EXCEEDS	14		9.2	
90 PERCENT EXCEEDS	10		1.1	

h See PERIOD OF RECORD paragraph.
a From floodmark.

08076500 Halls Bayou at Houston, TX--Continued



08076700 Greens Bayou at Ley Road, Houston, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°50′13", long 95°13′59", Harris County, Hydrologic Unit 12040104, on right bank at downstream side of bridge on Ley Road in northeast Houston and 300 ft downstream from mouth of Halls Bayou.

DRAINAGE AREA.--182 mi^2.

PERIOD OF RECORD.--Nov. 1962 to Dec. 1964, May 1971 to Sept. 1971 (discharge measurements only), Oct. 1971 to Sept. 1991 (peak discharges greater than base discharge), Aug. 1992 to current year (peak discharges above 2,000 ft^3/s).
Water-quality records.--Chemical data: Oct. 1970 to Sept. 1981. Biochemical data: Oct. 1970 to Sept. 1981. Pesticide data: Oct. 1970 to Sept. 1981.

GAGE.--Water-stage recorder. Datum of gage is 2.13 ft below NGVD of 1929, 1973 adjustment. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records good. Discharge is computed for all storms that produce peak discharges above 2,000 ft^3/s. Gage was discontinued on Sept. 12, 1991, for bridge construction and temporarily relocated about 1.0 mi downstream at U.S. Highway 90 to obtain stage data for the Harris County Flood Control District. Gage was moved back to Ley Road on Aug. 12, 1992, at current datum. No known regulation or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,700 ft^3/s, from indirect measurement of peak flow, June 9, 2001, gage height, 44.02 ft, from floodmark; minimum not determined (affected by tide).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	1180	---	---	---	---	---	---
2	---	---	---	---	---	816	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	1100	---	---	---	---	---	---	---	---
6	2860	---	---	551	---	---	---	---	---	---	---	---
7	466	---	---	---	---	---	---	---	---	---	---	1980
8	---	---	---	---	---	---	7010	---	---	---	---	1580
9	---	---	---	---	---	---	2980	---	---	---	---	774
10	---	---	---	---	---	---	589	---	---	---	---	---
11	2750	---	---	---	---	---	---	---	---	---	---	---
12	4230	---	7610	---	---	---	---	---	---	---	---	---
13	6420	---	2950	---	---	---	---	---	---	---	---	---
14	2750	---	1550	---	---	---	---	---	---	3700	---	---
15	714	---	586	---	---	---	---	---	---	781	2660	---
16	---	---	874	---	---	---	---	---	---	1300	2540	---
17	---	---	2930	---	---	---	---	---	---	881	523	---
18	---	---	586	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	1200
20	---	---	---	---	---	---	---	---	---	---	---	5870
21	---	---	---	---	---	---	---	---	---	---	---	827
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	1240	---	---	---
30	---	---	---	---	---	598	---	---	934	---	---	---
31	---	---	---	---	---	1270	---	---	---	---	---	---

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08077600 Clear Creek near Friendswood, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°31’02", long 95°10’42", Harris-Galveston County line, Hydrologic Unit 12040204, on right bank at right downstream side of bridge on Farm Road 528 near Friendswood.

DRAINAGE AREA.--122 mi^2.

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 fair. No known regulation or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft^3/s, June 9, 2001, gage height, 20.43 ft; maximum gage height, 20.85 ft, Aug. 1, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 13	1645	4,420	8.79	Apr. 8	1645	7,300	13.22
Dec. 13	1815	5,710	11.02	Aug. 16	0015	*7,930	*13.92

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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 current year (maximum and minimum elevations for Galveston Bay and maximum elevation for 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.

EXTREMES FOR PERIOD OF RECORD (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, 3.0 ft, Sept. 8; minimum elevation, -1.8 ft, Jan. 7.

EXTREMES FOR CURRENT YEAR (GALVESTON BAY).--Maximum elevation, 3.9 ft, Sept. 6; minimum elevation, -1.9 ft, Jan. 7.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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

08077650 Moses Lake-Galveston Bay near Texas City, TX--Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

	FEBRUARY			MARCH			APRIL			MAY		
	MOSES LAKE	GALV. BAY	GALV. BAY	MOSES LAKE	GALV. BAY	GALV. BAY	MOSES LAKE	GALV. BAY	GALV. BAY	MOSES LAKE	GALV. BAY	GALV. BAY
DAY	MAX	MAX	MIN	MAX	MAX	MIN	MAX	MAX	MIN	MAX	MAX	MIN
1	0.4	0.2	-1.1	2.1	2.5	---	1.2	1.2	-0.6	1.5	1.6	-0.3
2	0.8	0.8	-0.2	---	---	---	1.6	1.6	0.0	1.4	1.5	0.0
3	0.8	0.8	0.3	---	---	---	1.2	1.2	-0.1	1.3	1.4	-0.2
4	1.0	0.9	-0.3	---	---	---	1.3	1.3	-0.2	1.2	1.4	0.0
5	1.8	1.9	0.5	1.0	1.1	---	1.4	1.4	0.1	1.4	1.4	0.2
6	1.8	1.7	-0.1	1.0	1.1	-0.1	1.8	1.8	0.2	1.4	1.5	0.8
7	0.4	0.6	-1.1	1.2	1.2	-0.3	2.0	2.1	1.0	1.6	1.6	1.1
8	0.9	1.1	-0.5	1.5	1.6	0.3	2.2	2.2	1.2	2.1	2.0	1.2
9	1.2	1.3	0.0	1.6	1.6	0.1	2.0	1.9	1.0	2.1	2.1	0.8
10	1.2	1.3	-1.1	1.0	1.4	-0.5	1.6	1.5	0.7	1.7	1.7	0.7
11	0.0	0.3	-1.3	1.5	1.5	0.4	1.6	1.6	1.0	2.0	2.2	0.7
12	0.6	0.8	-0.3	1.4	1.4	-0.2	1.5	1.5	0.9	2.2	2.3	0.9
13	0.7	0.8	-0.4	0.7	0.8	-0.1	1.2	1.3	0.5	1.5	1.8	0.0
14	0.7	0.9	-0.2	1.2	1.3	0.5	1.4	1.5	0.3	1.8	1.9	-0.3
15	1.0	1.1	0.3	1.3	1.3	0.8	1.5	1.5	0.4	2.2	2.3	1.0
16	0.9	0.9	-0.4	1.1	1.1	0.7	1.6	1.7	0.2	2.0	2.2	0.9
17	0.6	0.7	0.0	1.1	1.1	0.6	1.5	1.5	0.1	2.2	2.3	0.2
18	1.5	1.6	0.3	1.4	1.4	0.4	1.5	1.5	0.0	1.1	1.0	-0.2
19	1.6	1.7	0.8	1.7	1.7	0.4	1.5	1.6	0.0	1.6	1.6	0.0
20	1.4	1.3	0.3	1.5	1.5	-0.2	1.6	1.7	0.2	1.6	1.7	0.6
21	1.5	1.9	0.2	0.7	0.8	-1.0	1.6	1.7	0.4	1.6	1.8	0.9
22	1.1	1.1	-0.3	1.1	1.3	-0.6	1.4	1.3	0.0	1.7	1.9	1.2
23	1.2	1.4	-0.3	1.5	1.6	0.0	1.2	1.2	0.2	1.8	2.0	0.9
24	1.2	1.4	-0.4	1.6	1.7	0.2	1.2	1.1	0.4	1.8	2.0	0.6
25	1.5	1.6	-0.2	1.6	1.7	0.2	1.2	1.2	0.5	1.6	1.7	0.3
26	1.3	1.3	-1.3	1.4	1.4	-0.6	1.4	1.4	0.5	1.5	1.7	0.1
27	-0.2	0.4	-1.5	1.2	1.2	0.0	1.8	1.8	0.4	1.8	2.0	0.1
28	1.3	1.5	0.3	1.4	1.5	0.6	1.6	1.7	0.2	2.0	2.2	0.3
29	---	---	---	1.2	1.3	0.2	1.4	1.4	-0.2	1.8	2.0	0.3
30	---	---	---	1.3	1.4	0.0	1.5	1.5	-0.1	1.7	2.0	0.1
31	---	---	---	1.1	1.3	-0.2	---	---	---	1.8	2.0	0.5
MONTH	1.8	1.9	-1.5	---	---	---	2.2	2.2	-0.6	2.2	2.3	-0.3

	JUNE			JULY			AUGUST			SEPTEMBER		
	MOSES LAKE	GALV. BAY	GALV. BAY	MOSES LAKE	GALV. BAY	GALV. BAY	MOSES LAKE	GALV. BAY	GALV. BAY	MOSES LAKE	GALV. BAY	GALV. BAY
DAY	MAX	MAX	MIN	MAX	MAX	MIN	MAX	MAX	MIN	MAX	MAX	MIN
1	1.7	1.8	0.7	1.4	1.6	0.7	0.9	0.9	0.0	1.8	1.8	0.5
2	1.7	1.8	0.8	1.2	1.4	0.7	0.9	1.0	-0.2	1.9	2.0	0.7
3	1.7	1.8	1.0	1.3	1.4	0.6	0.9	1.0	0.0	2.3	2.4	1.0
4	1.6	1.7	0.9	1.2	1.4	0.2	1.3	1.4	-0.2	2.6	2.6	1.2
5	1.8	2.0	0.9	0.9	1.1	-0.4	1.5	1.6	-0.2	1.8	2.7	1.2
6	1.6	1.7	0.8	0.7	0.9	-0.5	1.1	1.2	-0.5	2.1	3.9	1.7
7	1.5	1.6	0.4	1.2	1.3	-0.2	1.3	1.3	-0.5	2.5	3.8	2.4
8	1.6	1.7	0.4	---	1.7	0.1	1.2	1.7	0.1	3.0	3.1	2.2
9	1.7	1.8	0.4	1.7	2.0	0.2	1.5	1.6	0.0	2.9	2.9	2.2
10	1.9	2.1	0.4	1.5	1.7	0.0	2.3	2.3	0.6	2.6	2.8	1.6
11	2.1	2.3	0.7	1.2	1.4	-0.1	2.3	2.3	1.4	1.9	2.5	0.8
12	1.9	2.0	0.5	1.3	1.5	-0.1	1.9	2.0	1.2	1.2	2.1	0.4
13	1.7	1.9	0.2	1.3	1.8	-0.1	1.8	1.8	1.0	1.8	1.9	0.4
14	1.4	1.5	0.2	0.9	1.1	-0.2	1.7	1.7	0.7	2.0	2.1	0.6
15	1.3	1.5	-0.2	1.1	1.2	0.1	2.6	2.6	0.9	1.8	1.9	0.3
16	1.3	1.5	0.2	1.2	1.4	0.5	2.2	2.3	0.6	1.7	1.8	0.4
17	1.0	1.1	0.0	1.4	1.5	0.3	1.9	2.0	0.3	1.7	1.8	0.4
18	1.2	1.3	0.5	1.1	1.2	0.0	1.7	1.9	0.2	1.5	1.6	0.4
19	1.3	1.5	0.7	1.0	1.2	-0.3	1.7	1.8	0.1	1.7	1.8	0.6
20	1.5	1.7	0.4	1.1	1.2	-0.3	1.7	1.7	0.1	1.6	1.8	0.7
21	1.4	1.5	0.2	1.0	1.1	-0.5	1.7	1.8	0.2	1.7	1.7	0.4
22	1.7	1.8	0.3	1.0	1.1	-0.5	1.6	1.6	0.3	1.4	1.8	1.0
23	1.7	1.8	0.3	1.0	1.0	-0.6	1.4	1.4	0.2	1.3	2.5	1.6
24	1.6	1.8	0.0	1.0	1.0	-0.6	1.3	1.3	0.4	1.3	3.1	1.7
25	1.6	1.9	-0.1	1.0	1.1	-0.5	1.1	1.2	0.4	1.3	3.1	1.8
26	1.6	1.8	0.2	1.1	1.2	-0.2	0.9	1.4	0.5	1.4	2.1	0.2
27	1.5	1.7	0.1	1.2	1.2	0.0	0.9	1.3	0.3	1.7	1.8	0.6
28	1.3	1.5	0.2	1.0	1.0	0.1	1.2	1.3	0.5	2.1	2.2	0.7
29	1.9	2.2	0.3	1.0	1.0	0.3	1.3	1.3	0.3	2.1	2.2	0.3
30	1.7	1.9	1.0	0.9	1.0	0.4	1.5	1.5	0.2	1.8	1.8	0.4
31	---	---	---	0.9	1.0	0.2	1.6	1.6	0.4	---	---	---
MONTH	2.1	2.3	-0.2	---	2.0	-0.6	2.6	2.6	-0.5	3.0	3.9	0.2

08077690 Highland Bayou Diversion Channel near Hitchcock, TX

LOCATION.--Lat 29°21'36", long 95°02'22", Galveston County, Hydrologic Unit 12040204, on center of earthen dam, 0.5 mi east of Hitchcock, and approximately 0.6 mi upstream from FM 2004.

DRAINAGE AREA.--Not applicable.

PERIOD OF RECORD.--Mar. 1997 to current year (daily maximum elevation).

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

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 8.84 ft, June 9, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 8.49 ft, Aug. 15.

ELEVATION FROM DCP, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.03	2.31	2.16	1.94	0.90	3.64	1.85	2.07	2.32	2.23	1.51	2.37
2	1.83	2.31	2.30	2.01	1.39	3.40	2.16	1.91	2.32	2.02	1.50	2.50
3	1.88	2.42	2.24	1.06	1.32	0.98	1.78	1.92	2.35	1.94	1.46	2.87
4	2.02	2.40	2.12	1.60	1.47	1.38	1.85	1.78	2.22	1.98	2.04	3.15
5	2.14	2.39	2.22	2.94	2.31	1.67	1.98	2.01	2.38	1.56	2.12	3.30
6	2.43	2.52	2.10	1.77	2.24	1.63	2.51	2.04	2.26	1.31	1.63	4.45
7	2.16	2.17	1.85	1.06	0.96	1.92	2.70	2.22	2.21	1.85	1.81	5.26
8	2.33	2.04	1.62	0.88	1.50	2.22	3.12	2.78	2.19	2.14	2.37	3.75
9	2.85	2.00	1.13	0.94	1.60	2.15	2.57	2.64	2.30	2.59	2.19	4.45
10	3.01	1.88	1.39	1.09	1.57	2.03	2.13	2.23	2.59	2.14	2.96	3.54
11	3.31	1.80	2.37	1.15	---	2.11	2.21	2.67	2.82	2.14	2.94	3.12
12	2.87	1.73	2.52	1.16	---	2.01	2.09	2.81	2.55	2.04	2.57	2.54
13	3.59	2.11	2.21	1.29	---	1.34	1.87	2.05	2.35	2.12	2.41	2.37
14	2.09	2.54	1.77	1.54	---	1.82	2.00	2.46	1.98	1.76	2.42	2.64
15	2.72	3.09	2.53	1.32	---	1.98	2.12	2.83	2.04	2.15	8.49	2.42
16	2.30	3.12	2.71	1.71	---	1.87	2.33	2.69	2.02	2.84	6.80	2.51
17	2.60	2.26	2.88	1.51	---	1.85	2.12	4.14	1.66	2.16	2.83	2.56
18	2.45	1.84	1.49	1.32	---	2.09	2.10	2.41	1.83	1.79	2.61	2.21
19	2.31	1.85	1.73	1.32	---	2.64	2.08	2.21	2.16	1.57	2.42	2.46
20	2.12	1.23	1.33	1.58	---	2.03	2.21	2.36	2.10	1.69	2.39	2.25
21	2.41	1.66	1.68	1.58	---	1.49	2.23	2.44	2.13	1.64	2.39	2.27
22	2.40	2.05	2.37	1.61	---	1.93	1.78	2.55	2.33	1.69	2.19	2.27
23	2.45	2.43	2.12	1.66	---	2.20	1.80	2.57	2.31	1.68	2.05	3.03
24	2.39	2.37	1.57	1.65	---	2.27	1.82	2.43	2.39	1.64	1.93	3.45
25	2.10	2.23	1.73	1.26	---	2.23	1.73	2.26	2.27	1.76	1.75	3.67
26	2.58	2.44	1.42	1.60	---	1.78	1.95	2.19	2.27	1.82	1.76	2.86
27	2.35	2.24	1.28	1.80	---	1.86	2.55	2.41	2.33	1.76	1.62	2.30
28	2.11	2.24	1.83	2.03	1.98	2.08	2.27	2.56	2.09	1.63	1.82	2.62
29	1.94	1.70	1.83	1.83	---	1.97	2.01	2.52	2.66	1.57	1.86	2.73
30	1.96	1.89	1.93	1.93	---	2.05	2.02	2.40	2.49	1.57	1.99	2.32
31	2.25	---	2.03	2.00	---	1.64	---	2.45	---	1.49	2.11	---
MAX	3.59	3.12	2.88	2.94	---	3.64	3.12	4.14	2.82	2.84	8.49	5.26

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08077695 Highland Bayou near Hitchcock, TX

LOCATION.--Lat 29°21'36", long 95°02'22", Galveston County, Hydrologic Unit 12040204, on center of earthen dam approximately 3000 ft upstream from FM 2004 and 0.5 mi east of Hitchcock.

DRAINAGE AREA.--14.2 mi^2.

PERIOD OF RECORD.--Mar. 1997 to current year (daily maximum).

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

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 8.61 ft, Sept. 11, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 6.18 ft, Aug. 9.

ELEVATION FROM DCP, in FT (NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.97	2.30	2.15	1.93	0.91	3.46	1.79	2.11	2.27	2.14	1.51	2.36
2	1.79	2.28	2.28	1.94	1.39	3.30	2.13	1.91	2.31	1.95	1.49	2.51
3	1.86	2.42	2.19	1.06	1.34	0.90	1.73	1.87	2.34	1.90	1.47	2.83
4	2.01	2.39	2.12	1.59	1.48	1.26	1.80	1.77	2.19	1.91	2.02	3.15
5	2.13	2.36	2.23	2.85	2.28	1.57	1.95	1.95	2.33	1.52	2.14	3.20
6	2.30	2.52	2.09	1.75	2.21	1.55	2.44	2.03	2.19	1.28	1.65	4.20
7	2.13	2.19	1.85	1.07	0.97	1.86	2.70	2.19	2.19	1.82	1.81	5.04
8	2.33	2.07	1.62	0.89	1.49	2.19	3.03	2.79	2.17	2.13	2.37	3.74
9	2.85	2.03	1.13	0.94	1.60	2.09	2.57	2.64	2.27	2.58	2.23	4.23
10	3.01	1.90	1.38	1.09	1.54	1.96	2.15	2.16	2.55	2.13	2.96	3.49
11	3.33	1.81	2.37	1.16	---	2.07	2.18	2.65	2.78	2.25	2.97	3.11
12	2.86	1.73	2.53	1.16	---	1.98	2.10	2.79	2.54	2.06	2.67	2.53
13	3.55	2.11	2.16	1.30	---	1.34	1.86	1.95	2.32	2.07	2.51	2.38
14	2.14	2.54	1.75	1.55	---	1.80	1.98	2.41	1.96	1.74	2.36	2.61
15	2.75	3.03	2.49	1.33	---	1.96	2.09	2.79	2.00	2.11	6.18	2.43
16	2.24	3.10	3.06	1.72	---	1.84	2.31	2.68	1.96	2.57	4.32	2.49
17	2.61	2.27	2.99	1.51	---	1.80	2.10	3.32	1.61	2.08	2.73	2.59
18	2.48	1.87	1.48	1.34	---	2.03	2.07	2.10	1.79	1.80	2.58	2.22
19	2.35	1.86	1.72	1.34	---	2.51	2.09	2.17	2.12	1.60	2.42	2.50
20	2.12	1.26	1.33	1.61	---	1.98	2.21	2.32	2.07	1.70	2.38	2.26
21	2.42	1.67	1.69	1.61	---	1.43	2.20	2.42	2.07	1.64	2.37	2.29
22	2.36	2.06	2.50	1.61	---	1.89	1.76	2.53	2.31	1.68	2.19	2.16
23	2.43	2.43	2.08	1.65	---	2.13	1.81	2.58	2.28	1.68	2.04	2.99
24	2.37	2.39	1.57	1.66	---	2.20	1.82	2.39	2.36	1.66	1.95	3.40
25	2.04	2.16	1.72	1.25	---	2.17	1.74	2.24	2.24	1.76	1.76	3.65
26	2.53	2.46	1.41	1.60	---	1.75	1.93	2.17	2.23	1.79	1.78	2.92
27	2.32	2.15	1.28	1.78	---	1.83	2.53	2.39	2.20	1.78	1.64	2.41
28	2.09	2.21	1.81	2.00	1.96	2.05	2.28	2.57	2.01	1.63	1.83	2.73
29	1.91	1.70	1.81	1.82	---	1.94	2.01	2.40	2.54	1.56	1.86	2.77
30	1.91	1.88	1.91	1.93	---	2.00	2.05	2.45	2.41	1.56	1.97	2.37
31	2.22	---	1.98	2.00	---	1.58	---	2.42	---	1.49	2.09	---
MAX	3.55	3.10	3.06	2.85	---	3.46	3.03	3.32	2.78	2.58	6.18	5.04

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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.

Supplementary gage (station 08077752): Lat 29°20′26", long 94°57′00", in LaMarque Levee Gravity Drain 4,000 ft southeast along LaMarque Levee from LaMarque Levee Pump Station.

PERIOD OF RECORD.--Nov. 1986 to current year (maximum elevation landward, maximum and minimum elevation seaward, and maximum elevation for supplementary gage).

GAGE.--Water-stage recorders. Datum of gages are NGVD of 1929 (levels by Galveston County Engineer). Radio telemeter at station. Telephone telemeter at station.

Supplementary gage: Radio telemeter at station.

REMARKS.--Records good. Landward orifice records elevation of flood runoff behind levee. This runoff is pumped into Jones Bay. Only maximum landward elevations equal or exceeding -3.0 ft are shown. Seaward records are tidal but influenced by runoff in Highland Bayou.

Supplementary gage: Records fair. Landward orifice records elevation of flood runoff behind levee. Seaward records are equivalent to seaward records at primary station. A channel connects site to pumping station. Water will be pumped, or drained by gravity, into Jones Bay depending on elevation of seaward water-surface. Only elevations equal or exceeding -2.0 ft are shown.

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.

Supplementary gage: Maximum elevation (landward), 11.0 ft, June 7, 1992; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum elevation (landward), 2.1 ft, Aug. 15; maximum elevation (seaward), 4.4 ft, Sept. 7; minimum elevation (seaward), -1.2 ft, Jan. 7.

Supplementary gage: Maximum elevation (landward), 1.2 ft, Aug. 15; minimum not determined.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

	OCTOBER				NOVEMBER				DECEMBER			
	LAND-WARD	SEA-WARD	SEA-WARD	SUPPLE-MENTARY	LAND-WARD	SEA-WARD	SEA-WARD	SUPPLE-MENTARY	LAND-WARD	SEA-WARD	SEA-WARD	SUPPLE-MENTARY
DAY	MAX	MAX	MIN	MAX	MAX	MAX	MIN	MAX	MAX	MAX	MIN	MAX
1	---	1.4	1.0	---	---	1.6	0.9	---	---	1.5	0.3	---
2	-3.0	1.2	0.8	---	---	1.7	0.6	---	---	1.6	0.4	---
3	-3.0	1.2	0.7	---	---	1.8	0.8	---	---	1.5	0.3	---
4	-3.0	1.4	0.8	---	---	1.7	0.6	---	---	1.5	0.3	---
5	-2.7	1.5	0.8	---	---	1.7	0.7	---	---	1.6	0.5	---
6	-2.7	1.5	0.1	---	---	1.9	0.7	---	---	1.4	0.4	---
7	---	1.5	0.7	---	---	1.6	0.4	---	---	1.2	0.2	---
8	---	1.7	0.8	---	---	1.4	0.5	---	---	1.0	-0.3	---
9	---	2.2	1.2	---	---	1.4	0.4	---	---	0.3	-0.2	---
10	---	2.4	1.4	---	---	1.3	0.3	---	---	0.8	0.2	---
11	---	2.7	1.5	---	---	1.2	0.5	---	---	1.8	0.3	---
12	---	2.2	1.2	---	---	1.1	0.5	---	---	1.9	1.1	---
13	-2.2	2.7	1.4	---	---	1.5	0.6	---	-2.5	1.3	0.5	---
14	---	1.4	0.3	---	---	1.9	0.9	---	-2.5	0.7	-0.3	---
15	---	2.0	0.4	---	---	2.4	1.4	---	---	1.9	0.5	---
16	---	1.6	0.7	---	---	2.5	1.2	---	-2.2	2.0	0.8	---
17	---	1.9	1.1	---	---	1.7	0.4	---	-1.3	1.9	0.0	-1.8
18	---	1.8	0.7	---	---	1.2	0.1	---	---	0.7	-0.2	---
19	---	1.7	0.5	---	---	1.2	0.1	---	---	1.1	-0.3	---
20	---	1.5	0.5	---	---	0.4	-0.4	---	---	0.6	-0.1	---
21	---	1.8	0.8	---	---	1.0	0.3	---	---	1.0	0.4	---
22	---	1.8	0.6	---	---	1.4	0.8	---	-0.3	1.4	0.9	-1.0
23	---	1.8	0.8	---	---	1.8	1.2	---	-0.1	1.4	0.3	-0.8
24	---	1.8	0.7	---	---	1.8	0.6	---	---	0.9	0.2	---
25	---	1.4	0.8	---	---	1.6	0.6	---	---	1.0	0.2	---
26	---	1.9	0.9	---	---	1.9	1.3	---	---	0.8	-0.4	---
27	---	1.7	1.0	---	---	1.5	0.9	---	---	0.6	-0.7	---
28	---	1.4	0.9	---	---	1.5	0.5	---	---	1.1	0.1	---
29	---	1.3	0.8	---	---	0.9	-0.1	---	---	1.1	0.1	---
30	---	1.3	0.7	---	---	1.2	-0.2	---	---	1.2	0.1	---
31	---	1.6	1.1	---	---	---	---	---	---	1.3	0.1	---
MONTH	---	2.7	0.1	---	---	2.5	-0.4	---	---	2.0	-0.7	---

08077740 LaMarque Levee Pump Station near LaMarque, TX--Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

	JANUARY				FEBRUARY				MARCH			
	LAND-WARD	SEA-WARD	SEA-WARD	SUPPLE-MENTARY	LAND-WARD	SEA-WARD	SEA-WARD	SUPPLE-MENTARY	LAND-WARD	SEA-WARD	SEA-WARD	SUPPLE-MENTARY
DAY	MAX	MAX	MIN	MAX	MAX	MAX	MIN	MAX	MAX	MAX	MIN	MAX
1	---	1.3	0.1	---	---	0.2	-0.9	---	---	2.7	1.3	---
2	---	1.2	-0.2	---	---	0.7	-0.5	---	---	2.7	0.2	---
3	---	0.4	-0.7	---	---	0.7	0.2	---	---	0.3	-1.0	---
4	---	0.8	-0.1	---	---	0.8	-0.2	---	---	0.7	-0.6	---
5	-2.0	1.8	0.5	---	---	1.6	0.5	---	---	0.9	-0.2	---
6	---	0.5	-1.0	---	---	1.6	0.3	---	---	0.9	0.1	---
7	---	-0.7	-1.2	---	---	0.3	-0.7	---	---	1.2	0.0	---
8	---	0.2	-0.8	---	---	0.9	-0.3	---	---	1.6	0.5	---
9	---	0.3	-0.4	---	---	1.0	0.2	---	---	1.5	0.1	---
10	---	0.4	-0.5	---	---	0.9	-0.8	---	---	1.3	0.0	---
11	---	0.4	-0.6	---	---	0.1	-0.8	---	---	1.5	0.8	---
12	---	0.4	-0.5	---	---	0.5	-0.2	---	---	1.4	0.1	---
13	---	0.6	-0.4	---	---	0.6	-0.3	---	---	0.7	0.2	---
14	---	0.9	-0.2	---	---	0.7	0.0	---	---	1.1	0.6	---
15	---	0.7	-0.1	---	---	0.9	0.3	---	---	1.3	0.9	---
16	---	1.1	0.2	---	---	0.5	-0.2	---	---	1.2	0.8	---
17	---	0.9	0.1	---	---	0.4	-0.1	---	---	1.1	0.7	---
18	---	0.7	0.0	---	---	1.4	0.2	---	---	1.4	0.5	---
19	---	0.6	-0.5	---	---	1.4	0.9	---	---	1.9	0.6	---
20	---	0.9	0.0	---	---	1.2	0.3	---	---	1.5	0.3	---
21	---	1.0	0.3	---	---	1.2	0.2	---	---	0.6	-0.5	---
22	---	1.0	0.2	---	---	1.0	-0.1	---	---	1.2	-0.4	---
23	---	1.1	0.1	---	---	1.1	0.1	---	---	1.5	0.2	---
24	---	1.1	0.2	---	---	1.3	0.1	---	---	1.6	0.6	---
25	---	0.4	-0.7	---	---	1.4	0.3	---	---	1.5	0.7	---
26	---	1.0	-0.2	---	---	0.8	-0.8	---	---	1.1	-0.2	---
27	---	1.2	0.0	---	---	0.0	-1.0	---	---	1.2	0.4	---
28	---	1.3	0.1	---	---	1.3	0.0	---	---	1.4	0.8	---
29	---	1.2	0.2	---	---	---	---	---	---	1.3	0.6	---
30	---	1.3	0.5	---	---	---	---	---	---	1.4	0.4	---
31	---	1.4	0.2	---	---	---	---	---	---	1.0	0.1	---
MONTH	---	1.8	-1.2	---	---	1.6	-1.0	---	---	2.7	-1.0	---

	APRIL				MAY				JUNE			
	LAND-WARD	SEA-WARD	SEA-WARD	SUPPLE-MENTARY	LAND-WARD	SEA-WARD	SEA-WARD	SUPPLE-MENTARY	LAND-WARD	SEA-WARD	SEA-WARD	SUPPLE-MENTARY
DAY	MAX	MAX	MIN	MAX	MAX	MAX	MIN	MAX	MAX	MAX	MIN	MAX
1	---	1.1	-0.2	---	---	1.5	0.4	---	---	1.7	0.8	---
2	---	1.5	0.3	---	---	1.3	0.4	---	---	1.7	0.8	---
3	---	1.0	0.1	---	---	1.2	0.3	---	---	1.7	1.1	---
4	---	1.2	0.1	---	---	1.2	0.3	---	---	1.5	1.1	---
5	---	1.3	0.3	---	---	1.4	0.5	---	---	1.7	1.1	---
6	---	1.9	0.6	---	---	1.5	1.0	---	---	1.6	0.8	---
7	---	2.0	1.3	---	---	1.6	1.2	---	---	1.4	0.7	---
8	-1.9	2.3	1.5	-2.0	---	2.2	1.5	---	---	1.5	0.6	---
9	---	1.8	0.9	---	---	2.1	1.0	---	---	1.6	0.7	---
10	---	1.4	0.8	---	---	1.6	1.0	---	---	1.9	0.6	---
11	---	1.5	1.1	---	---	2.0	1.1	---	---	2.1	0.9	---
12	---	1.4	0.9	---	---	2.2	1.4	---	---	1.9	0.8	---
13	---	1.2	0.7	---	---	1.4	0.3	---	---	1.7	0.6	---
14	---	1.3	0.6	---	---	1.8	-0.1	---	---	1.3	0.4	---
15	---	1.5	0.6	---	---	2.2	1.0	---	---	1.4	0.1	---
16	---	1.6	0.6	---	---	2.0	1.1	---	---	1.3	0.4	---
17	---	1.4	0.5	---	-1.1	1.9	0.8	-0.9	---	0.9	0.1	---
18	---	1.4	0.3	---	-3.0	1.0	0.1	---	---	1.2	0.5	---
19	---	1.5	0.4	---	---	1.5	0.1	---	---	1.5	0.9	---
20	---	1.6	0.5	---	---	1.6	0.7	---	---	1.5	0.5	---
21	---	1.6	0.7	---	---	1.7	0.9	---	---	1.4	0.5	---
22	---	1.2	0.3	---	---	1.8	1.2	---	---	1.6	0.5	---
23	---	1.2	0.4	---	---	1.9	1.1	---	---	1.7	0.7	---
24	---	1.2	0.6	---	---	1.7	0.9	---	---	1.6	0.5	---
25	---	1.1	0.6	---	---	1.6	0.7	---	---	1.6	0.4	---
26	---	1.4	0.6	---	---	1.5	0.5	---	---	1.6	0.5	---
27	---	1.9	0.6	---	---	1.8	0.4	---	---	1.5	0.5	---
28	---	1.7	0.7	---	---	2.0	0.5	---	---	1.3	0.3	---
29	---	1.3	0.3	---	---	1.8	0.6	---	---	1.9	0.4	---
30	---	1.5	0.4	---	---	1.7	0.5	---	---	1.8	1.1	---
31	---	---	---	---	---	1.8	0.5	---	---	---	---	---
MONTH	---	2.3	-0.2	---	---	2.2	-0.1	---	---	2.1	0.1	---

HIGHLAND BAYOU BASIN

08077740 LaMarque Levee Pump Station near LaMarque, TX--Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

	JULY				AUGUST				SEPTEMBER			
	LAND-WARD	SEA-WARD	SEA-WARD	SUPPLE-MENTARY	LAND-WARD	SEA-WARD	SEA-WARD	SUPPLE-MENTARY	LAND-WARD	SEA-WARD	SEA-WARD	SUPPLE-MENTARY
DAY	MAX	MAX	MIN	MAX	MAX	MAX	MIN	MAX	MAX	MAX	MIN	MAX
1	---	1.5	0.8	---	---	0.9	0.2	---	---	1.7	0.8	---
2	---	1.3	0.7	---	---	0.9	0.1	---	---	1.8	0.9	---
3	---	1.3	0.8	---	---	0.8	0.1	---	---	2.2	1.1	---
4	---	1.2	0.4	---	---	1.3	0.2	---	---	2.5	1.3	---
5	---	0.9	-0.1	---	---	1.5	0.3	---	---	2.5	1.5	---
6	---	0.6	-0.2	---	---	1.0	0.1	---	---	3.5	1.8	---
7	---	1.1	-0.2	---	---	1.2	-0.1	---	-2.4	4.4	2.7	---
8	---	1.5	0.2	---	---	1.7	0.3	---	0.1	3.0	2.5	-0.7
9	---	2.0	0.7	---	---	1.5	0.4	---	-1.9	3.0	2.4	---
10	---	1.5	0.4	---	---	2.2	0.7	---	---	2.7	1.8	---
11	---	1.5	0.1	---	---	2.2	1.5	---	---	2.4	1.2	---
12	---	1.4	0.2	---	---	2.0	1.4	---	---	1.9	0.7	---
13	---	1.3	0.2	---	---	1.8	1.2	---	---	1.7	0.8	---
14	---	0.9	0.2	---	---	1.7	1.1	---	---	2.0	1.0	---
15	-2.1	1.0	0.2	---	2.1	3.1	1.4	1.2	---	1.8	0.6	---
16	-1.8	1.5	0.7	---	1.2	2.7	1.0	0.8	---	1.8	0.7	---
17	---	1.4	0.4	---	---	1.9	0.7	---	---	1.8	0.8	---
18	---	1.1	0.2	---	---	1.8	0.7	---	---	1.6	0.7	---
19	---	0.9	0.0	---	---	1.7	0.6	---	---	1.8	0.8	---
20	---	1.0	0.0	---	---	1.7	0.5	---	-2.3	1.5	0.9	---
21	---	1.0	0.0	---	---	1.7	0.5	---	---	1.6	0.6	---
22	---	1.0	-0.1	---	---	1.5	0.6	---	---	1.5	0.9	---
23	---	1.0	-0.1	---	---	1.3	0.6	---	---	2.3	1.5	---
24	---	1.1	-0.1	---	---	1.3	0.6	---	---	2.7	1.9	---
25	---	1.1	-0.1	---	---	1.1	0.6	---	---	3.0	2.0	---
26	---	1.1	0.1	---	---	1.0	0.4	---	---	2.2	0.8	---
27	---	1.2	0.2	---	---	0.9	0.6	---	---	1.7	0.8	---
28	---	1.0	0.4	---	---	1.1	0.5	---	---	2.0	1.1	---
29	---	1.0	0.5	---	---	1.2	0.5	---	---	2.1	0.8	---
30	---	0.9	0.5	---	---	1.3	0.6	---	---	1.7	0.7	---
31	---	0.9	0.3	---	---	1.5	0.7	---	---	---	---	---
MONTH	---	2.0	-0.2	---	---	3.1	-0.1	---	---	4.4	0.6	---

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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^2. During extreme flooding, overflow from about 11 mi^2 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 good. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

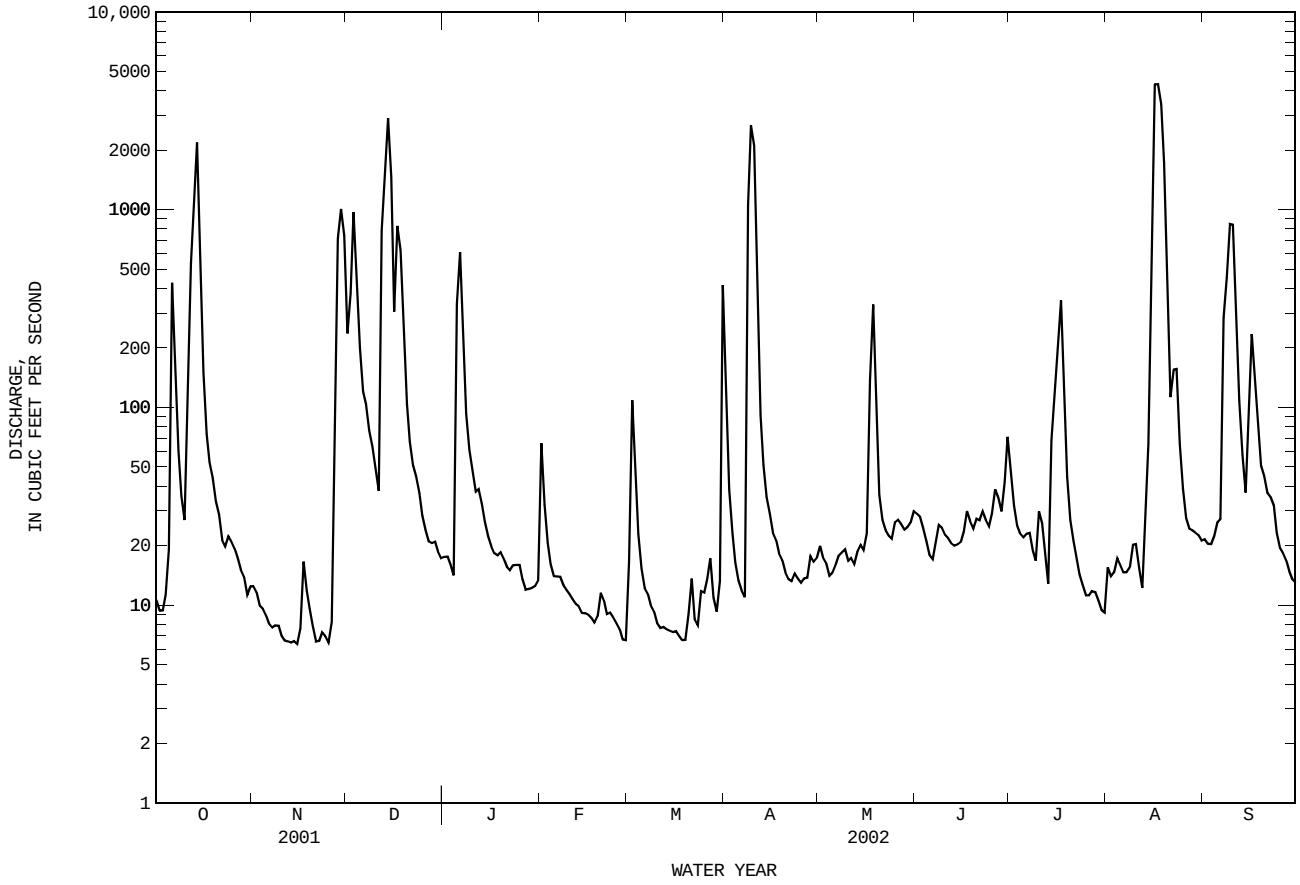
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	237	18	66	17	113	20	29	47	16	22
2	9.4	12	379	18	32	109	39	18	28	32	14	20
3	9.4	10	971	16	21	47	23	16	25	25	15	20
4	11	9.6	488	14	16	23	16	14	21	23	17	22
5	19	9.0	201	334	14	15	13	15	18	22	16	26
6	426	8.1	120	611	14	12	12	16	17	23	15	27
7	177	7.7	104	201	14	11	11	18	21	23	15	285
8	60	7.9	77	93	13	10	1060	19	25	19	16	454
9	36	7.9	64	61	12	9.3	2670	19	25	17	20	847
10	27	7.0	49	48	11	8.1	2110	17	23	30	20	842
11	145	6.6	38	38	11	7.7	444	17	22	26	15	328
12	535	6.6	782	39	10	7.8	91	16	21	18	12	108
13	1010	6.5	1650	33	9.9	7.5	51	19	20	13	25	58
14	2180	6.6	2900	26	9.1	7.4	35	20	20	68	65	37
15	840	6.4	1460	22	9.1	7.3	29	19	21	127	1140	97
16	151	7.6	305	20	8.9	7.4	23	23	23	213	4310	235
17	74	17	827	18	8.6	7.0	21	137	30	348	4330	134
18	53	12	624	18	8.2	6.7	18	331	27	118	3430	82
19	44	9.6	217	19	8.8	6.7	17	84	24	45	1730	51
20	33	7.8	104	17	12	9.0	15	36	27	27	338	45
21	29	6.6	67	16	11	14	14	27	27	21	113	37
22	21	6.6	51	15	9.0	8.5	13	24	30	18	155	35
23	20	7.3	45	16	9.2	7.9	14	22	27	14	157	32
24	22	7.0	37	16	8.7	12	14	22	25	13	66	23
25	21	6.5	28	16	8.1	12	13	26	29	11	39	20
26	19	8.2	24	14	7.5	13	14	27	39	11	28	18
27	17	110	21	12	6.7	17	14	26	35	12	24	17
28	15	715	21	12	6.7	11	18	24	30	12	24	15
29	14	1010	21	12	---	9.3	17	25	42	11	23	14
30	11	741	19	12	---	13	17	26	71	9.4	23	13
31	12	---	17	13	---	416	---	30	---	9.2	21	---
TOTAL	6051.8	2796.1	11948	1818	375.5	869.6	6959	1153	822	1405.6	16232	3964
MEAN	195.2	93.20	385.4	58.65	13.41	28.05	232.0	37.19	27.40	45.34	523.6	132.1
MAX	2180	1010	2900	611	66	416	2670	331	71	348	4330	847
MIN	9.4	6.4	17	12	6.7	6.7	11	14	17	9.2	12	13
AC-FT	12000	5550	23700	3610	745	1720	13800	2290	1630	2790	32200	7860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2002, BY WATER YEAR (WY)

MEAN	85.74	90.82	106.2	133.1	103.1	76.09	99.89	125.0	207.1	147.5	116.3	142.5
MAX	522	378	385	464	508	476	572	528	876	1659	642	843
(WY)	1995	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	16.8	18.2	12.9	12.3	4.47
(WY)	1978	2000	1990	2000	2000	2000	1987	1996	1990	2000	1999	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1959 - 2002	
ANNUAL TOTAL	62623.6		54394.6			
ANNUAL MEAN	171.6		149.0		119.5	
HIGHEST ANNUAL MEAN					340	1979
LOWEST ANNUAL MEAN					19.4	2000
HIGHEST DAILY MEAN	2900	Dec 14	4330	Aug 17	15700	Jul 26 1979
LOWEST DAILY MEAN	2.0	Aug 24	6.4	Nov 15	0.03	Dec 17 1975
ANNUAL SEVEN-DAY MINIMUM	2.9	Aug 20	6.8	Nov 10	0.08	Oct 15 1977
MAXIMUM PEAK FLOW			4730	Aug 16	21500	Jul 26 1979
MAXIMUM PEAK STAGE			30.57	Aug 16	33.88	Jul 26 1979
ANNUAL RUNOFF (AC-FT)	124200		107900		86600	
10 PERCENT EXCEEDS	496		314		206	
50 PERCENT EXCEEDS	21		21		30	
90 PERCENT EXCEEDS	5.3		8.7		3.5	

08078000 Chocolate Bayou near Alvin, TX--Continued



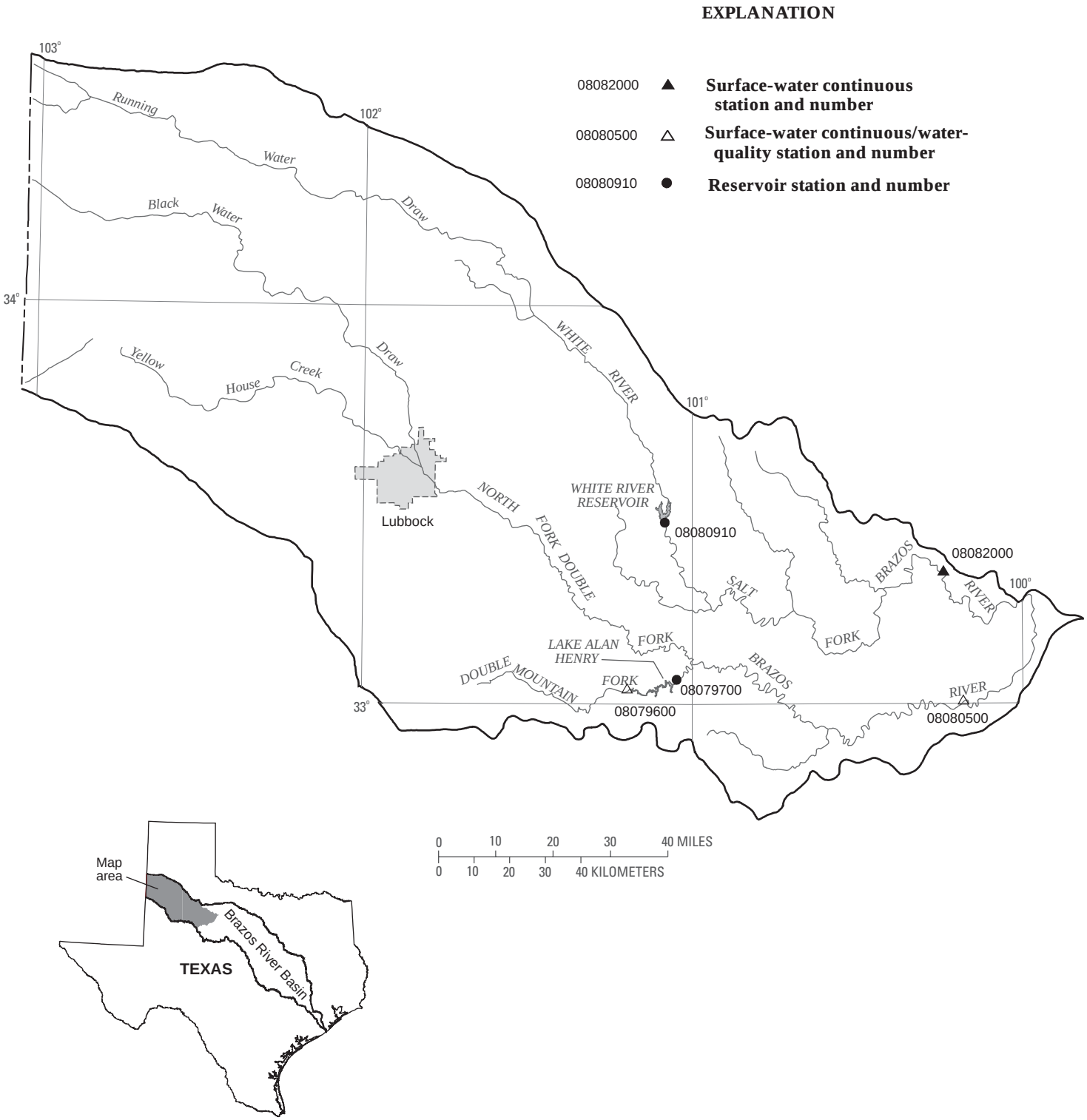


Figure 5.--Map showing location of gaging stations in the first section of the Brazos River Basin

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^2, of which 1,222 mi^2 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. l955, 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	15	e0.02	0.00	0.00	35	0.03	0.00	0.00	4.5	0.00
2	0.00	0.00	10	0.00	0.00	0.00	8.1	0.00	0.00	0.00	e0.50	0.00
3	0.00	0.00	6.4	0.00	0.00	0.00	1.1	0.00	0.00	0.00	e0.01	0.00
4	26	24	4.4	0.00	0.00	0.00	0.00	0.15	0.00	74	0.00	0.00
5	505	0.69	3.3	0.00	8.7	0.00	0.00	12	0.00	60	0.00	0.00
6	10	e0.02	3.0	0.00	61	0.00	5.7	e1.0	0.00	925	0.00	0.00
7	0.32	0.00	2.4	0.00	7.4	0.00	664	e0.02	0.00	300	0.00	0.00
8	e0.05	0.00	1.5	0.00	0.02	0.00	94	0.00	0.00	50	0.00	0.00
9	0.00	0.00	1.1	0.00	0.00	0.00	14	0.00	0.05	12	0.00	0.00
10	0.00	0.00	0.57	0.00	0.00	0.00	6.8	0.00	0.00	11	0.00	0.00
11	0.00	0.00	0.18	0.00	0.00	0.00	4.0	0.00	0.00	12	0.00	0.00
12	0.00	0.00	0.01	0.00	0.00	0.00	1.9	0.00	0.00	12	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.00	0.00	22	8.4	0.00
14	0.00	581	0.00	0.00	0.00	0.00	0.43	0.00	0.00	11	22	0.00
15	0.00	1230	0.00	0.00	0.00	0.00	0.16	0.00	31	11	0.66	0.00
16	0.00	837	0.00	0.00	0.00	0.00	0.02	0.00	0.70	7.8	3.8	0.00
17	0.00	241	0.00	0.00	0.00	0.00	0.00	0.00	0.04	e1.0	e0.50	0.00
18	0.00	51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.02	e0.01	0.00
19	0.00	16	0.00	0.00	0.00	5.2	0.00	0.00	0.00	0.00	0.00	e85
20	0.00	5.0	0.00	0.00	0.00	595	0.00	0.00	0.00	0.00	8.7	e2.0
21	0.00	0.38	0.00	0.00	0.00	22	0.00	0.00	0.00	0.00	1420	e0.50
22	0.00	e0.02	0.00	0.00	0.00	6.5	0.00	0.00	0.00	0.00	60	e0.02
23	0.00	0.00	0.00	0.00	0.00	3.6	0.00	0.00	0.00	0.00	3.6	0.00
24	0.00	0.00	0.00	0.00	0.00	2.5	0.00	0.00	0.00	0.00	0.67	0.00
25	0.00	0.00	0.00	0.00	0.00	2.5	5.5	0.00	0.00	0.00	0.28	0.00
26	0.00	0.00	0.00	0.00	0.00	1.7	21	0.00	0.00	0.00	0.04	0.00
27	0.00	0.00	0.00	0.00	0.00	0.02	0.67	0.10	97	0.00	0.04	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	1.8	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.54	0.04	0.00	0.01	129	0.22	0.00
30	0.00	16	9.2	0.00	---	728	0.02	0.00	0.00	34	0.03	0.00
31	0.00	---	e1.0	0.00	---	458	---	0.00	---	5.8	0.00	---
TOTAL	541.37	3002.11	58.06	0.02	77.12	1825.56	863.53	13.30	130.60	1677.62	1533.96	87.52
MEAN	17.46	100.1	1.873	0.001	2.754	58.89	28.78	0.429	4.353	54.12	49.48	2.917
MAX	505	1230	15	0.02	61	728	664	12	97	925	1420	85
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	1070	5950	115	0.04	153	3620	1710	26	259	3330	3040	174
CFSM	0.07	0.41	0.01	0.00	0.01	0.24	0.12	0.00	0.02	0.22	0.20	0.01
IN.	0.08	0.46	0.01	0.00	0.01	0.28	0.13	0.00	0.02	0.26	0.23	0.01

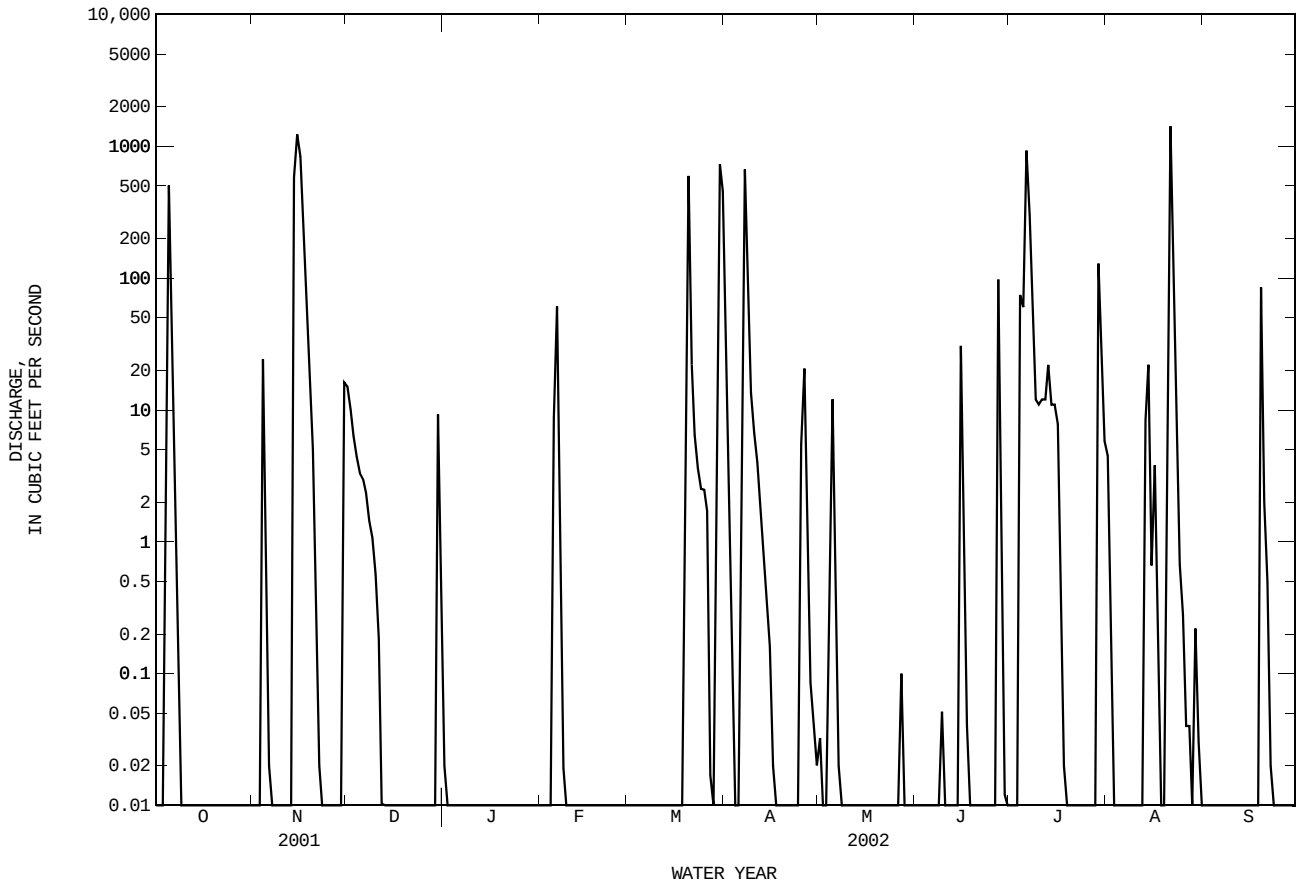
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002, BY WATER YEAR (WY)

MEAN	35.98	8.009	4.319	1.980	4.927	9.767	13.50	52.44	76.20	28.07	33.96	48.75
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.052	0.000	0.000	0.000
(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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002	
ANNUAL TOTAL	10350.55		9810.77			
ANNUAL MEAN	28.36		26.88		26.10	
HIGHEST ANNUAL MEAN					69.8	1967
LOWEST ANNUAL MEAN					1.65	1983
HIGHEST DAILY MEAN	2630	May 31	1420	Aug 21	10000	Jun 12 1999
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Feb 17 1962
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 9	0.00	Mar 3 1962
MAXIMUM PEAK FLOW			5380	Aug 21	c49600	May 6 1969
MAXIMUM PEAK STAGE			a9.86	Aug 21	p19.80	May 6 1969
ANNUAL RUNOFF (AC-FT)	20530		19460		18910	
ANNUAL RUNOFF (CFSM)	0.12		0.11		0.11	
ANNUAL RUNOFF (INCHES)	1.58		1.50		1.45	
10 PERCENT EXCEEDS	9.3		12		9.4	
50 PERCENT EXCEEDS	0.00		0.00		0.01	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated
c From rating curve extended above 5,350 ft^3/s on basis of slope-area measurements of 27,300 and 34,900 ft^3/s.
a From floodmark.
p Observed.



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 are 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, 21,800 microsiemens/cm, June 17; minimum daily, 480 microsiemens/cm, Nov. 16.
WATER TEMPERATURE: Maximum daily, 33.0°C, July 13, Aug. 22; minimum daily, 1.0°C, Mar. 22.

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

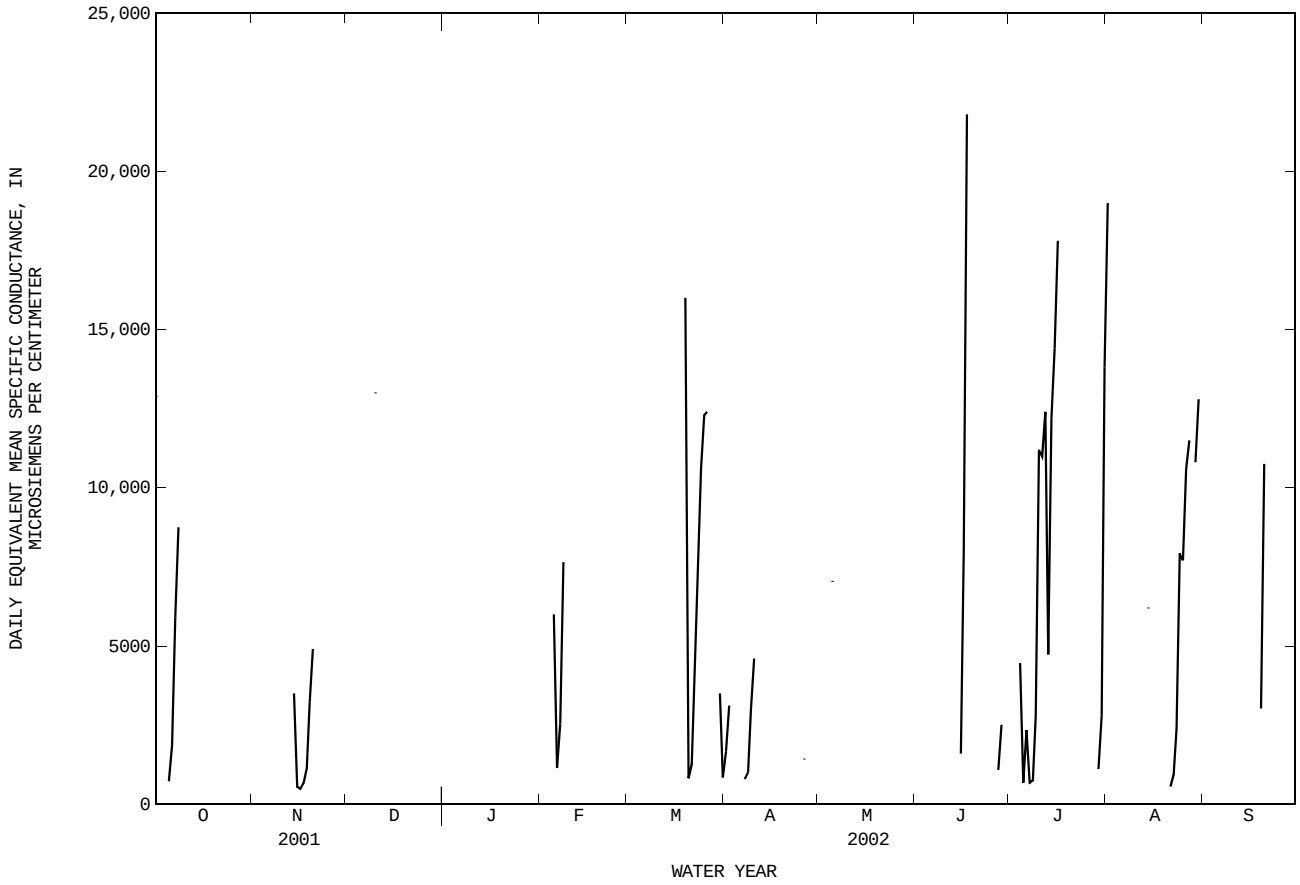
Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
DEC													
10...	1300	.43	12900	--	11.6	--	--	960	239	86.8	2350	33	9.68
MAR													
21...	1230	17	1180	--	12.7	9.4	94	91	23.7	7.76	206	9	4.01
JUN													
27...	1210	133	585	8.3	25.3	6.2	82	12	3.48	.884	132	16	1.20
AUG													
21...	1300	447	483	8.8	27.0	6.5	87	24	6.49	1.96	87.6	8	3.29

Date	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
DEC					
10...	473	4150	1.0	10.9	7450
MAR					
21...	128	228	1.0	6.7	666
JUN					
27...	44.7	76.8	1.4	9.4	358
AUG					
21...	52.7	62.1	1.3	8.0	271

08079600 Double Mountain Fork Brazos River at Justiceburg, TX--Continued

SPECIFIC CONDUCTANCE FROM DAILY OBSERVER, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY EQUIVALENT MEAN VALUES

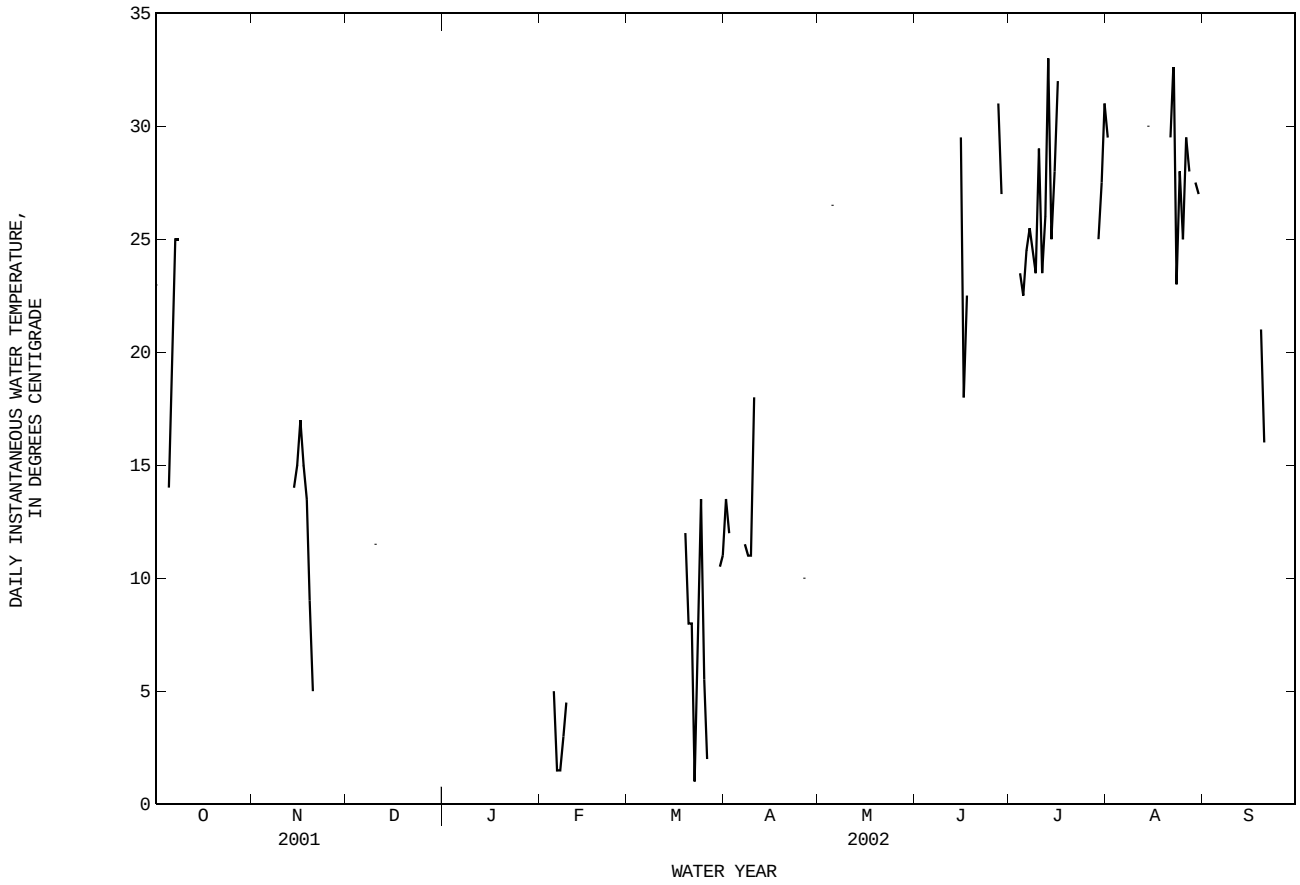
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	1660	---	---	---	19000	---
2	---	---	---	---	---	---	3110	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	4460	---	---
5	726	---	---	---	6000	---	---	7040	---	679	---	---
6	1870	---	---	---	1150	---	---	---	---	2330	---	---
7	5910	---	---	---	2550	---	797	---	---	671	---	---
8	8750	---	---	---	7650	---	1000	---	---	750	---	---
9	---	---	---	---	---	---	3000	---	---	2810	---	---
10	---	---	13000	---	---	---	4600	---	---	11200	---	---
11	---	---	---	---	---	---	---	---	---	11000	---	---
12	---	---	---	---	---	---	---	---	---	12400	---	---
13	---	---	---	---	---	---	---	---	---	4730	---	---
14	---	3500	---	---	---	---	---	---	---	12200	6200	---
15	---	550	---	---	---	---	---	---	1600	14400	---	---
16	---	480	---	---	---	---	---	---	8000	17800	---	---
17	---	665	---	---	---	---	---	---	21800	---	---	---
18	---	1140	---	---	---	---	---	---	---	---	---	---
19	---	3200	---	---	---	16000	---	---	---	---	---	3020
20	---	4900	---	---	---	815	---	---	---	---	---	10800
21	---	---	---	---	---	1260	---	---	---	---	555	---
22	---	---	---	---	---	3860	---	---	---	---	937	---
23	---	---	---	---	---	7520	---	---	---	---	2390	---
24	---	---	---	---	---	10600	---	---	---	---	7930	---
25	---	---	---	---	---	12300	---	---	---	---	7710	---
26	---	---	---	---	---	12400	1420	---	---	---	10600	---
27	---	---	---	---	---	---	---	---	1080	---	11500	---
28	---	---	---	---	---	---	---	---	2510	---	---	---
29	---	---	---	---	---	---	---	---	---	1110	10800	---
30	---	---	---	---	---	3500	---	---	---	2790	12800	---
31	---	---	---	---	---	850	---	---	---	13800	---	---



08079600 Double Mountain Fork Brazos River at Justiceburg, TX--Continued

WATER TEMPERATURE FROM DAILY OBSERVER, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	13.5	---	---	---	29.5	---
2	---	---	---	---	---	---	12.0	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	23.5	---	---
5	14.0	---	---	---	5.0	---	---	26.5	---	22.5	---	---
6	21.0	---	---	---	1.5	---	---	---	---	24.5	---	---
7	25.0	---	---	---	1.5	---	11.5	---	---	25.5	---	---
8	25.0	---	---	---	3.0	---	11.0	---	---	24.5	---	---
9	---	---	---	---	4.5	---	11.0	---	---	23.5	---	---
10	---	---	11.5	---	---	---	18.0	---	---	29.0	---	---
11	---	---	---	---	---	---	---	---	---	23.5	---	---
12	---	---	---	---	---	---	---	---	---	26.0	---	---
13	---	---	---	---	---	---	---	---	---	33.0	---	---
14	---	14.0	---	---	---	---	---	---	---	25.0	30.0	---
15	---	15.0	---	---	---	---	---	---	29.5	28.0	---	---
16	---	17.0	---	---	---	---	---	---	18.0	32.0	---	---
17	---	15.0	---	---	---	---	---	---	22.5	---	---	---
18	---	13.5	---	---	---	---	---	---	---	---	---	---
19	---	9.0	---	---	---	12.0	---	---	---	---	---	21.0
20	---	5.0	---	---	---	8.0	---	---	---	---	---	16.0
21	---	---	---	---	---	8.0	---	---	---	---	29.5	---
22	---	---	---	---	---	1.0	---	---	---	---	33.0	---
23	---	---	---	---	---	6.5	---	---	---	---	23.0	---
24	---	---	---	---	---	13.5	---	---	---	---	28.0	---
25	---	---	---	---	---	5.5	---	---	---	---	25.0	---
26	---	---	---	---	---	2.0	10.0	---	---	---	29.5	---
27	---	---	---	---	---	---	---	---	31.0	---	28.0	---
28	---	---	---	---	---	---	---	---	27.0	---	---	---
29	---	---	---	---	---	---	---	---	---	25.0	27.5	---
30	---	---	---	---	---	10.5	---	---	---	27.5	27.0	---
31	---	---	---	---	---	11.0	---	---	---	31.0	---	---



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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 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.--1,616.7 mi^2, of which 1,222 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Oct. 1997 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.--No estimated daily contents. 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. Conservation pool storage is 115,937 acre-ft. 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 (top of conservation pool)	2,220.0
Lowest gated outlet (invert)	2,140.0

COOPERATION.--The capacity curve dated Oct. 1, 1993, was furnished by the Brazos River Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 93,310 acre-ft, Oct. 26, 2000, elevation, 2,211.58 ft; minimum contents, 34,640 acre-ft, Mar. 16, 17, 1999, elevation, 2,180.91 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 82,780 acre-ft, Aug. 22, elevation, 2,207.21 ft; minimum contents, 72,060 acre-ft, Nov. 13, 14, elevation, 2,202.39 ft.

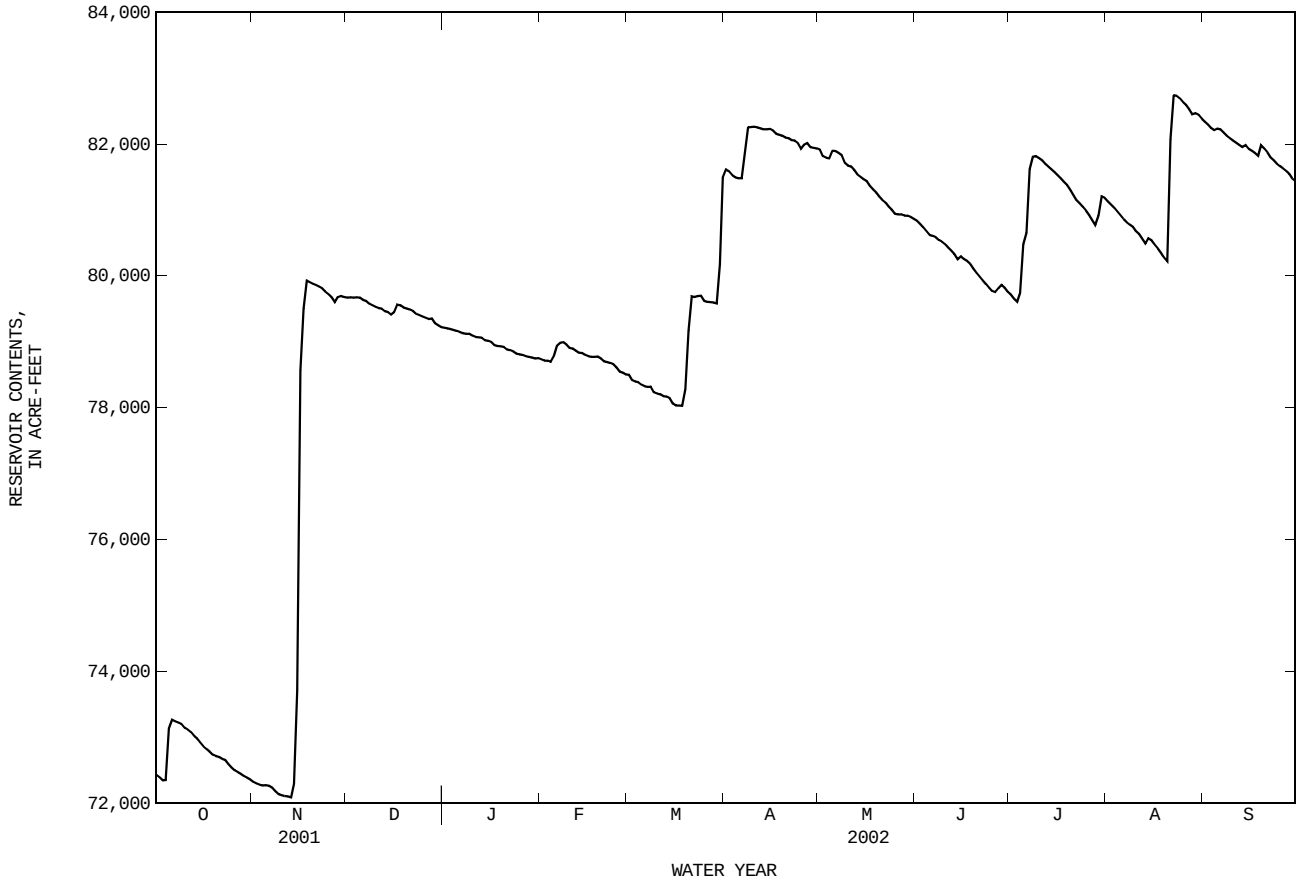
RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72430	72320	79670	79210	78730	78500	81610	81910	80830	79710	81130	82340
2	72390	72290	79670	79200	78710	78410	81580	81820	80790	79650	81080	82290
3	72350	72270	79660	79190	78710	78390	81520	81790	80740	79610	81030	82240
4	72350	72260	79670	79180	78690	78380	81490	81780	80680	79730	80980	82210
5	73130	72270	79670	79160	78780	78340	81480	81890	80620	80470	80920	82230
6	73260	72260	79630	79140	78940	78320	81480	81890	80600	80650	80860	82220
7	73240	72230	79620	79130	78980	78310	81870	81860	80580	81610	80820	82170
8	73220	72180	79570	79120	78990	78320	82250	81830	80540	81800	80780	82120
9	73200	72130	79550	79120	78960	78230	82250	81710	80520	81810	80740	82090
10	73140	72120	79530	79090	78910	78210	82260	81670	80480	81790	80680	82050
11	73110	72100	79510	79070	78890	78200	82250	81660	80430	81750	80630	82020
12	73080	72100	79500	79060	78860	78170	82240	81600	80380	81700	80560	81980
13	73020	72080	79460	79060	78830	78170	82220	81540	80330	81660	80490	81950
14	72980	72290	79450	79020	78830	78140	82220	81500	80250	81620	80560	81980
15	72920	73700	79410	79010	78800	78060	82230	81460	80290	81570	80540	81920
16	72860	78560	79440	78990	78780	78030	82200	81440	80250	81520	80470	81900
17	72820	79500	79560	78950	78770	78030	82150	81360	80220	81470	80410	81860
18	72780	79920	79550	78930	78770	78030	82140	81310	80180	81420	80340	81820
19	72730	79900	79520	78930	78770	78280	82120	81260	80110	81380	80270	81980
20	72710	79870	79500	78920	78740	79160	82090	81200	80040	81300	80220	81930
21	72700	79850	79490	78880	78700	79690	82080	81150	79990	81220	82070	81870
22	72670	79830	79460	78870	78690	79680	82060	81110	79930	81150	82740	81800
23	72650	79810	79420	78850	78680	79690	82050	81050	79880	81100	82730	81750
24	72590	79760	79400	78820	78650	79700	82010	81000	79820	81050	82690	81700
25	72540	79720	79380	78810	78610	79620	81930	80940	79770	80990	82640	81660
26	72490	79670	79360	78800	78550	79600	81990	80930	79750	80920	82590	81630
27	72470	79600	79340	78780	78530	79600	82010	80930	79810	80840	82520	81590
28	72440	79670	79350	78770	78500	79600	81950	80910	79860	80770	82450	81540
29	72410	79690	79280	78760	---	79580	81940	80910	79820	80910	82460	81480
30	72380	79680	79250	78740	---	80180	81930	80890	79760	81200	82440	81430
31	72350	---	79220	78750	---	81490	---	80860	---	81180	82380	---
MEAN	72760	75990	79490	78980	78760	78840	81990	81390	80240	81080	81330	81920
MAX	73260	79920	79670	79210	78990	81490	82260	81910	80830	81810	82740	82340
MIN	72350	72080	79220	78740	78500	78030	81480	80860	79750	79610	80220	81430
(+)	2202.53	2205.86	2205.66	2205.45	2205.34	2206.65	2206.84	2206.38	2205.90	2206.52	2207.04	2206.63
(@)	-120	+7330	-460	-470	-250	+2990	+440	-1070	-1100	+1420	+1200	-950

CAL YR 2001 MAX 81840 MIN 71230 (@) -300
WTR YR 2002 MAX 82740 MIN 72080 (@) +8960

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

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^2, of which 6,932 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Dec. 1923 to Sept. 1934, June 1939 to current year.

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 and affected daily discharges and discharges below 5.0 ft^3/s, 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^3/s (114,300 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1925-34, 1940-93).--Maximum discharge, 91,400 ft^3/s Sept. 26, 1955 (gage height, 29.50 ft) from rating curve extended above 75,900 ft^3/s; no flow at times most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.04	0.00	44	12	3.1	5.9	90	37	e6.0	e0.25	25	20
2	0.00	0.00	36	12	3.0	5.2	79	40	4.7	e0.10	18	e14
3	0.00	0.00	33	12	3.0	4.2	64	40	2.6	e0.05	e12	e10
4	0.00	0.00	31	12	3.0	3.9	52	38	2.0	556	e9.0	8.4
5	0.06	0.00	32	12	8.5	3.6	45	&75	35	644	7.3	7.6
6	0.16	0.00	28	10	13	2.9	41	&107	29	1540	5.9	e7.0
7	e0.65	0.00	26	9.4	12	2.8	41	&60	7.3	532	5.6	e6.5
8	e2.5	0.00	24	8.8	10	2.8	36	&44	5.0	199	5.3	6.2
9	6.9	0.00	22	8.3	8.3	2.6	48	&36	e4.0	98	5.3	14
10	9.5	0.00	21	6.0	7.8	2.6	55	&27	e3.5	66	5.0	8.8
11	16	0.00	20	4.8	12	2.8	45	&26	e3.0	55	3.3	5.6
12	15	0.00	20	4.6	12	2.6	40	&21	e2.5	46	71	e4.0
13	11	0.00	19	6.8	12	2.4	36	18	e2.5	42	35	e3.0
14	3.9	0.49	17	6.5	12	2.2	29	17	e2.5	36	21	e2.0
15	3.2	8.0	17	4.9	13	2.0	22	15	e2.5	31	e13	1.2
16	3.6	13	20	4.7	13	e2.0	16	13	e2.0	22	e10	0.90
17	3.3	107	44	4.5	13	e2.0	14	e10	15	25	6.6	e0.90
18	3.0	370	33	4.0	13	e2.5	14	e10	14	24	e4.5	e0.90
19	2.4	142	37	4.3	12	11	25	10	e4.0	18	3.8	e10
20	1.7	91	29	4.4	11	50	21	9.6	e3.0	13	e2.5	e23
21	1.5	74	24	4.0	11	40	15	8.8	e3.0	e10	2.0	e5.0
22	0.90	62	22	3.8	10	37	15	e8.5	46	e8.0	1.4	1.5
23	0.53	54	19	3.7	9.3	26	15	e8.0	72	e5.5	39	1.2
24	0.22	51	17	3.4	7.7	25	14	e8.0	17	4.4	51	1.4
25	0.03	45	16	3.6	6.9	22	29	7.6	6.6	3.8	39	1.4
26	0.00	39	15	3.4	6.5	20	87	13	6.6	e3.0	28	e0.90
27	0.00	42	15	3.3	6.8	19	78	13	5.6	e3.0	21	e0.65
28	0.00	43	14	3.1	5.9	18	47	21	3.0	2.8	e11	0.44
29	0.00	45	14	3.0	---	17	42	19	e1.5	63	30	e0.35
30	0.00	48	13	6.7	---	142	41	7.6	0.64	104	25	e0.25
31	0.00	---	12	4.9	---	363	---	e6.5	---	42	21	---
TOTAL	86.09	1234.49	734	194.9	258.8	845.0	1196	774.6	312.04	4196.90	537.5	167.09
MEAN	2.777	41.15	23.68	6.287	9.243	27.26	39.87	24.99	10.40	135.4	17.34	5.570
MAX	16	370	44	12	13	363	90	107	72	1540	71	23
MIN	0.00	0.00	12	3.0	3.0	2.0	14	6.5	0.64	0.05	1.4	0.25
AC-FT	171	2450	1460	387	513	1680	2370	1540	619	8320	1070	331

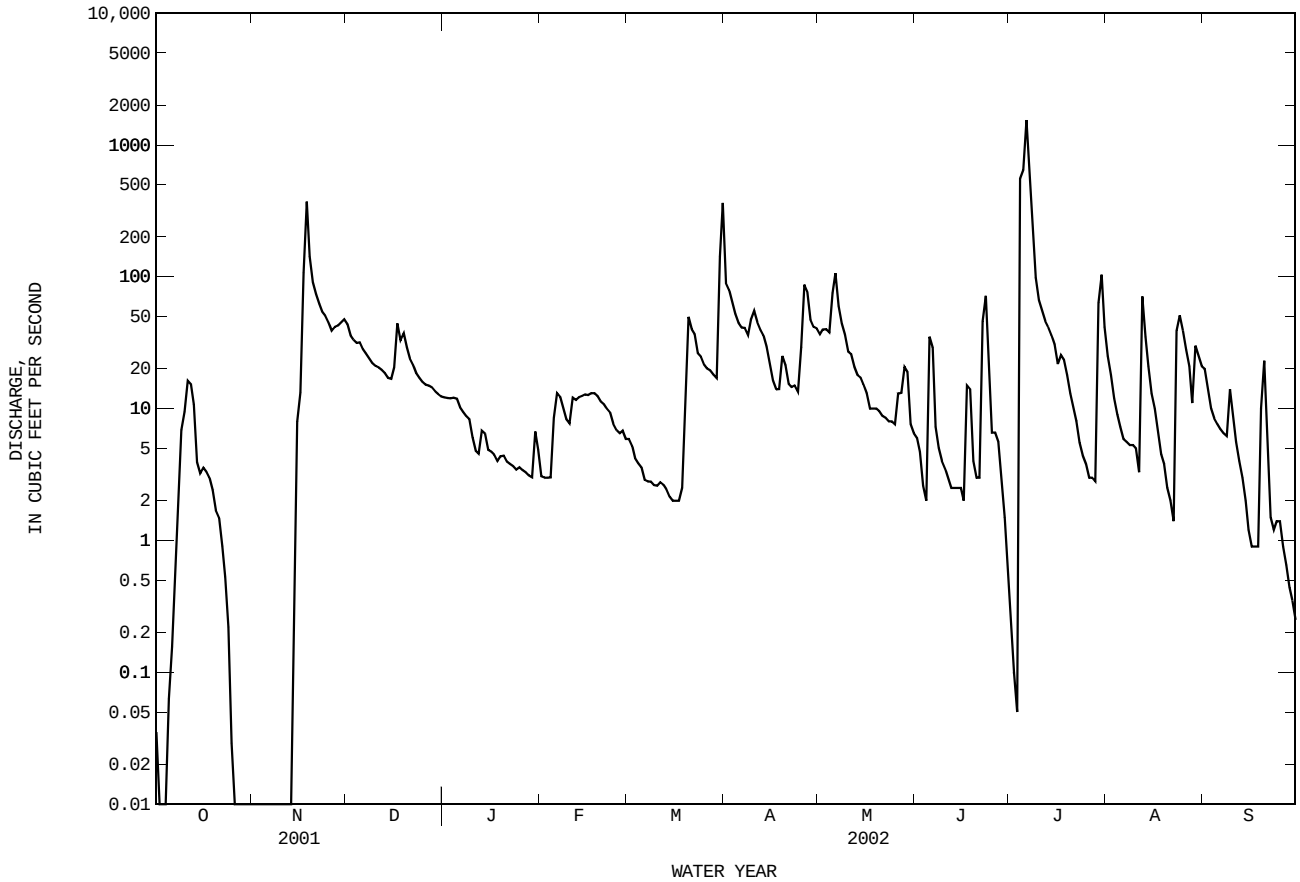
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2002z, BY WATER YEAR (WY)

MEAN	18.74	24.90	14.17	11.99	27.43	98.05	42.75	72.88	233.2	43.71	41.58	49.44
MAX	102	134	70.3	77.1	143	685	253	181	1264	135	152	231
(WY)	2001	2001	2001	2001	1997	2000	1997	1995	1999	2002	1996	1995
MIN	0.94	0.25	0.000	0.33	0.005	0.042	0.033	0.84	10.4	0.065	0.000	0.000
(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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1994 - 2002z	
ANNUAL TOTAL	14838.46		10537.41			
ANNUAL MEAN	40.65		28.87		56.45	
HIGHEST ANNUAL MEAN					129	1999
LOWEST ANNUAL MEAN					7.55	1998
HIGHEST DAILY MEAN	422	Jun 1	1540	Jul 6	14600	Mar 23 2000
LOWEST DAILY MEAN	0.00	Oct 2	0.00	Oct 2	0.00	Oct 1 1993
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 26	0.00	Oct 26	0.00	Oct 1 1993
MAXIMUM PEAK FLOW			3540	Jul 6	23000	Mar 23 2000
MAXIMUM PEAK STAGE			7.76	Jul 6	p17.30	Mar 23 2000
ANNUAL RUNOFF (AC-FT)	29430		20900		40900	
10 PERCENT EXCEEDS	89		47		84	
50 PERCENT EXCEEDS	21		10		4.1	
90 PERCENT EXCEEDS	0.88		0.65		0.00	

e Estimated
& Value was computed from affected unit values
z Period of regulated streamflow.
p Observed.



08080500 Double Mountain Fork Brazos River near Aspermont, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1948 to Nov. 1951, Sept. 1956 to Aug. 2002 (discontinued).
BIOCHEMICAL DATA: June 1978 to May 1993, Nov. 1995 to Aug. 2002 (discontinued).
PESTICIDE DATA: Mar. to June 1979.
SEDIMENT DATA: Sept. 1944 to Nov. 1951, June 1978 to Sept. 1993.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct. 1948 to Nov. 1951, Sept. 1956 to Sept. 1995 (local observer).
WATER TEMPERATURE: Nov. 1949 to Nov. 1951, Sept. 1956 to Sept. 1995 (local observer).
SUSPENDED-SEDIMENT DISCHARGE: Nov. 1949 to Sept. 1951 (local observer).

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous water years using the daily records of specific conductance and regression relation between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. Regression equations developed for this station may be obtained from the U.S. Geological Survey Texas District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 13,100 microsiemens/cm, July 29, 1980; minimum daily, 720 microsiemens/cm, Oct. 18, 1985.
WATER TEMPERATURE: Maximum daily, 38.0°C, July 18, 1966; minimum daily, 0.0°C, on many days during winter months.

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

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT													
09...	1400	8.1	6920	8.7	28.4	5.5	78	2200	679	115	838	8	10.4
DEC													
05...	1500	32	4530	8.0	19.0	8.4	97	940	271	63.3	625	9	8.08
JUL													
15...	1400	32	--	--	--	--	--	1000	327	55.6	596	8	10.4
AUG													
19...	1040	3.8	8060	8.0	27.6	7.1	98	1900	590	96.3	976	10	11.8

Date	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)
OCT													
09...	1840	1450	.6	9.2	5010	<.008	<.05	.26	--	<.10	<.06	<.02	4
DEC													
05...	836	934	.8	10.4	2830	<.008	.06	.07	.08	.15	<.06	<.02	4
JUL													
15...	992	951	.8	11.3	3010	<.008	<.05	.05	.15	.20	<.06	<.02	--
AUG													
19...	1690	1660	.7	10.5	5100	<.008	<.05	.23	--	.23	<.06	<.02	--

Date	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
OCT											
09...	41.8	<.2	2.5	E1.4	<50	<2	145	<.01	2	<.4	<120
DEC											
05...	122	<.1	<.8	<1.0	<30	<1	6.9	<.01	E1	<.1	<72
JUL											
15...	--	--	--	--	--	--	--	--	--	--	--
AUG											
19...	--	--	--	--	--	--	--	--	--	--	--

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

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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^2, of which 2,380 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Apr. 1964 to Sept. 1976, Jan. 1999 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 good except those for estimated daily contents, which are poor. 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^3/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. Contents for Apr. 1964 to Sept. 1976 from area-capacity curves dated July 1960. Conservation pool storage is 31,537 acre-ft. 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.--The capacity table dated June 23, 1993, furnished by Texas Water Development Board is based on Oct. 1992 volumetric survey. 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.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,130 acre-ft, Oct. 1, elevation, 2,351.04 ft; minimum contents, 5,120 acre-ft, Sept. 30, elevation, 2,346.45 ft.

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

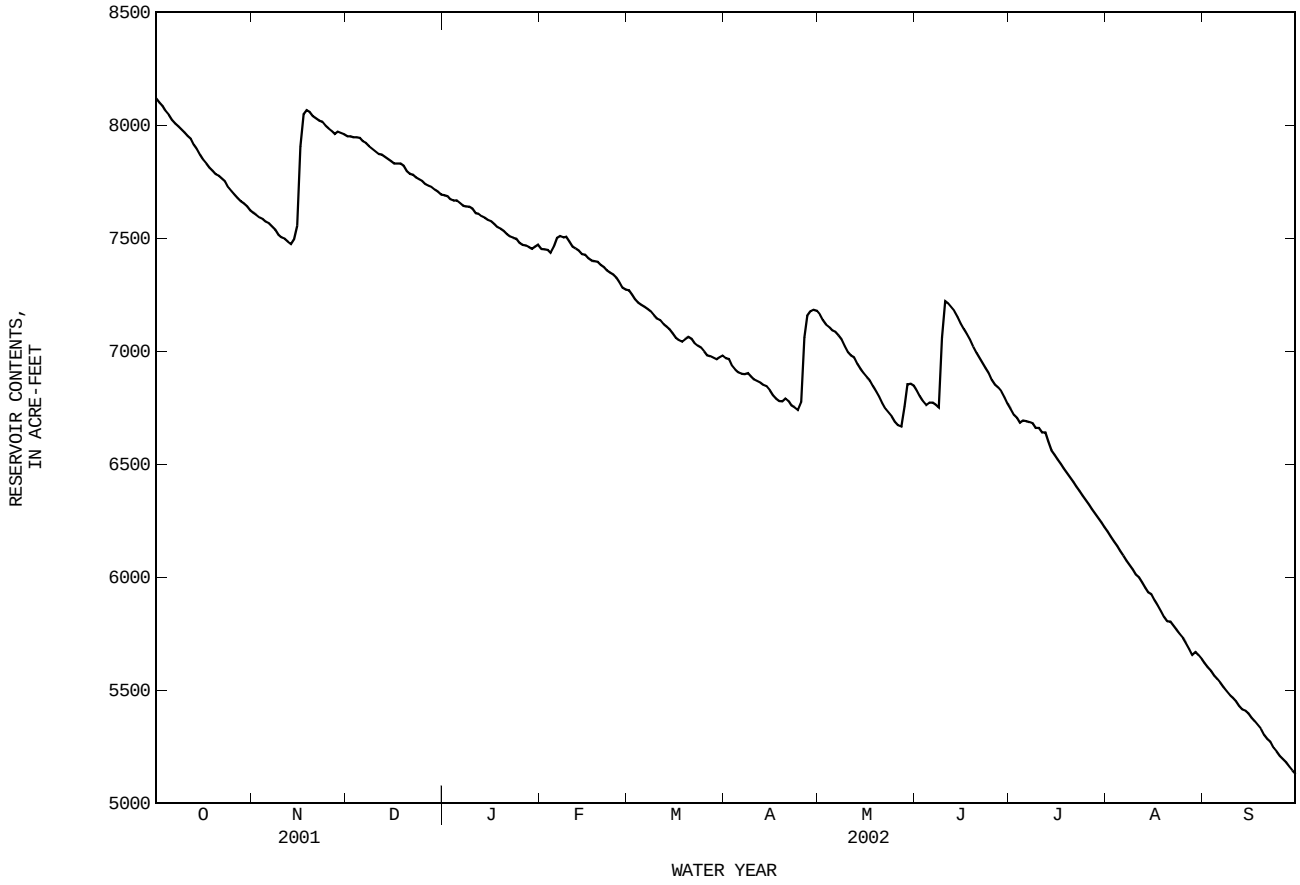
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8120	7610	7950	7690	7450	7270	6970	7160	6820	6740	6200	5620
2	8100	7600	7950	7690	7450	7250	6960	7140	6800	6720	6180	5600
3	8080	7590	7950	7670	7450	7230	6930	7120	6780	6700	6160	5580
4	8060	7580	7950	7670	7430	7210	6920	7110	6760	6680	6140	5560
5	8050	7570	7940	7670	7460	7200	6900	7090	6770	6690	6120	5550
6	8020	7570	7930	7660	7500	7200	6900	7090	6770	6690	6090	5530
7	8010	7550	7920	7640	7510	7180	6900	7070	6760	6680	6070	5510
8	7990	7540	7910	7640	7500	7170	6900	7050	6750	6680	6050	5490
9	7980	7510	7900	7640	7510	7160	6890	7020	7060	e6660	6030	5480
10	7970	7500	7880	7630	7480	7140	6870	6990	7220	e6660	6010	5460
11	7950	7500	7870	7610	7460	7140	6870	6980	7210	e6640	6000	5450
12	7940	7480	7870	7610	7450	7120	6860	6970	7190	6640	5970	5430
13	7910	7470	7860	7600	7440	7110	6850	6940	7180	e6600	5950	5410
14	7890	7490	7850	7590	7430	7100	6840	6920	7150	e6560	5930	5410
15	7870	7550	e7840	7580	7430	7080	6830	6900	7120	e6540	5920	5400
16	7850	7900	e7830	7570	7410	7060	6800	6890	7100	e6520	5900	5380
17	7830	8050	e7830	7560	7400	7050	6790	6870	7080	e6500	5870	5360
18	7810	8060	e7830	7550	7400	7040	6780	6840	7050	e6480	5850	5340
19	7800	8060	7820	7540	7390	7050	6780	6820	7020	e6460	5820	5330
20	7780	8040	7800	7530	7380	7060	6790	6800	6990	e6440	5800	5300
21	7770	8030	7780	7520	7370	7050	6780	6770	6970	e6420	5800	5280
22	7760	8020	7780	7510	7360	7030	6760	6740	6950	e6400	5780	5270
23	7750	8020	7770	7500	7350	7020	6750	6730	6920	e6380	5770	5240
24	7720	8000	7760	7500	7340	7020	6740	6710	6900	e6360	5750	5230
25	7710	7990	7750	7480	7320	7000	6770	6690	6870	e6340	5730	5210
26	7690	7970	7740	7470	7300	6980	7060	6670	6850	e6320	5710	5190
27	7680	7960	7730	7470	7280	6980	7160	6670	6840	e6300	5680	5180
28	7660	7970	7730	7460	7270	6970	7170	6750	6820	e6280	5660	5160
29	7650	7960	7710	7450	---	6960	7180	6850	6790	e6260	5670	5140
30	7640	7960	7710	7460	---	6970	7180	6860	6770	e6240	5650	5130
31	7620	---	7690	7470	---	6980	---	6850	---	e6220	5640	---
MEAN	7860	7770	7830	7570	7410	7090	6900	6910	6940	6510	5900	5370
MAX	8120	8060	7950	7690	7510	7270	7180	7160	7220	6740	6200	5620
MIN	7620	7470	7690	7450	7270	6960	6740	6670	6750	6220	5640	5130
(+)	2350.32	2350.80	2350.42	2350.10	2349.81	2349.38	2349.68	2349.19	2349.07	2348.23	2347.30	2346.46
(@)	-520	+340	-270	-220	-200	-290	+200	-330	-80	-550	-580	-510

CAL YR 2001 MAX 12020 MIN 7470 (@) -4020
WTR YR 2002 MAX 8120 MIN 5130 (@) -3010

e Estimated

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

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^2, of which 2,634 mi^2 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 fair except those for estimated and affected daily discharges and discharges below 1.0 ft^3/s, which are 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^3/s (107,400 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1940-63).--Maximum discharge, 52,200 ft^3/s Sept. 25, 1955 (gage height, 14.92 ft) from rating curve extended above 28,800 ft^3/s by logarithmic plotting; no flow at times.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.07	30	3.0	10	1.0	28	67	0.00	0.00	0.54	0.00
2	0.00	0.04	23	3.4	7.1	0.69	16	31	0.00	0.00	0.05	0.00
3	0.00	0.06	19	4.0	5.4	0.76	7.7	23	0.00	0.00	0.04	0.00
4	0.00	0.11	16	3.9	4.3	0.77	4.4	22	0.00	3.5	0.00	0.00
5	0.03	0.09	14	4.7	10	0.63	3.4	15	51	9.3	0.00	0.00
6	0.00	0.05	11	4.2	30	0.67	3.8	9.9	1.9	480	0.00	0.00
7	0.00	0.05	9.5	3.4	26	0.65	37	6.8	5.0	287	0.00	0.00
8	0.00	0.04	7.7	3.0	16	0.67	63	4.3	0.80	133	0.00	0.00
9	0.00	0.04	6.8	2.9	9.8	0.65	40	2.4	e0.50	57	0.00	26
10	3.9	0.04	6.2	2.7	5.9	0.63	20	1.2	90	35	0.00	1.2
11	17	0.05	6.2	2.3	4.5	0.64	16	0.90	18	15	0.00	0.02
12	0.88	0.04	6.2	2.0	3.5	0.65	12	0.54	4.2	4.1	0.00	0.00
13	0.21	0.03	5.6	2.0	3.0	0.66	8.9	0.35	&2.1	34	0.00	0.00
14	0.18	0.16	4.9	1.9	2.7	0.64	7.8	0.26	&3.6	12	122	0.00
15	0.18	33	4.6	1.9	2.1	0.66	6.3	0.06	&2.8	2.1	0.74	0.00
16	0.18	44	6.9	2.0	2.3	0.64	4.7	0.04	134	1.0	e0.20	0.00
17	0.18	454	19	1.9	2.0	0.65	3.1	e0.03	48	0.41	e0.05	0.00
18	0.18	225	16	1.9	2.2	0.82	2.4	e0.03	20	e0.10	0.00	e0.10
19	0.18	163	12	2.0	2.3	14	2.9	0.02	8.8	0.04	0.00	0.26
20	0.18	94	8.6	2.1	2.1	39	4.0	0.02	4.1	0.01	0.00	e0.10
21	0.16	60	7.9	1.7	1.5	46	4.1	0.01	2.5	0.00	0.00	e0.02
22	0.15	41	7.4	1.6	1.3	27	3.0	0.00	e0.50	0.00	0.00	0.00
23	0.15	30	6.0	1.5	1.3	16	2.6	0.00	e0.10	0.00	5.2	0.00
24	0.17	22	4.7	3.0	1.3	11	2.1	0.00	0.00	0.00	e0.50	0.00
25	0.18	18	4.1	3.0	1.1	6.4	64	0.00	0.00	0.00	e0.10	0.00
26	0.18	15	4.0	3.1	0.61	4.7	502	0.00	0.00	0.00	0.00	0.00
27	0.18	14	3.9	2.7	0.58	3.7	303	0.00	0.00	0.00	0.00	0.00
28	0.17	23	3.9	2.5	0.54	3.4	239	1.0	0.00	0.00	0.00	0.00
29	0.15	26	3.5	2.4	---	3.1	174	0.58	0.00	391	80	0.00
30	0.18	44	3.1	8.0	---	35	105	0.00	0.00	84	1.9	0.00
31	0.13	---	2.9	15	---	57	---	0.00	---	2.9	e0.30	---
TOTAL	25.08	1306.87	284.6	99.7	159.43	278.78	1690.2	186.44	397.90	1551.46	211.62	27.70
MEAN	0.809	43.56	9.181	3.216	5.694	8.993	56.34	6.014	13.26	50.05	6.826	0.923
MAX	17	454	30	15	30	57	502	67	134	480	122	26
MIN	0.00	0.03	2.9	1.5	0.54	0.63	2.1	0.00	0.00	0.00	0.00	0.00
AC-FT	50	2590	565	198	316	553	3350	370	789	3080	420	55

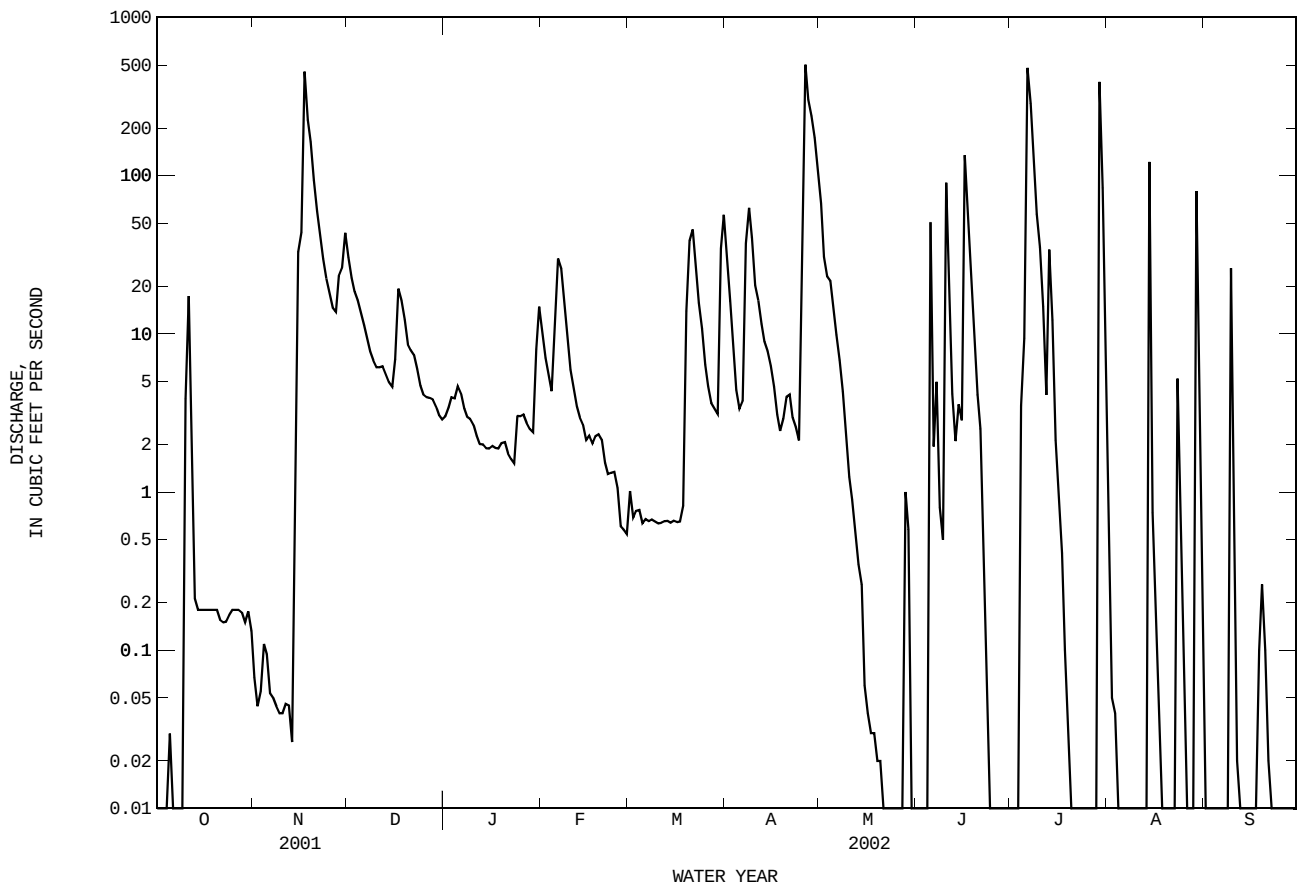
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002z, BY WATER YEAR (WY)

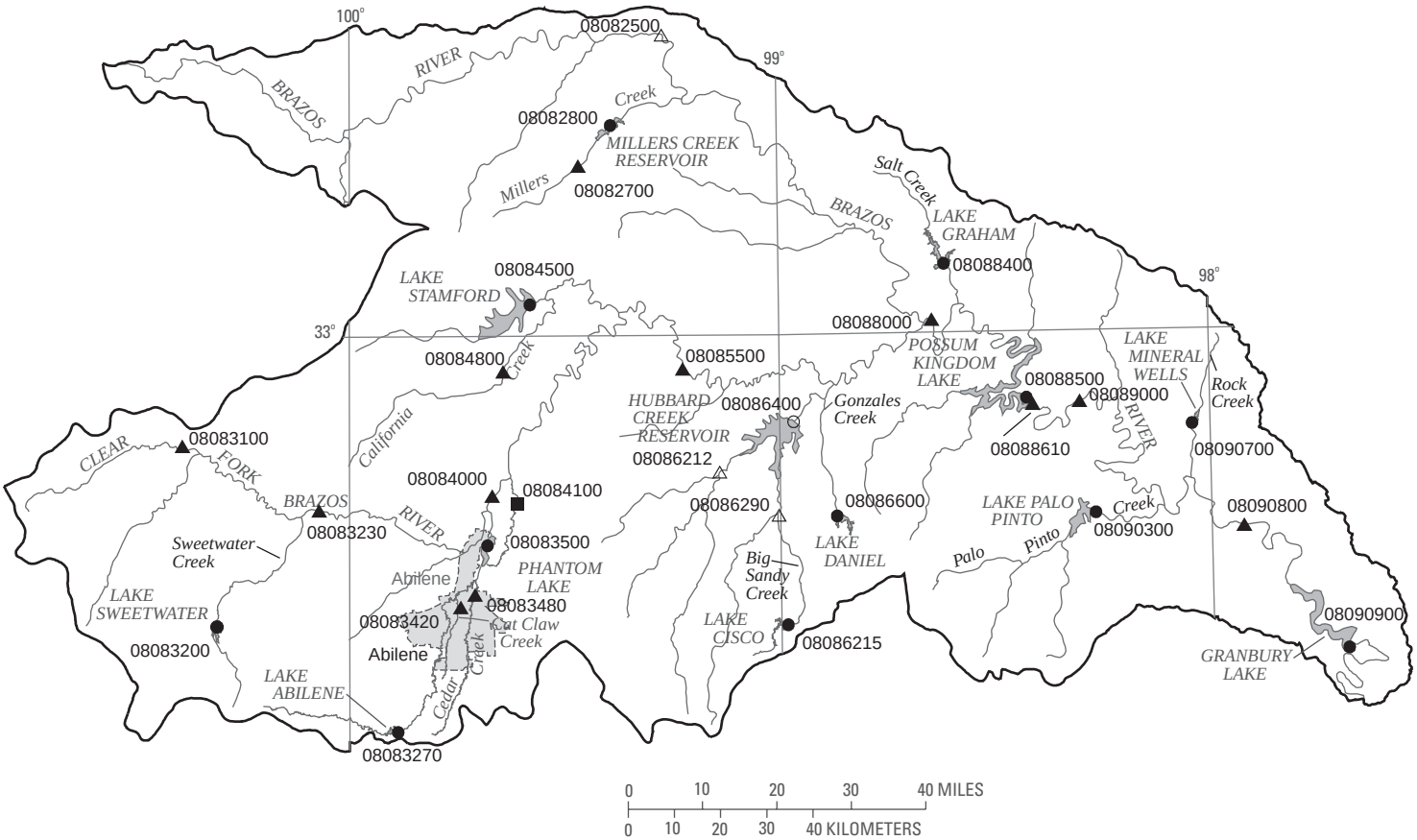
MEAN	94.51	25.23	18.42	15.68	22.67	30.26	34.77	115.1	173.3	33.09	100.8	101.6
MAX	918	125	226	134	232	192	200	724	1087	206	1054	664
(WY)	1987	1987	1992	1992	1992	2000	1997	1987	1990	1967	1972	1966
MIN	0.059	0.065	0.000	0.027	0.050	0.26	0.26	0.35	1.10	0.011	0.013	0.000
(WY)	1980	2000	2000	2000	2000	1971	1971	1964	1998	1998	2000	2000

08082000 Salt Fork Brazos River near Aspermont, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1964 - 2002z	
ANNUAL TOTAL	7524.93		6219.78			
ANNUAL MEAN	20.62		17.04		63.87	
HIGHEST ANNUAL MEAN					212	1987
LOWEST ANNUAL MEAN					11.7	1998
HIGHEST DAILY MEAN	454	Nov 17	502	Apr 26	11300	Aug 14 1972
LOWEST DAILY MEAN	0.00	Jul 16	0.00	Oct 1	0.00	Jul 31 1972
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 16	0.00	Jun 24	0.00	Oct 11 1999
MAXIMUM PEAK FLOW			1570	Jul 6	c30200	Aug 30 1966
MAXIMUM PEAK STAGE			5.05	Jul 6	12.45	Aug 30 1966
ANNUAL RUNOFF (AC-FT)	14930		12340		46270	
10 PERCENT EXCEEDS	48		33		104	
50 PERCENT EXCEEDS	4.9		1.9		6.6	
90 PERCENT EXCEEDS	0.00		0.00		0.14	

e Estimated
& Value was computed from affected unit values
z Period of regulated streamflow.
c From rating curve extended above 28,800 ft^3/s by logarithmic plotting.





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

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^2, approximately, of which 9,566 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Dec. 1923 to current year.

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. Flow affected at times by discharge from the flood-detention pools of 12 floodwater-retarding structures. These structures control runoff from 108 mi^2 above this station. Small diversions upstream from station for irrigation and oil field operations. No flow at times.

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.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--39 years (water years 1925-63) prior to regulation, 434 ft^3/s (314,100 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1924-63).--Maximum discharge, 95,400 ft^3/s Oct. 16, 1926 (gage height, 15.16 ft); no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	0.26	104	14	11	6.9	109	357	29	46	736	28
2	5.0	0.28	102	13	7.7	4.0	288	236	25	23	371	26
3	4.1	0.24	93	13	8.9	4.4	231	179	24	118	222	22
4	3.7	0.15	97	14	9.5	5.4	126	151	50	393	157	15
5	2.1	0.35	85	23	21	5.5	98	134	1600	376	118	12
6	1.7	1.0	58	19	22	6.1	88	125	1270	240	94	10
7	1.6	0.70	52	15	21	6.2	126	113	570	3630	78	9.0
8	1.4	0.08	45	17	18	6.7	235	102	554	3010	65	7.7
9	2.3	0.09	36	16	17	4.2	263	144	406	1630	55	11
10	4.5	0.12	34	13	13	3.8	150	120	260	1000	47	8.7
11	4.3	0.15	33	14	13	4.4	118	103	155	683	159	6.7
12	5.3	0.19	38	12	14	4.6	107	82	85	420	66	6.2
13	2.3	0.26	29	11	12	5.5	98	64	57	370	36	5.8
14	7.0	18	29	11	10	5.1	95	55	74	225	50	5.6
15	6.2	328	28	9.4	9.5	3.2	84	55	99	173	89	6.7
16	4.0	411	53	10	9.0	3.1	71	55	193	141	140	7.1
17	3.9	386	56	8.7	8.9	3.6	60	45	256	134	106	6.6
18	4.7	200	41	7.5	9.5	19	50	39	338	114	68	6.2
19	4.8	542	39	9.7	11	36	62	34	289	101	42	74
20	4.4	811	50	9.0	9.9	48	50	32	175	82	31	66
21	3.6	458	47	8.5	8.0	65	41	31	130	72	24	51
22	3.0	301	45	9.9	8.7	44	37	30	80	67	19	23
23	2.6	217	36	9.0	8.8	30	43	30	55	57	16	13
24	1.2	170	29	6.7	9.3	53	32	30	43	50	14	8.9
25	0.74	135	27	7.0	6.3	31	43	26	38	45	12	7.3
26	0.40	105	26	7.6	4.6	30	1490	28	31	39	11	6.3
27	0.30	78	23	7.7	5.0	25	2390	63	34	37	9.1	6.0
28	0.32	45	23	9.3	5.7	25	1250	31	37	42	8.5	5.8
29	0.30	112	19	8.7	---	24	661	29	27	183	34	4.9
30	0.27	95	15	7.6	---	47	502	26	20	4470	34	4.5
31	0.11	---	15	11	---	93	---	36	---	1680	33	---
TOTAL	92.64	4415.87	1407	352.3	312.3	652.7	8998	2585	7004	19651	2944.6	471.0
MEAN	2.988	147.2	45.39	11.36	11.15	21.05	299.9	83.39	233.5	633.9	94.99	15.70
MAX	7.0	811	104	23	22	93	2390	357	1600	4470	736	74
MIN	0.11	0.08	15	6.7	4.6	3.1	32	26	20	23	8.5	4.5
AC-FT	184	8760	2790	699	619	1290	17850	5130	13890	38980	5840	934

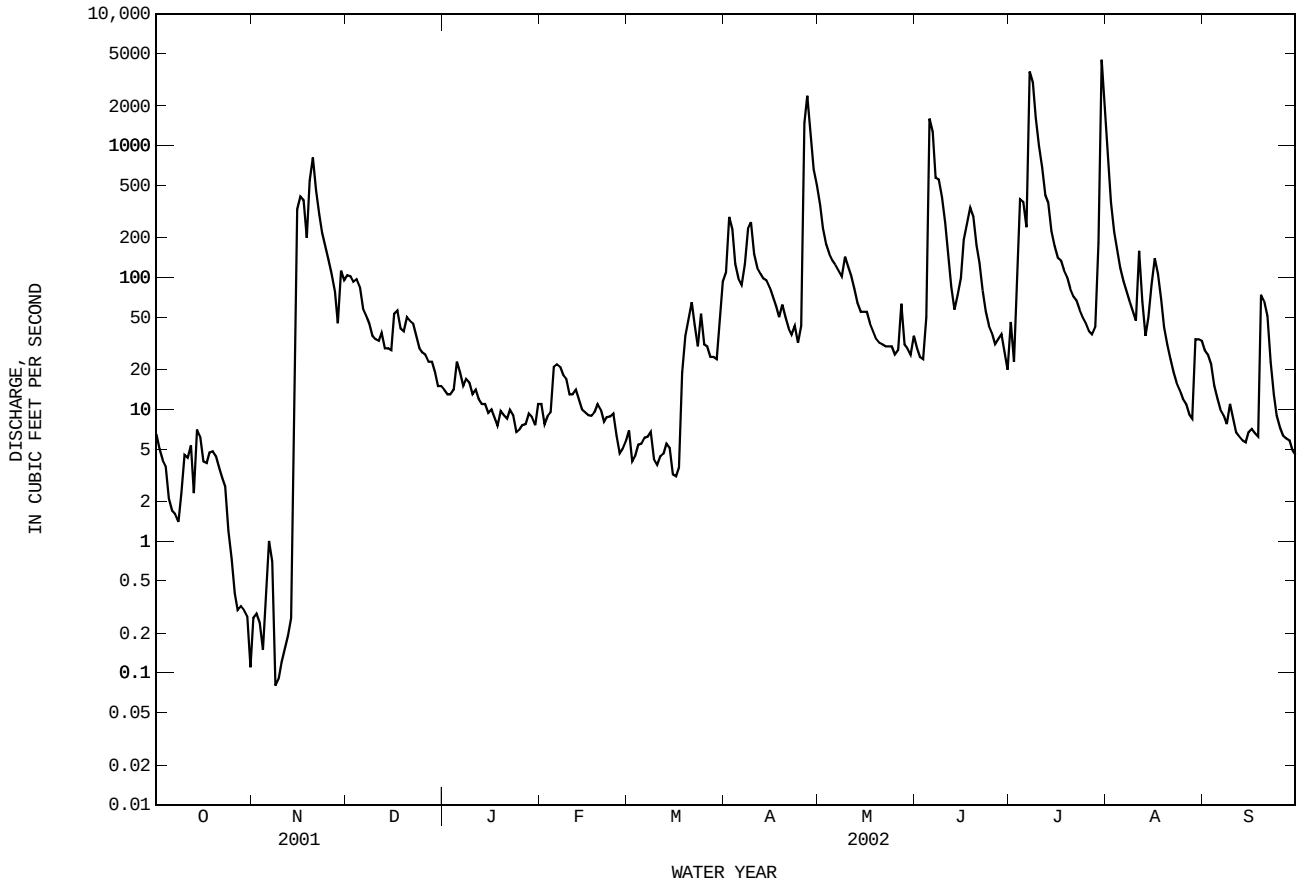
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002z, BY WATER YEAR (WY)

MEAN	335.4	127.3	74.66	69.77	113.1	163.6	176.7	536.9	724.9	183.1	336.6	434.6
MAX	2449	679	603	434	1246	960	1318	2450	3505	995	3373	2336
(WY)	1984	1973	1992	1992	1992	2000	1990	1982	1990	1967	1972	1966
MIN	0.25	2.72	3.02	4.49	4.20	2.28	1.21	3.68	8.03	0.24	0.000	0.002
(WY)	1980	1978	1999	1971	1971	1971	1978	1996	1984	1970	1970	2000

08082500 Brazos River at Seymour, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR			FOR 2002 WATER YEAR			WATER YEARS 1964 - 2002z		
ANNUAL TOTAL	50738.35			48886.41					
ANNUAL MEAN	139.0			133.9			273.2		
HIGHEST ANNUAL MEAN							742		1987
LOWEST ANNUAL MEAN							61.1		1998
HIGHEST DAILY MEAN	2230	Mar	9	4470	Jul	30	30700	Jun 4	1990
LOWEST DAILY MEAN	0.00	Aug	1	0.08	Nov	8	0.00	May 24	1964
ANNUAL SEVEN-DAY MINIMUM	0.05	Aug	1	0.23	Nov	7	0.00	Jul 12	1964
MAXIMUM PEAK FLOW				7820	Jul	30	42700	Aug 16	1972
MAXIMUM PEAK STAGE				8.51	Jul	30	18.35	Aug 16	1972
ANNUAL RUNOFF (AC-FT)	100600			96970			198000		
10 PERCENT EXCEEDS	326			258			510		
50 PERCENT EXCEEDS	53			30			49		
90 PERCENT EXCEEDS	0.38			4.0			2.5		

z Period of regulated streamflow.



08082500 Brazos River at Seymour, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Aug. 1942 to Sept. 1995, Oct. 1996 to Aug. 2002 (discontinued).
BIOCHEMICAL DATA: Oct. 1974 to Sept. 1977, Dec. 1996 to Aug. 2002 (discontinued).
PESTICIDE DATA: Apr. 1975 to Aug. 1977.
SEDIMENT DATA: Oct. 1974 to Sept. 1977.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Aug. 1959 to Sept. 1995.
WATER TEMPERATURE: Aug. 1959 to Sept. 1995.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 80,400 microsiemens/cm, May 24, 1971; minimum daily, 47 microsiemens/cm, May 16, 1989.
WATER TEMPERATURE: Maximum daily, 38.0°C Aug. 1, 1983; minimum daily, 0.0°C on many days during winter months.

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

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)
OCT													
31...	1040	.26	8800	8.2	16.8	10.7	119	1400	1000	360	118	1520	18
MAR													
14...	1300	7.4	20200	8.4	22.2	12.3	161	2300	2200	621	186	3610	33
MAY													
20...	1300	37	16600	7.9	25.3	8.8	113	2000	1900	568	139	2970	29
AUG													
09...	0955	61	9900	7.8	27.4	10.7	139	1400	1300	433	84.1	1680	19

Date	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
OCT													
31...	12.0	341	1220	2300	1.4	21.0	5780	7.02	.092	7.11	.10	.32	.42
MAR													
14...	16.8	102	1890	6200	.7	.5	12600	--	<.008	<.05	.14	.03	.18
MAY													
20...	14.8	131	1550	4960	.7	9.2	10300	--	<.008	.48	.24	--	.22
AUG													
09...	13.3	110	1160	2740	.5	9.5	6180	--	<.008	.13	.10	.11	.21

Date	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)
OCT													
31...	<.06	<.02	5	534	<.4	<2.4	<4.0	6	<3	249	<.01	6	<.4
MAR													
14...	<.06	<.02	6	49.4	<.6	<2.4	E2.5	42	<4	65.5	<.01	4	<.5
MAY													
20...	<.06	<.02	--	--	--	--	--	--	--	--	--	--	--
AUG													
09...	<.06	<.02	--	--	--	--	--	--	--	--	--	--	--

Date	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
OCT	
31...	12
MAR	
14...	5
MAY	
20...	--
AUG	
09...	--

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

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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^2.

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

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 2001 TO SEPTEMBER 2002
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	38	0.52	3.0	e1.1	0.00	0.00
2	0.00	0.00	e0.02	0.00	0.00	0.00	7.6	0.23	0.73	e1.0	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.16	0.29	e0.82	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.11	2.6	e0.55	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.06	394	e0.34	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.02	920	e0.27	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	4.3	0.00	294	5.3	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	e35	0.00	29	28	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	e23	0.00	12	32	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	e12	0.00	8.8	12	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	e3.6	0.00	8.3	e0.42	0.00	0.00
12	0.08	0.00	0.00	0.00	0.00	0.00	e2.9	0.00	8.2	e0.31	0.00	0.00
13	0.00	e0.00	0.00	0.00	0.00	0.00	e1.6	0.00	7.9	e0.25	0.00	0.00
14	0.00	e0.00	0.00	0.00	0.00	0.00	e1.0	0.00	7.6	e0.23	0.00	0.00
15	0.00	e0.46	0.00	0.00	0.00	0.00	e0.58	0.00	7.6	e0.18	0.00	0.00
16	0.00	e0.27	0.00	0.00	0.00	0.00	e0.42	0.00	18	0.10	0.00	0.00
17	0.00	e4.5	0.00	0.00	0.00	0.00	e0.27	0.00	46	0.03	0.00	0.00
18	0.00	e4.9	e0.35	0.00	0.00	0.00	0.00	0.00	31	0.00	0.00	0.00
19	0.00	e0.64	e0.14	0.00	0.00	0.60	0.00	0.00	13	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	2.7	0.00	0.00	11	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	1.1	0.00	0.00	9.9	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	9.2	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	7.6	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	e4.0	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	e2.1	0.00	e1.9	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	e20	18	e1.6	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	36	8.1	e1.5	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	15	10	e1.4	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	5.2	54	e1.3	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	20	1.6	23	e1.2	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	214	---	12	---	0.00	0.00	---
TOTAL	0.08	10.77	0.51	0.00	0.00	238.81	213.23	126.20	1862.62	82.90	0.00	0.00
MEAN	0.003	0.359	0.016	0.000	0.000	7.704	7.108	4.071	62.09	2.674	0.000	0.000
MAX	0.08	4.9	0.35	0.00	0.00	214	38	54	920	32	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00
AC-FT	0.2	21	1.0	0.00	0.00	474	423	250	3690	164	0.00	0.00

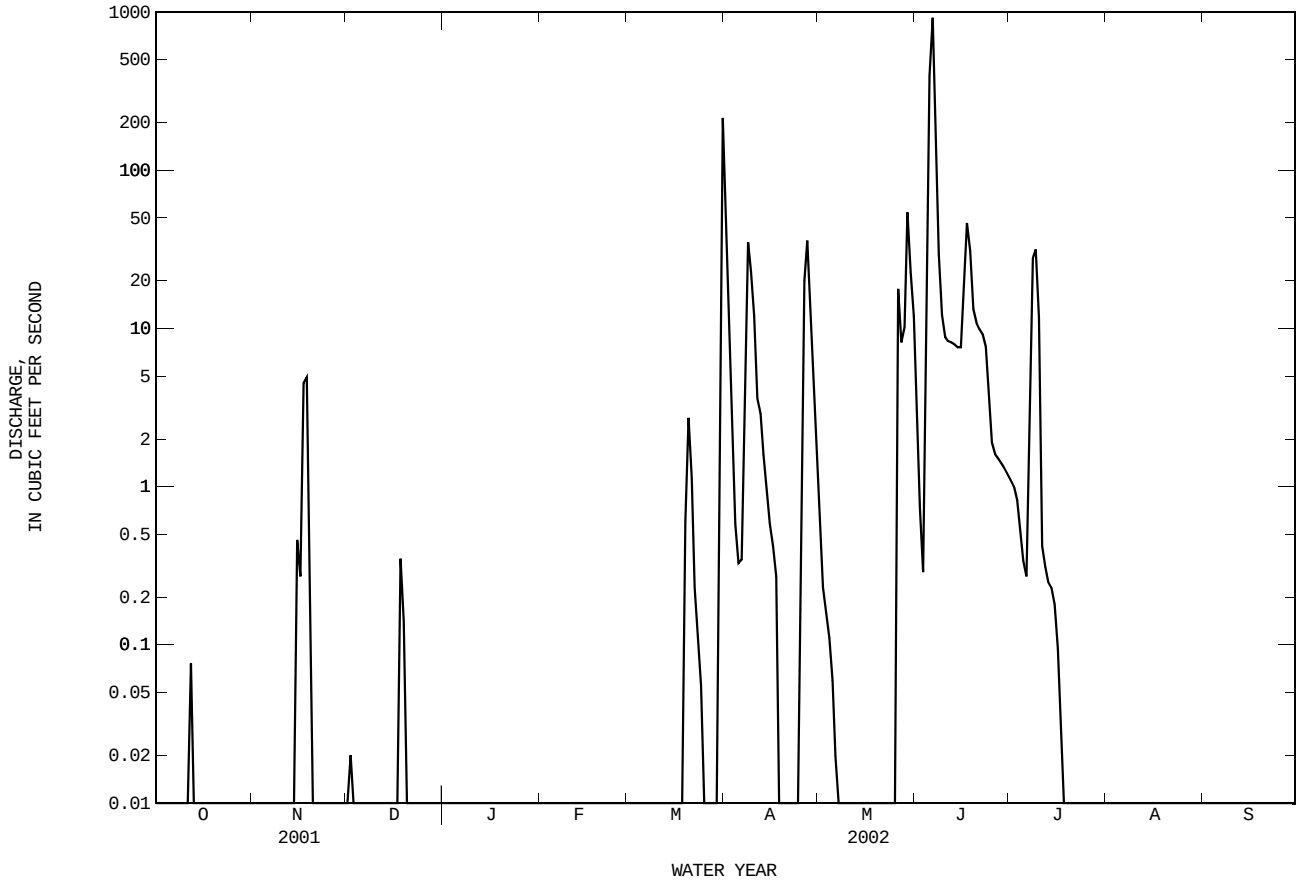
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002, BY WATER YEAR (WY)

MEAN	4.346	2.062	0.694	1.599	5.033	3.394	5.195	12.89	27.22	3.115	14.14	5.373
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1964	1966	1964	1964	1966	1964	1964	1967	1966	1964	1964	1963

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR			FOR 2002 WATER YEAR			WATER YEARS 1963 - 2002		
ANNUAL TOTAL	1630.97			2535.12					
ANNUAL MEAN	4.468			6.946			7.115		
HIGHEST ANNUAL MEAN							50.7		1982
LOWEST ANNUAL MEAN							0.033		1984
HIGHEST DAILY MEAN	380	Mar	9	920	Jun	6	8730	Aug	4 1978
LOWEST DAILY MEAN	0.00	Jan	2	0.00	Oct	1	0.00	Aug	2 1963
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan	2	0.00	Oct	1	0.00	Aug	2 1963
MAXIMUM PEAK FLOW				1230	Jun	6	34600	Aug	4 1978
MAXIMUM PEAK STAGE				13.62	Jun	6	17.53	Aug	4 1978
ANNUAL RUNOFF (AC-FT)	3240			5030			5150		
10 PERCENT EXCEEDS	1.2			7.6			1.3		
50 PERCENT EXCEEDS	0.00			0.00			0.00		
90 PERCENT EXCEEDS	0.00			0.00			0.00		

e Estimated

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, at intake tower on left bank 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^2

PERIOD OF RECORD.--Aug. 1974 to Oct. 1994, July 1998 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.--No estimated daily contents. 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-foot-square concrete conduit. Low-flow releases are made by valves in the outlet vault of the drop inlet. Conservation pool storage is 27,888 acre-ft. 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 contents, 18,400 acre-ft, June 19, elevation, 1,328.77 ft; minimum contents, 12,000 acre-ft, Mar. 18, elevation, 1,323.54 ft.

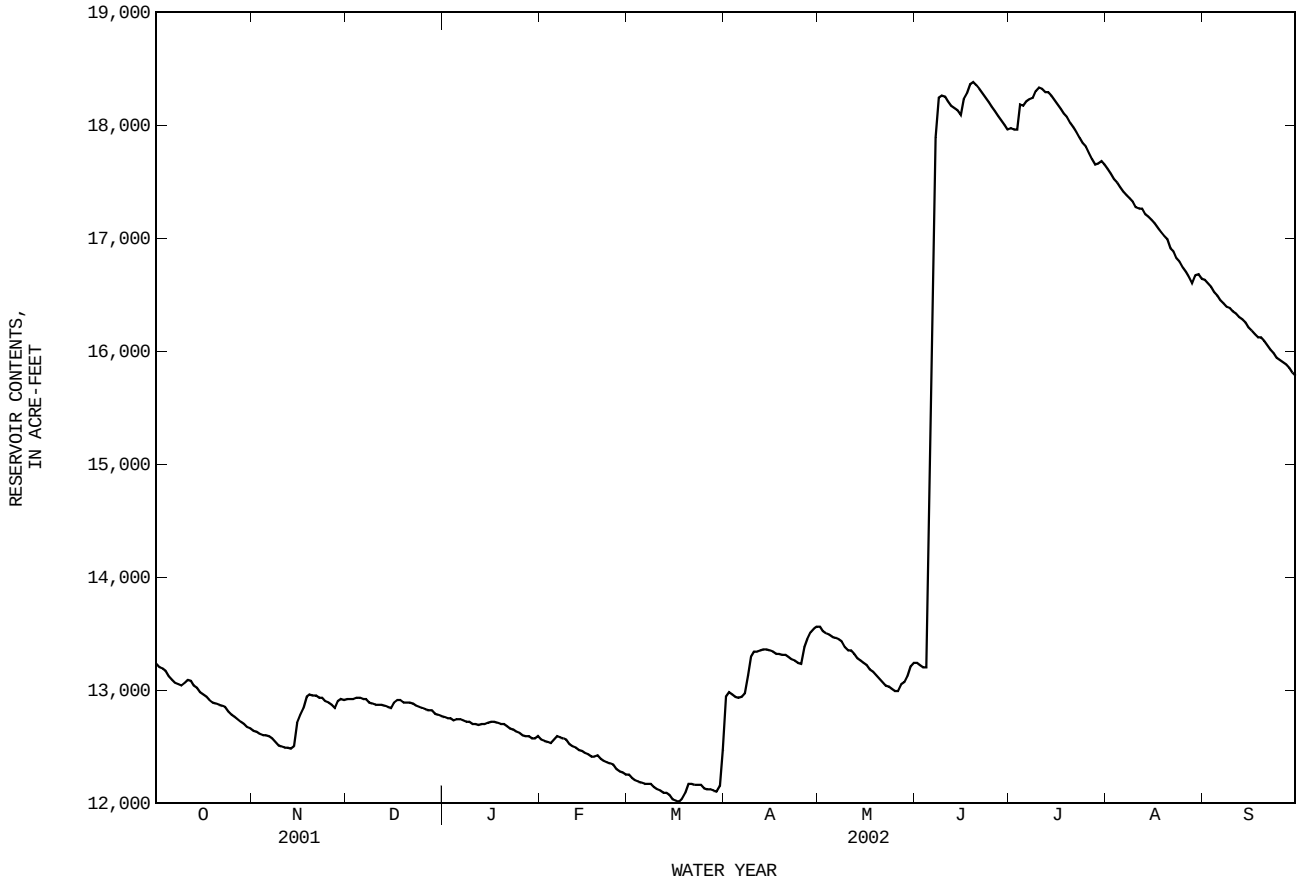
RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13230	12640	12920	12760	12560	12250	12940	13560	13240	17970	17610	16630
2	13200	12630	12920	12750	12550	12220	12980	13520	13220	17960	17570	16600
3	13190	12610	12920	12750	12540	12200	12960	13500	13200	17960	17520	16570
4	13170	12600	12930	12730	12530	12190	12940	13490	13200	18180	17490	16520
5	13120	12600	12930	12740	12560	12180	12930	13470	14150	18170	17450	16490
6	13090	12590	12920	12740	12590	12170	12940	13460	16160	18210	17410	16450
7	13060	12570	12920	12730	12580	12170	12970	13450	17890	18230	17380	16420
8	13050	12540	12890	12720	12570	12170	13130	13430	18240	18240	17350	16390
9	13040	12510	12880	12720	12560	12140	13290	13380	18260	18300	17320	16380
10	13060	12500	12870	12700	12520	12120	13340	13350	18250	18330	17270	16350
11	13090	12490	12870	12700	12500	12110	13340	13350	18210	18320	17260	16330
12	13080	12490	12870	12690	12490	12090	13350	13320	18170	18290	17260	16300
13	13040	12480	12860	12700	12470	12090	13360	13280	18150	18290	17210	16280
14	13020	12500	12850	12700	12460	12070	13360	13260	18130	18260	17190	16250
15	12980	12710	12840	12710	12440	12030	13350	13240	18090	18220	17160	16210
16	12960	12780	12890	12720	12430	12020	13340	13220	18230	18180	17130	16180
17	12940	12840	12910	12720	12410	12010	13320	13180	18280	18140	17090	16150
18	12910	12940	12910	12710	12410	12040	13320	13160	18360	18100	17050	16120
19	12890	12960	12890	12700	12420	12090	13310	13130	18380	18070	17020	16120
20	12880	12950	12890	12700	12390	12170	13310	13100	18350	18020	16990	16090
21	12870	12950	12890	12680	12370	12170	13290	13070	18320	17980	16910	16050
22	12860	12930	12880	12660	12360	12160	13270	13040	18280	17940	16880	16010
23	12850	12930	12860	12650	12350	12160	13260	13030	18240	17890	16820	15980
24	12810	12900	12850	12630	12340	12160	13240	13010	18200	17840	16790	15940
25	12780	12890	12840	12620	12300	12130	13230	12990	18160	17810	16740	15920
26	12760	12870	12830	12600	12280	12120	13380	12990	18120	17750	16700	15900
27	12740	12840	12820	12590	12270	12120	13450	13050	18080	17700	16650	15880
28	12720	12900	12820	12590	12250	12110	13510	13070	18040	17650	16600	15850
29	12700	12920	12790	12570	---	12100	13540	13120	18000	17660	16670	15810
30	12670	12910	12780	12570	---	12150	13560	13210	17960	17680	16680	15780
31	12660	---	12770	12590	---	12470	---	13240	---	17650	16640	---
MEAN	12950	12730	12870	12680	12450	12140	13250	13250	17320	18030	17090	16200
MAX	13230	12960	12930	12760	12590	12470	13560	13560	18380	18330	17610	16630
MIN	12660	12480	12770	12570	12250	12010	12930	12990	13200	17650	16600	15780
(+)	1324.18	1324.43	1324.29	1324.12	1323.79	1324.00	1325.06	1324.75	1328.47	1328.26	1327.54	1326.91
(@)	-600	+250	-140	-180	-340	+220	+1090	-320	+4720	-310	-1010	-860

CAL YR 2001 MAX 17020 MIN 7760 (@) +4810
WTR YR 2002 MAX 18380 MIN 12010 (@) +2520

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

08082800 Millers Creek Reservoir near Bomarton, TX--Continued



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^2.

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 fair. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.05	0.00	0.00	0.00	0.01	0.00	2.0	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00
5	0.05	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.04	0.15	0.00	0.00
6	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.02	1.8	0.00	0.00
7	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	4.3	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.1	0.00	0.00
10	5.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.00	0.00
11	9.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.00	0.00
12	14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00
13	8.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00
14	2.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
15	0.79	1.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
16	0.00	0.03	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
17	0.00	0.76	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	38	0.00	0.00	0.00	0.00
30	0.00	0.26	0.00	0.00	---	0.40	0.00	8.4	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.03	---	3.9	---	0.00	0.00	---
TOTAL	39.54	2.36	0.81	0.00	0.13	0.49	0.01	50.43	2.97	28.15	0.00	0.00
MEAN	1.275	0.079	0.026	0.000	0.005	0.016	0.000	1.627	0.099	0.908	0.000	0.000
MAX	14	1.3	0.54	0.00	0.07	0.40	0.01	38	2.0	12	0.00	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	78	4.7	1.6	0.00	0.3	1.0	0.02	100	5.9	56	0.00	0.00

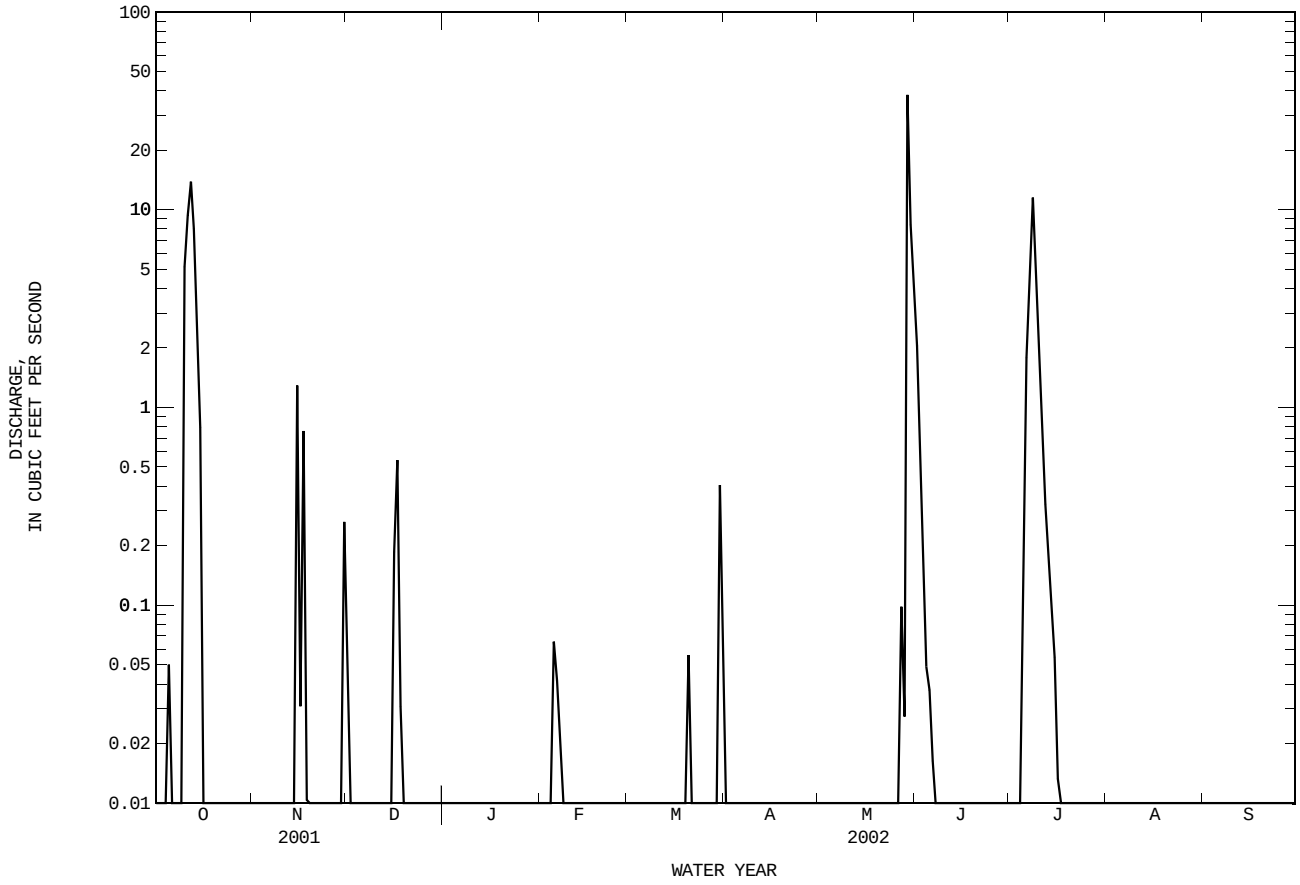
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002, BY WATER YEAR (WY)

MEAN	9.478	2.340	2.504	2.454	3.190	7.509	5.470	23.04	14.78	5.387	8.006	17.59
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	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.027	0.065	0.000	0.000	0.000
(WY)	2000	2000	2000	2000	2000	2002	2001	2000	1998	2001	1998	1998

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002	
ANNUAL TOTAL	185.98		124.89			
ANNUAL MEAN	0.510		0.342		8.502	
HIGHEST ANNUAL MEAN					29.6	1982
LOWEST ANNUAL MEAN					0.34	2002
HIGHEST DAILY MEAN	49	Sep 5	38	May 29	4420	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 16	0.00	Aug 3 1964
MAXIMUM PEAK FLOW			117	May 29	c9000	Mar 23 2000
MAXIMUM PEAK STAGE			6.20	May 29	a22.35	Mar 23 2000
ANNUAL RUNOFF (AC-FT)	369		248		6160	
10 PERCENT EXCEEDS	0.13		0.04		6.3	
50 PERCENT EXCEEDS	0.00		0.00		1.5	
90 PERCENT EXCEEDS	0.00		0.00		0.04	

c From rating curve extended above 7,050 ft^3/s.
a From floodmark.

08083100 Clear Fork Brazos River near Roby, TX--Continued



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^2.

PERIOD OF RECORD.--Jan. 1936 to Sept. 1969 (end of month contents only), Sept. 1969 to Sept. 1974, Mar. 1999 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 except those for estimated daily contents, which are fair. 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. Conservation pool storage is 2,544 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	2,128.5
Crest of spillway	2,116.5

COOPERATION.--The capacity table dated Apr. 24, 1953, was furnished by Freese and Nichols Inc. and is based on a survey in 1929. 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.

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

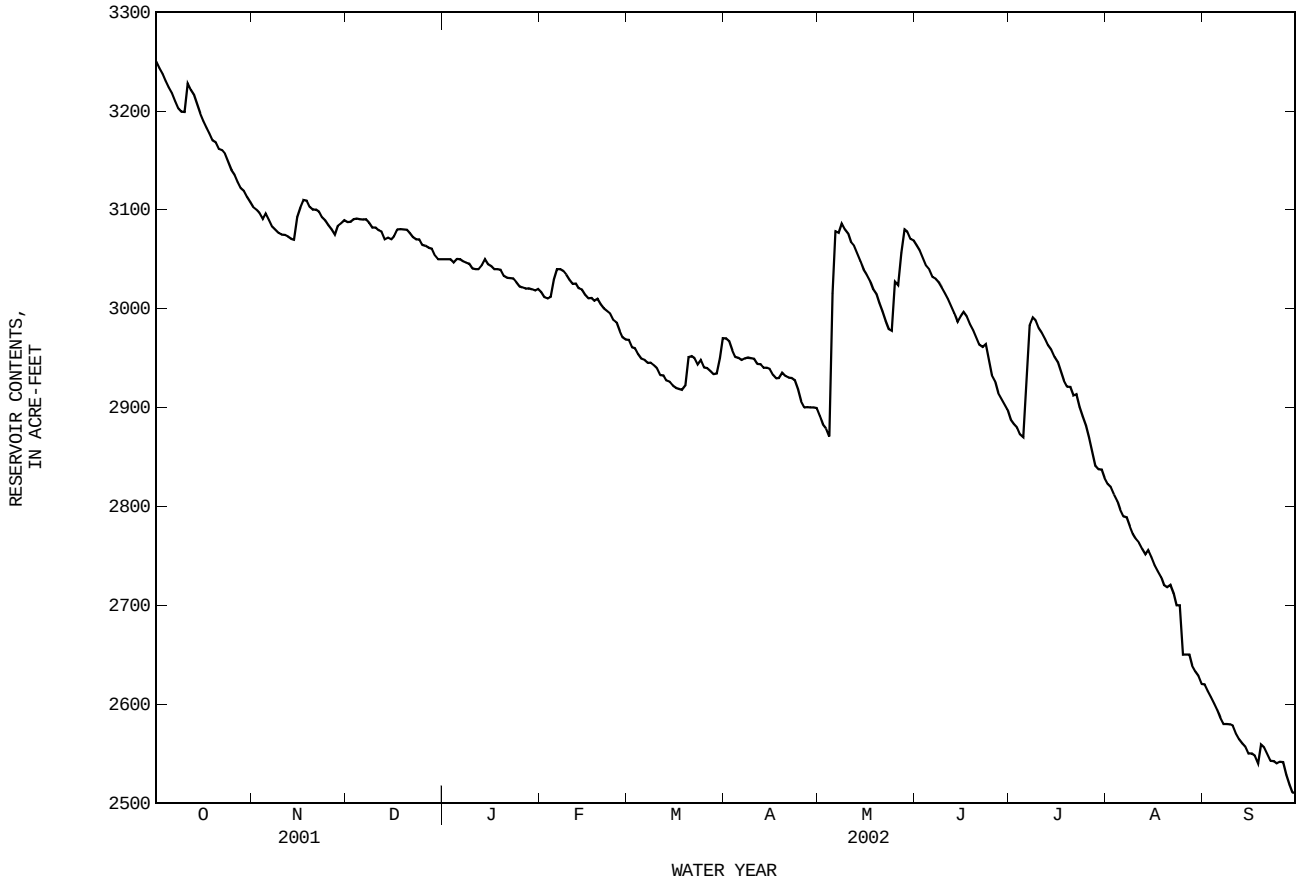
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3250	3100	3090	3050	3020	2970	2970	2890	3060	2890	2820	2620
2	3240	3100	3090	3050	3010	2960	2970	2880	3060	2880	2820	2610
3	3240	3100	3090	3050	3010	2960	2960	2880	3050	2880	2810	2610
4	3230	3090	3090	3050	3010	2950	2950	2870	3040	2870	2810	2600
5	3220	3100	3090	3050	3030	2950	2950	3020	3040	2870	2800	2590
6	3220	3090	3090	3050	3040	2950	2950	3080	3030	2930	2790	2590
7	3210	3080	3090	3050	3040	2940	2950	3080	3030	2980	2790	2580
8	3200	3080	3090	3050	3040	2950	2950	3090	3030	2990	2780	2580
9	3200	3080	3080	3050	3030	2940	2950	3080	3020	2990	2770	2580
10	3200	3070	3080	3040	3030	2940	2950	3080	3020	2980	2770	2580
11	3230	3070	3080	3040	3020	2930	2940	3070	3010	2980	2760	2570
12	3220	3070	3080	3040	3030	2930	2940	3060	3000	2970	2760	2560
13	3220	3070	3070	3040	3020	2930	2940	3060	3000	2960	2750	2560
14	3210	3070	3070	3050	3020	2930	2940	3050	2990	2960	2760	2560
15	3200	3090	3070	3040	3010	2920	2940	3040	2990	2950	2750	2550
16	3190	3100	3070	3040	3010	2920	2930	3030	3000	2950	2740	2550
17	3180	3110	3080	3040	3010	2920	2930	3030	2990	2940	2730	2550
18	3180	3110	3080	3040	3010	2920	2930	3020	2980	2930	2730	2540
19	3170	3100	3080	3040	3010	2920	2940	3020	2980	2920	2720	2560
20	3170	3100	3080	3030	3000	2950	2930	3010	2970	2920	2720	2560
21	3160	3100	3080	3030	3000	2950	2930	3000	2960	2910	2720	2550
22	3160	3100	3070	3030	3000	2950	2930	2990	2960	2910	2710	2540
23	3160	3090	3070	3030	3000	2940	2930	2980	2960	2900	e2700	2540
24	3150	3090	3070	3030	2990	2950	2920	2980	2950	2890	e2700	2540
25	3140	3080	3060	3020	2990	2940	2910	3030	2930	2880	e2650	2540
26	3140	3080	3060	3020	2980	2940	2900	3020	2930	2870	e2650	2540
27	3130	3070	3060	3020	2970	2940	2900	3060	2910	2860	2650	2530
28	3120	3080	3060	3020	2970	2930	2900	3080	2910	2840	2640	2520
29	3120	3090	3050	3020	---	2930	2900	3080	2900	2840	2630	2510
30	3110	3090	3050	3020	---	2950	2900	3070	2900	2840	2630	2510
31	3110	---	3050	3020	---	2970	---	3070	---	2830	2620	---
MEAN	3180	3090	3070	3040	3010	2940	2930	3020	2990	2910	2730	2560
MAX	3250	3110	3090	3050	3040	2970	2970	3090	3060	2990	2820	2620
MIN	3110	3070	3050	3020	2970	2920	2900	2870	2900	2830	2620	2510
(+)	2095.63	2095.55	2095.37	2095.26	2095.06	2095.06	2094.76	2095.46	2094.76	2094.46	2093.54	2093.04
(@)	-150	-20	-40	-30	-50	0	-70	+170	-170	-70	-210	-110

CAL YR 2001 MAX 4410 MIN 3050 (@) -1370
WTR YR 2002 MAX 3250 MIN 2510 (@) -750

e Estimated

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

08083200 Lake Sweetwater near Sweetwater, TX--Continued



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^2.

PERIOD OF RECORD.--Oct. 2001 to Sept. 2002.

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. No known regulation. There are several small diversions above station.

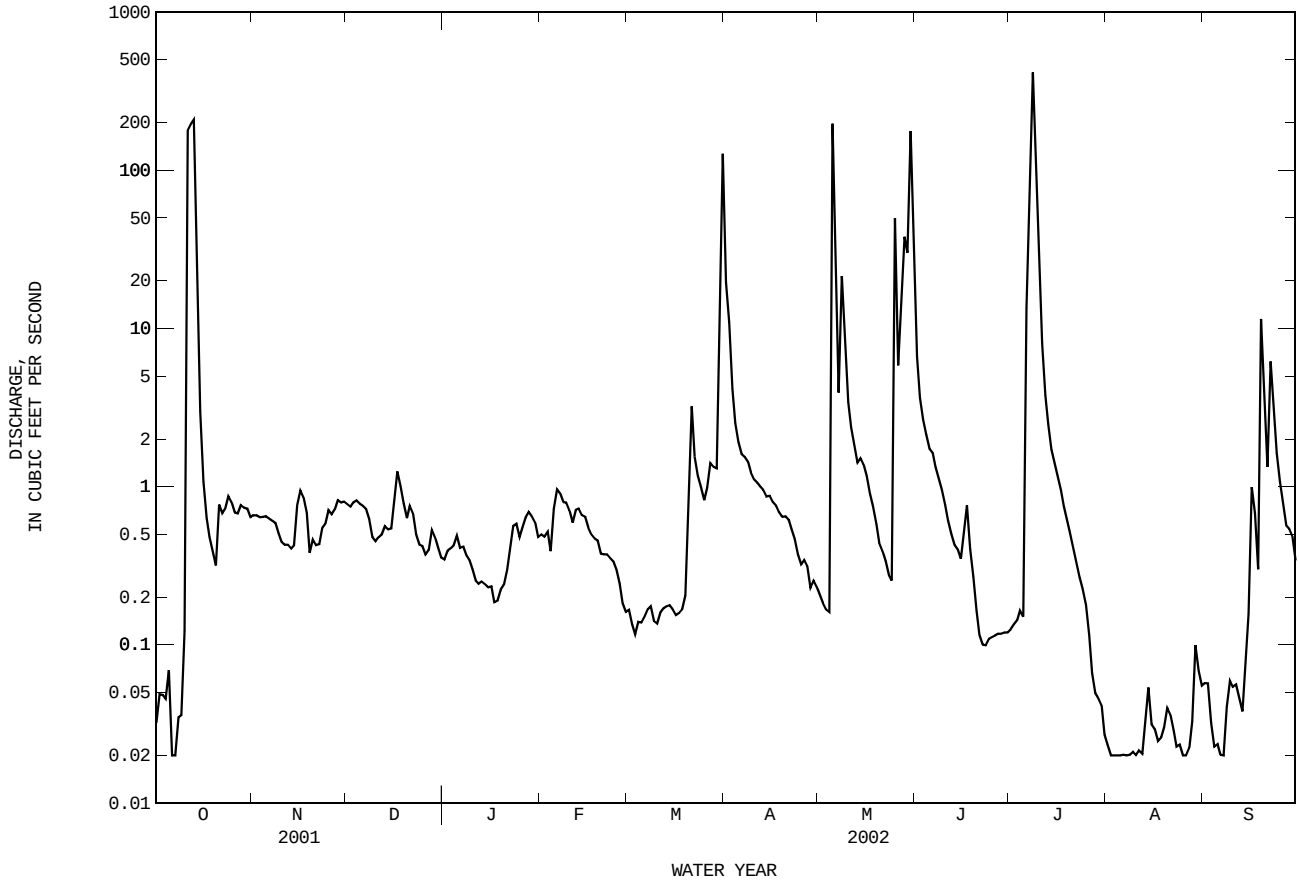
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 589 ft^3/s, July 8, 2002, gage height, 10.92 ft, from floodmark, from rating curve extended above 542 ft^3/s; minimum discharge, 0.02 ft^3/s for many days in 2002.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 589 ft^3/s, July 8, gage height, 10.92 ft, from floodmark, from rating curve extended above 542 ft^3/s; minimum discharge, 0.02 ft^3/s, on many days, gage height, 4.48 ft.

DISCHARGE FROM DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.03	0.66	0.78	0.35	0.50	0.17	20	0.21	6.6	0.13	0.02	0.06
2	0.05	0.66	0.75	0.39	0.48	0.13	11	0.18	3.7	0.13	0.02	0.06
3	0.05	0.64	0.79	0.40	0.52	0.12	4.2	0.17	2.7	0.14	0.02	0.03
4	0.05	0.64	0.82	0.42	0.39	0.14	2.5	0.16	2.1	0.16	0.02	0.02
5	0.07	0.65	0.78	0.49	0.73	0.14	1.9	196	1.7	0.15	0.02	0.02
6	0.02	0.63	0.75	0.41	0.96	0.15	1.6	18	1.6	13	0.02	0.02
7	0.02	0.61	0.72	0.42	0.91	0.17	1.5	3.9	1.3	47	0.02	0.02
8	0.03	0.59	0.62	0.37	0.80	0.17	1.4	21	1.1	414	0.02	0.04
9	0.04	0.50	0.48	0.34	0.79	0.14	1.2	7.7	0.95	115	0.02	0.06
10	0.12	0.45	0.45	0.30	0.70	0.14	1.1	3.4	0.76	39	0.02	0.05
11	178	0.43	0.48	0.26	0.59	0.16	1.1	2.4	0.61	8.0	0.02	0.06
12	195	0.43	0.50	0.24	0.71	0.17	1.00	1.8	0.50	3.8	0.02	0.05
13	208	0.41	0.56	0.25	0.73	0.17	0.95	1.4	0.43	2.5	0.03	0.04
14	23	0.42	0.54	0.24	0.66	0.18	0.87	1.5	0.40	1.7	0.05	0.08
15	3.0	0.76	0.54	0.23	0.64	0.17	0.87	1.4	0.35	1.4	0.03	0.16
16	1.1	0.95	0.82	0.23	0.55	0.15	0.80	1.2	0.50	1.1	0.03	0.99
17	0.63	0.85	1.2	0.19	0.50	0.16	0.76	0.90	0.76	0.94	0.02	0.68
18	0.48	0.68	1.0	0.19	0.47	0.17	0.69	0.74	0.40	0.75	0.03	0.30
19	0.39	0.38	0.78	0.22	0.46	0.20	0.64	0.58	0.27	0.61	0.03	11
20	0.32	0.46	0.63	0.24	0.38	0.78	0.65	0.44	0.16	0.50	0.04	3.9
21	0.77	0.43	0.76	0.30	0.37	3.2	0.62	0.39	0.12	0.40	0.04	1.3
22	0.68	0.43	0.68	0.41	0.37	1.5	0.54	0.34	0.10	0.33	0.03	6.2
23	0.72	0.54	0.50	0.56	0.35	1.2	0.46	0.28	0.10	0.27	0.02	3.1
24	0.87	0.58	0.43	0.58	0.34	0.99	0.37	0.25	0.11	0.22	0.02	1.6
25	0.80	0.71	0.42	0.48	0.30	0.82	0.32	50	0.11	0.18	0.02	1.1
26	0.69	0.67	0.37	0.55	0.24	0.98	0.34	5.8	0.11	0.12	0.02	0.80
27	0.68	0.72	0.40	0.64	0.18	1.4	0.32	15	0.12	0.07	0.02	0.57
28	0.77	0.82	0.53	0.69	0.16	1.3	0.23	38	0.12	0.05	0.03	0.54
29	0.74	0.79	0.48	0.65	---	1.3	0.25	30	0.12	0.05	0.10	0.49
30	0.73	0.81	0.41	0.59	---	11	0.23	177	0.12	0.04	0.07	0.34
31	0.64	---	0.36	0.48	---	127	---	23	---	0.03	0.06	---
TOTAL	618.49	18.30	19.33	12.11	14.78	154.47	58.41	603.14	28.02	651.77	0.93	33.68
MEAN	19.95	0.610	0.624	0.391	0.528	4.983	1.947	19.46	0.934	21.02	0.030	1.123
MAX	208	0.95	1.2	0.69	0.96	127	20	196	6.6	414	0.10	11
MIN	0.02	0.38	0.36	0.19	0.16	0.12	0.23	0.16	0.10	0.03	0.02	0.02
AC-FT	1230	36	38	24	29	306	116	1200	56	1290	1.8	67

08083230 Clear Fork Brazos River near Noodle, TX--Continued



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^2.

PERIOD OF RECORD.--Mar. 1999 to current year.

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

REMARKS.--Records fair. The lake is formed by a rolled earthfill dam 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. Conservation pool storage is 7,900 acre-ft. 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.--Capacity and area are from the area-capacity curve by Freese and Nichols Inc., dated 1948 and adjusted for the established elevation. The capacity table was provided by city of Abilene. Record of diversions may be obtained from city of Abilene.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded contents, 3,050 acre-ft, July 10, 2002, elevation, 2,006.45 ft; minimum contents, 6.8 acre-ft, May 2, 2001, elevation, 1,988.69 ft.

EXTREMES FOR CURRENT YEAR.--Maximum recorded contents, 3,050 acre-ft, July 10, elevation, 2,006.45 ft; minimum contents, 14 acre-ft, May 3, elevation, 1,989.68 ft.

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

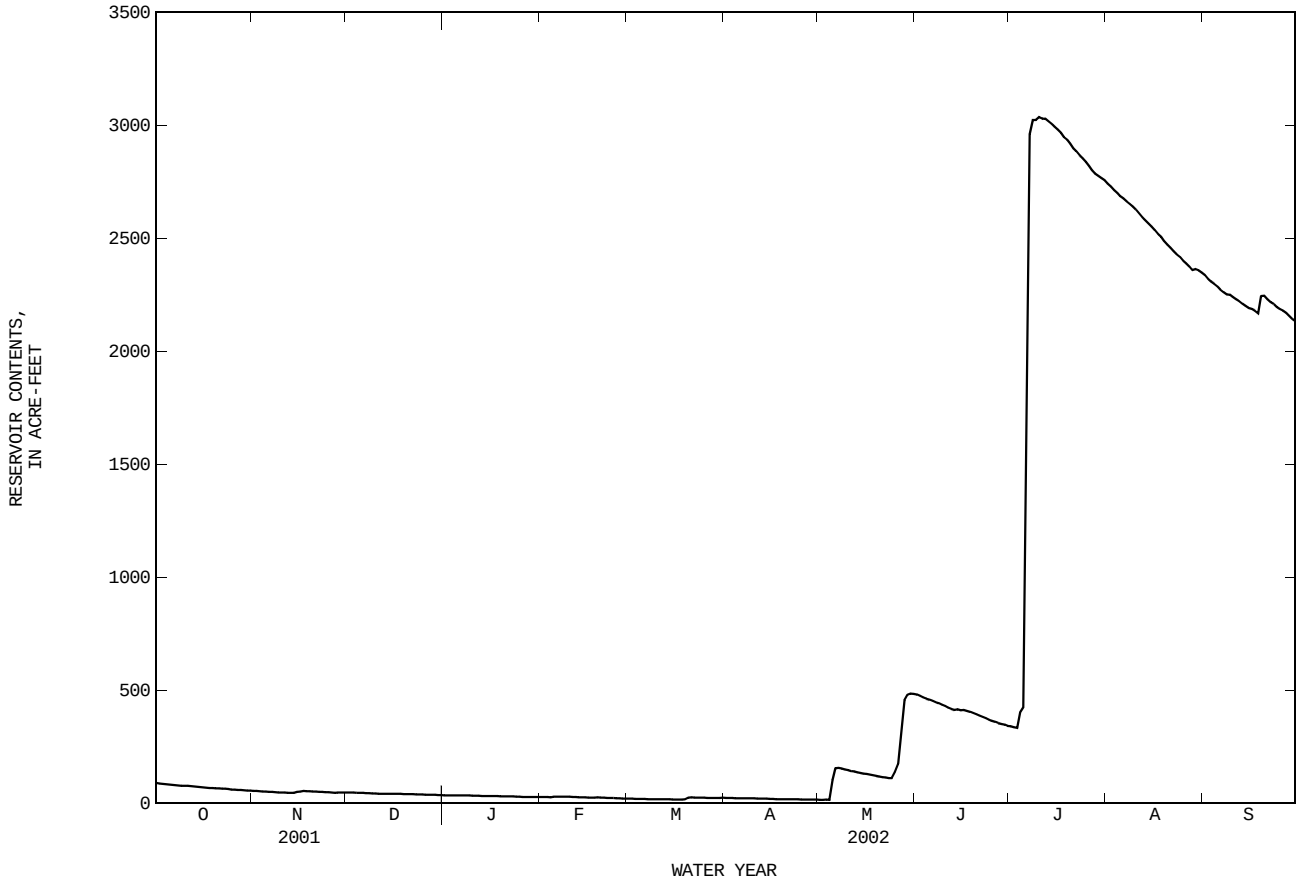
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	54	46	34	26	19	e22	14	479	339	2740	2340
2	86	53	46	34	26	19	e22	14	474	335	2730	2320
3	85	52	46	34	26	18	22	14	468	333	2710	2310
4	83	51	45	34	26	18	21	14	461	399	2700	2300
5	82	51	45	34	27	18	21	101	456	422	2690	2290
6	81	50	45	34	28	18	21	153	451	1710	2670	2270
7	79	49	44	33	28	17	21	155	446	2960	2660	2260
8	78	48	43	33	28	17	21	152	441	3020	2650	2250
9	77	47	42	33	27	17	20	149	435	3020	2640	2250
10	76	46	41	33	27	17	20	145	429	3040	2630	2240
11	76	46	41	32	26	17	20	141	422	3030	2610	2230
12	74	45	41	32	26	16	19	139	417	3030	2590	2220
13	73	45	41	31	25	16	19	136	411	3020	2580	2210
14	72	45	40	31	25	16	19	133	414	3010	2560	2200
15	71	49	40	31	25	16	18	130	411	2990	2550	2190
16	69	51	40	31	24	15	18	128	412	2980	2530	2190
17	68	53	40	30	24	15	17	125	408	2970	2520	2180
18	67	53	40	30	24	15	17	122	404	2950	2500	2170
19	66	52	39	30	24	17	17	119	397	2940	2490	2240
20	65	51	39	29	23	24	17	117	392	2920	2470	2240
21	64	50	39	29	23	25	17	114	386	2900	2460	2230
22	64	50	38	29	22	24	16	112	380	2880	2440	2220
23	63	49	38	29	22	24	16	111	374	2870	2430	2210
24	61	48	37	28	22	24	16	110	368	2850	2420	2200
25	60	47	37	27	21	23	15	137	363	2840	2400	2190
26	59	47	36	27	20	22	16	172	359	2820	2390	2180
27	58	46	36	27	19	22	15	303	354	2800	2370	2170
28	57	47	36	27	19	22	15	456	349	2780	2360	2150
29	56	46	36	e27	---	22	15	478	346	2770	2360	2140
30	55	46	35	e27	---	23	15	483	341	2760	2360	2130
31	54	---	35	27	---	23	---	483	---	2760	2350	---
MEAN	70	49	40	31	24	19	18	166	408	2470	2530	2220
MAX	88	54	46	34	28	25	22	483	479	3040	2740	2340
MIN	54	45	35	27	19	15	15	14	341	333	2350	2130
(+)	1991.37	1991.13	1990.68	1990.38	1990.05	1990.20	1989.75	1996.84	1995.78	2005.75	2004.68	2004.08
(@)	-32	-8	-11	-8	-8	+4	-8	+468	-142	+2419	-410	-220

CAL YR 2001 MAX 147 MIN 7.0 (@) +25.1
WTR YR 2002 MAX 3040 MIN 14 (@) +2044

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

e Estimated

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^2.

PERIOD OF RECORD.--Oct. 1970 to Sept. 1979, 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 fair. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.76	0.00	0.04	0.00	0.24	0.00	0.00	23	0.07	0.00
2	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00
3	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.00	0.00
4	0.00	6.4	0.00	0.01	0.15	0.00	0.00	0.00	0.00	156	0.00	0.00
5	0.16	1.0	0.00	0.21	41	0.00	0.00	76	0.00	5.3	0.00	0.00
6	0.02	0.00	0.06	0.00	4.4	0.00	0.00	0.77	0.00	682	0.00	0.00
7	0.00	0.00	0.04	0.00	0.32	0.00	6.7	0.76	0.00	608	0.00	0.00
8	0.00	0.00	0.00	0.00	0.08	0.00	2.2	1.9	0.00	19	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.02	0.00	6.9	0.00	5.9
10	2.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.2	0.00	1.5
11	4.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.6	0.00	0.08
12	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.9	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.9	76	0.00
14	0.00	14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.3	49	0.00
15	0.00	81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.4	1.4	6.9
16	0.00	1.6	10	0.00	0.00	0.00	0.00	0.00	19	5.0	0.13	0.47
17	0.00	7.8	6.6	0.00	0.00	0.00	0.00	0.00	0.67	3.4	0.00	0.00
18	0.00	0.15	0.11	0.00	0.00	0.00	0.00	0.00	0.01	0.54	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	58	0.00	0.00	0.00	0.10	0.00	93
20	0.00	0.00	0.00	0.00	0.00	37	0.00	0.00	0.00	0.00	0.00	1.3
21	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.24
22	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.2	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.3	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	59	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	95	0.80	0.00	0.00	0.00
29	0.00	21	0.00	0.00	---	0.23	0.20	4.6	1.2	0.00	4.8	0.00
30	0.00	2.3	0.00	2.4	---	65	1.2	1.0	0.44	56	0.36	0.00
31	0.00	---	0.00	1.4	---	6.1	---	0.11	---	1.1	0.00	---
MEAN	0.228	4.508	0.570	0.130	1.643	5.380	0.356	8.091	0.737	51.72	4.250	3.646
MAX	4.3	81	10	2.4	41	65	6.7	95	19	682	76	93
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

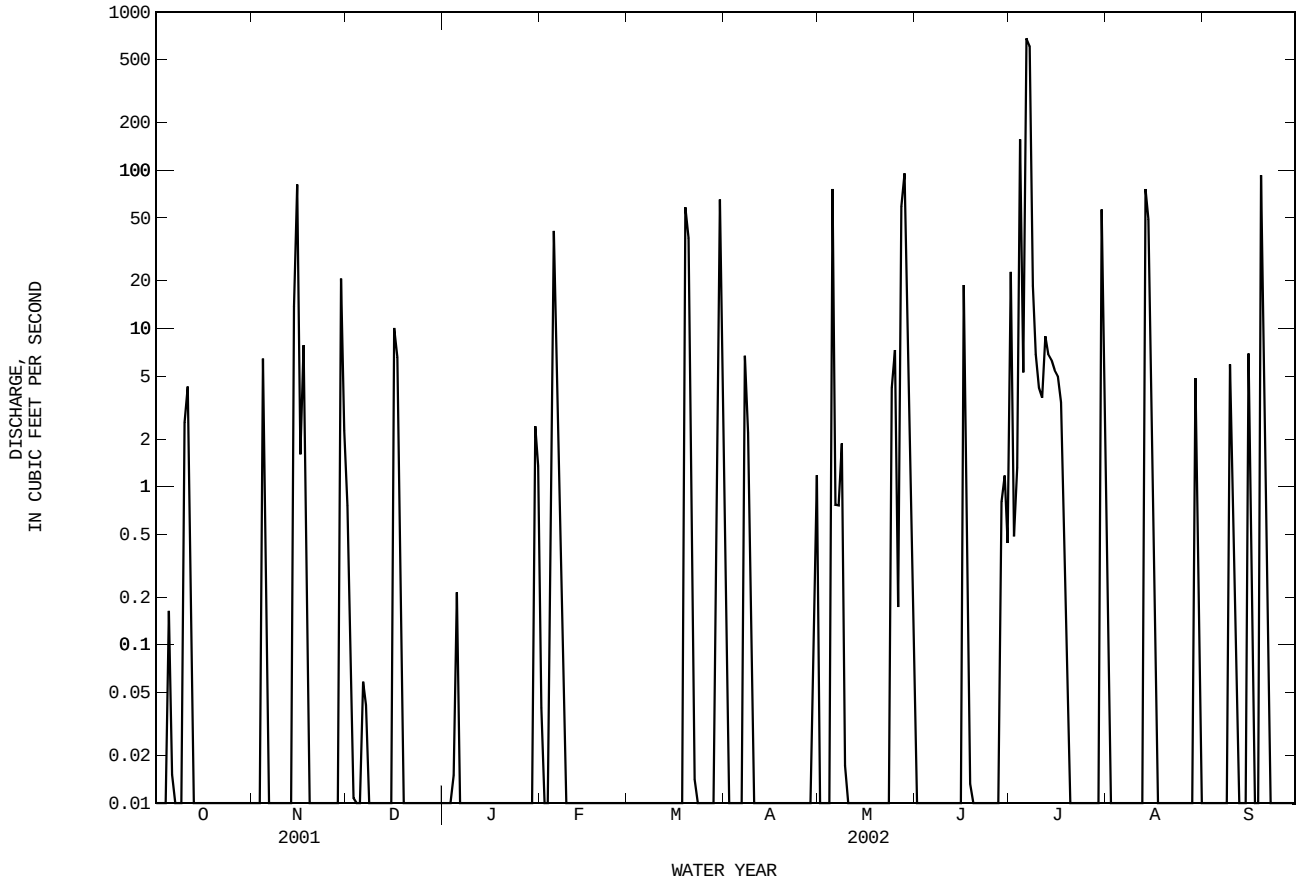
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2002h, BY WATER YEAR (WY)

MEAN	3.641	1.191	0.310	0.483	1.069	3.087	1.705	2.375	1.508	6.477	5.205	7.173
MAX	9.91	4.51	1.48	3.24	3.01	14.2	5.13	8.09	2.82	51.7	17.9	32.2
(WY)	1973	2002	1972	1973	1979	1979	1976	2002	1978	2002	1978	1974
MIN	0.16	0.000	0.000	0.000	0.000	0.000	0.35	0.006	0.72	0.045	0.11	0.000
(WY)	1971	1971	1973	1972	1976	1971	1975	1977	1976	2001	1973	1979

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 1971 - 2002h	
ANNUAL MEAN	6.863		2.935	
HIGHEST ANNUAL MEAN			6.86	2002
LOWEST ANNUAL MEAN			1.70	1977
HIGHEST DAILY MEAN	682	Jul 6	682	Jul 6 2002
LOWEST DAILY MEAN	0.00	Oct 1	0.00	Oct 1 1970
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 13	0.00	Oct 27 1970
MAXIMUM PEAK FLOW	c1940	Jul 7	c1940	Jul 7 2002
MAXIMUM PEAK STAGE	9.56	Jul 7	9.56	Jul 7 2002
10 PERCENT EXCEEDS	4.9		2.3	
50 PERCENT EXCEEDS	0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00	

h See PERIOD OF RECORD paragraph.
c From rating curve extended above 960 ft^3/s.

08083420 Cat Claw Creek at Abilene, TX--Continued



08083480 Cedar Creek at IH 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 IH 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^2.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,600 ft^3/s, July 6, 2002, gage height, 8.05 ft, from rating curve extended above 3,020 ft^3/s; no flow at times.

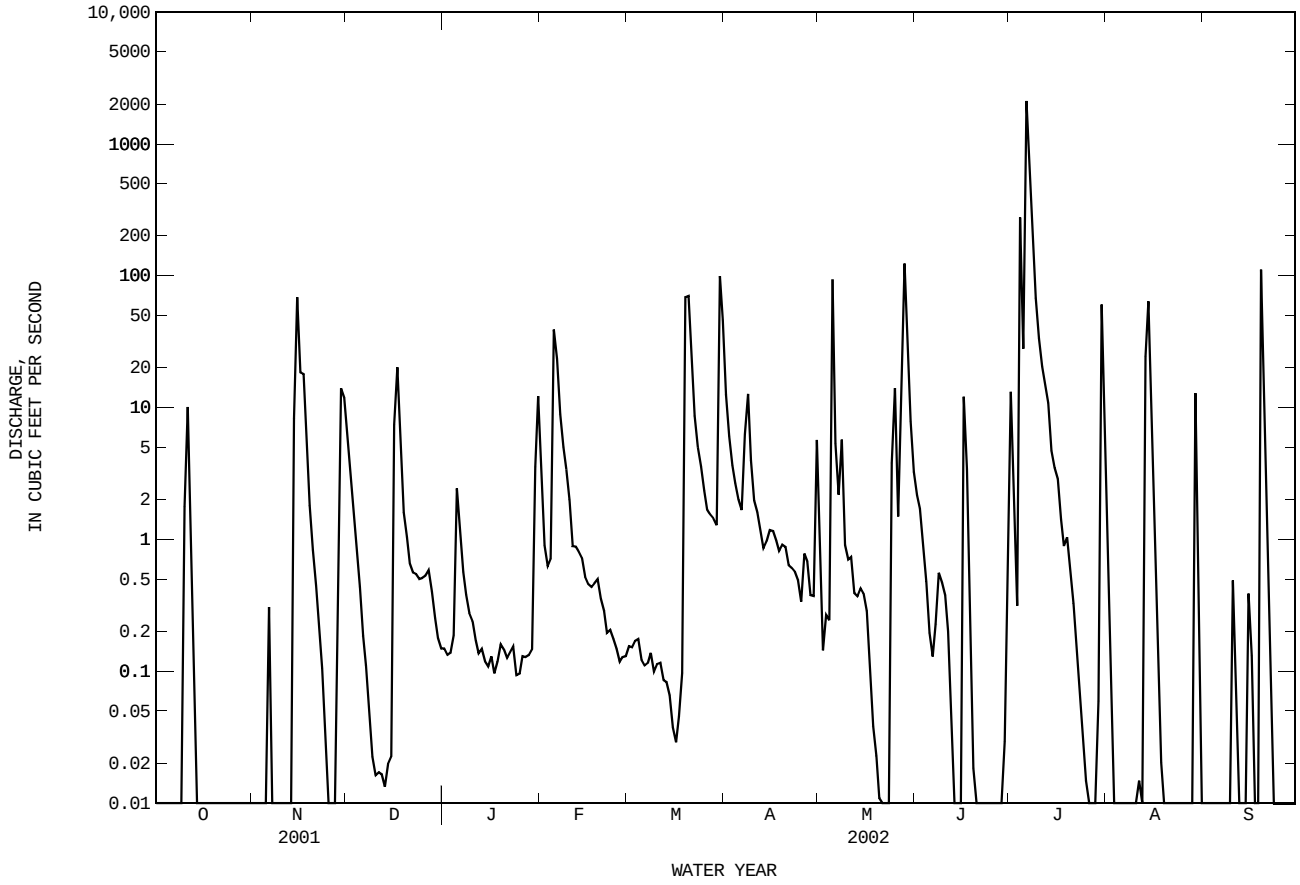
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood on Oct. 17, 2000 reached a stage of 7.72 ft, from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,600 ft^3/s, July 6, gage height, 8.05 ft, from rating curve extended above 3,020 ft^3/s; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	5.5	0.15	2.7	0.15	13	0.68	2.2	13	0.28	0.00
2	0.00	0.00	2.6	0.13	0.90	0.15	6.1	0.14	1.7	2.3	0.04	0.00
3	0.00	0.00	1.4	0.14	0.62	0.17	3.6	0.27	0.89	0.31	0.01	0.00
4	0.00	0.00	0.76	0.19	0.71	0.17	2.7	0.24	0.48	275	0.00	0.00
5	0.00	0.00	0.44	2.4	39	0.12	2.0	93	0.20	28	0.00	0.00
6	0.00	0.31	0.19	1.1	23	0.11	1.7	5.3	0.13	2110	0.00	0.00
7	0.00	0.00	0.11	0.56	8.9	0.12	6.3	2.2	0.23	783	0.00	0.00
8	0.00	0.00	0.05	0.38	5.0	0.14	13	5.7	0.56	213	0.00	0.00
9	0.00	0.00	0.02	0.28	3.4	0.10	4.0	0.91	0.47	68	0.00	0.00
10	1.8	0.00	0.02	0.24	2.0	0.11	2.0	0.70	0.38	33	0.00	0.49
11	10	0.00	0.02	0.17	0.89	0.12	1.6	0.74	0.20	20	0.01	0.05
12	1.2	0.00	0.02	0.14	0.88	0.09	1.1	0.39	0.05	15	0.00	0.00
13	0.08	0.00	0.01	0.15	0.81	0.08	0.85	0.37	0.00	11	24	0.00
14	0.00	8.2	0.02	0.12	0.72	0.07	0.97	0.42	0.00	4.7	64	0.00
15	0.00	69	0.02	0.11	0.52	0.04	1.2	0.39	0.00	3.5	9.6	0.39
16	0.00	18	7.4	0.13	0.46	0.03	1.2	0.29	12	2.9	1.8	0.13
17	0.00	18	20	0.10	0.43	0.05	0.98	0.11	3.4	1.4	0.24	0.00
18	0.00	4.9	5.0	0.12	0.46	0.10	0.81	0.04	0.36	0.89	0.02	0.00
19	0.00	1.8	1.6	0.16	0.50	68	0.91	0.02	0.02	1.0	0.00	111
20	0.00	0.83	1.0	0.15	0.35	70	0.88	0.01	0.00	0.60	0.00	8.6
21	0.00	0.45	0.65	0.13	0.29	20	0.64	0.00	0.00	0.33	0.00	1.3
22	0.00	0.20	0.56	0.14	0.20	8.7	0.61	0.00	0.00	0.15	0.00	0.06
23	0.00	0.11	0.54	0.15	0.21	5.0	0.57	0.00	0.00	0.07	0.00	0.00
24	0.00	0.03	0.50	0.09	0.18	3.6	0.49	3.8	0.00	0.03	0.00	0.00
25	0.00	0.00	0.51	0.10	0.15	2.3	0.34	14	0.00	0.01	0.00	0.00
26	0.00	0.00	0.53	0.13	0.12	1.7	0.78	1.5	0.00	0.01	0.00	0.00
27	0.00	0.00	0.58	0.13	0.13	1.5	0.68	24	0.00	0.00	0.00	0.00
28	0.00	0.19	0.40	0.13	0.13	1.4	0.38	123	0.00	0.00	0.00	0.00
29	0.00	14	0.25	0.15	---	1.3	0.37	27	0.03	0.06	13	0.00
30	0.00	12	0.18	3.5	---	99	5.7	7.8	0.62	60	0.81	0.00
31	0.00	---	0.15	12	---	46	---	3.2	---	4.0	0.00	---
MEAN	0.422	4.934	1.646	0.760	3.345	10.66	2.515	10.20	0.797	117.8	3.671	4.067
MAX	10	69	20	12	39	99	13	123	12	2110	64	111
MIN	0.00	0.00	0.01	0.09	0.12	0.03	0.34	0.00	0.00	0.00	0.00	0.00

08083480 Cedar Creek at IH 20 at Abilene, TX--Continued



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 dam on Elm Creek, 5.8 mi upstream from mouth, and 6.9 mi south of Nugent.

DRAINAGE AREA.--470 mi^2.

PERIOD OF RECORD.--July 1940 to Sept. 1965 (end of month contents only), Oct. 1965 to Sept. 1986, Mar. 1999 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 estimated daily contents and those computed from affected unit values, 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. Conservation pool storage is 70,030 acre-ft. 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.--The capacity table dated Feb. 23, 1994, furnished by the city of Abilene, was based on a volumetric survey of Nov. 1993 by Texas Water Development Board. 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 contents, 53,750 acre-ft, July 10, elevation, 1,631.33 ft; minimum contents, 28,180 acre-ft, July 3, 4, elevation, 1,621.79 ft.

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

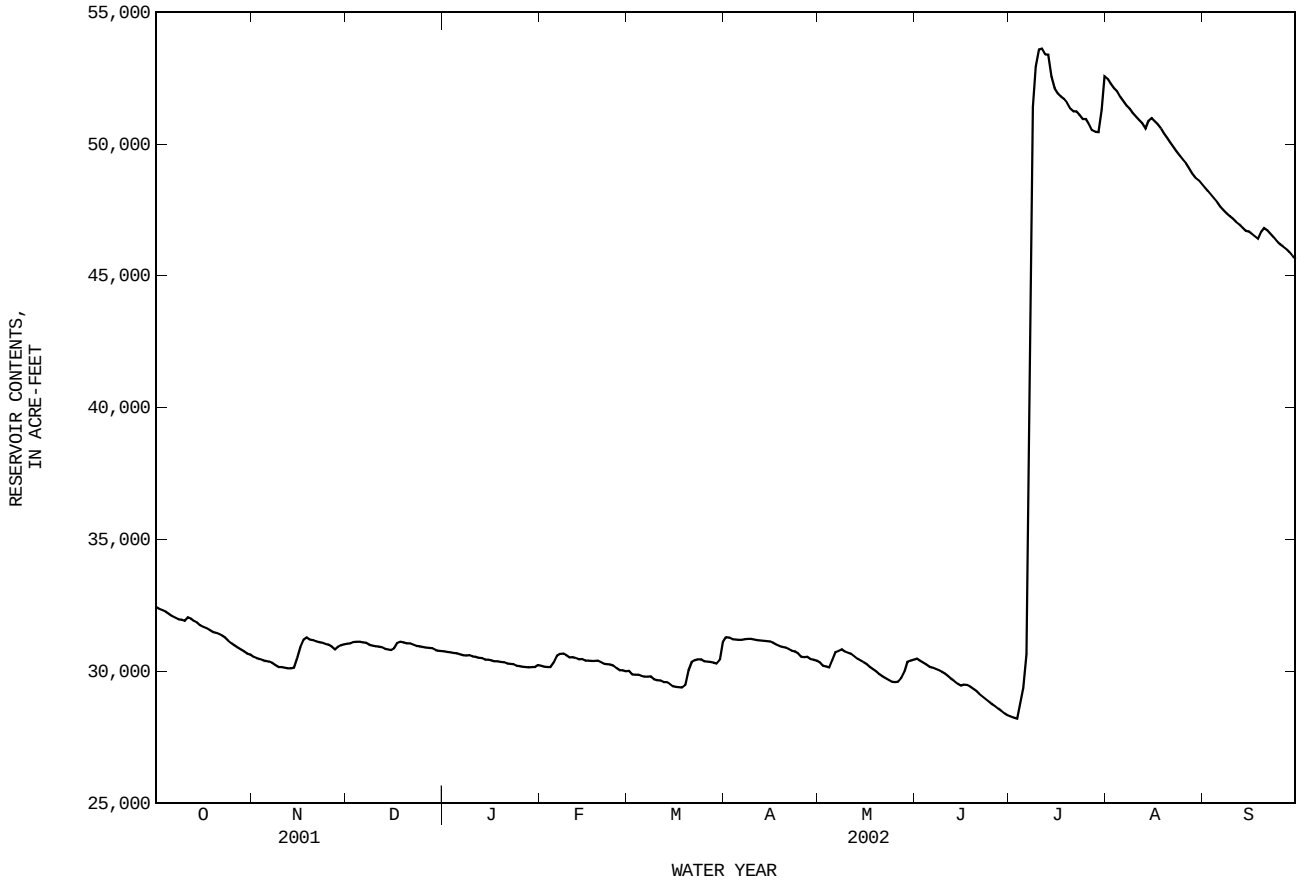
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32430	30550	31040	30750	30200	30010	31290	30330	30470	28280	&52470	48350
2	32350	30500	31060	30730	30170	29880	31270	30200	30400	28240	&52270	48210
3	32300	30460	31100	30720	30160	29870	31210	30180	30330	28200	&52110	48070
4	32260	30410	31120	30690	30160	29860	31200	30140	30250	28750	&51990	47920
5	32170	30390	31120	30680	30320	29810	31190	30440	30170	29370	&51790	47770
6	32090	30360	31090	30640	30580	29790	31190	30710	30130	30640	&51620	47620
7	32020	30310	31080	30610	30650	29790	31210	30760	30080	44040	&51460	47480
8	31970	30230	31000	30590	30660	29800	31220	30820	30030	51390	&51340	47360
9	31950	30160	30970	30600	30600	29690	31220	30740	29970	52940	&51160	47250
10	31910	30150	30950	30560	30520	29660	31200	30690	29900	&53580	&51030	47160
11	32040	30130	30930	30540	30530	29640	31180	30670	29810	&53610	&50910	47040
12	31990	30110	30910	30510	30490	29590	31160	30570	29710	&53390	&50780	46940
13	31910	30110	30850	30490	30450	29580	31150	30470	29620	&53380	&50590	46820
14	31840	30130	30820	30440	30460	29530	31140	30400	29530	&52560	50870	46700
15	31740	30490	30800	30440	30400	29430	31130	30340	29450	&52110	50970	46680
16	31670	30910	30860	30410	30400	29400	31080	30270	29490	&51920	50860	46600
17	31630	31190	31070	30380	30390	29390	31010	30150	29470	&51790	50730	46500
18	31570	31270	31110	30370	30390	29380	30960	30070	29420	&51710	50580	46400
19	31490	31200	31090	30350	30400	29470	30920	29980	29330	&51560	50400	46650
20	31460	31170	31060	30340	30340	30040	30900	29890	29240	&51340	50220	46810
21	31410	31130	31060	30290	30280	30350	30830	29800	29140	&51240	50050	46720
22	31350	31100	31010	30280	30270	30410	30770	29730	29040	&51230	49870	46580
23	31270	31080	30960	30260	30250	30450	30750	29660	28940	&51100	49720	46450
24	31150	31030	30940	30200	30220	30450	30680	29600	28840	&50940	49560	46320
25	31050	31000	30920	30190	30120	30370	30540	29590	28750	&50940	49400	46190
26	30970	30930	30900	30170	30030	30360	30530	29600	28670	&50740	49250	46110
27	30900	30820	30880	30150	30030	30350	30540	29740	28580	&50510	49060	46010
28	30820	30920	30870	30140	30000	30320	30460	29990	28490	&50450	48880	45890
29	30750	30980	30810	30150	---	30290	30430	30350	28400	&50450	48720	45760
30	30670	31020	30780	30150	---	30430	30400	30400	28320	e51300	48620	45630
31	30630	---	30760	30230	---	31090	---	30440	---	&52560	48480	---
MEAN	31610	30670	30970	30420	30340	29950	30960	30220	29470	47110	50510	46870
MAX	32430	31270	31120	30750	30660	31090	31290	30820	30470	53610	52470	48350
MIN	30630	30110	30760	30140	30000	29380	30400	29590	28320	28200	48480	45630
(+)	1622.92	1623.10	1622.98	1622.74	1622.64	1623.12	1622.81	1622.83	1621.86	1630.96	1629.64	1628.69
(@)	-1870	+390	-260	-530	-230	+1090	-690	+40	-2120	+24240	-4080	-2850

CAL YR 2001 MAX 41810 MIN 30110 (@) -8370
WTR YR 2002 MAX 53610 MIN 28200 (@) +13130

e Estimated
& Value was computed from affected unit values.

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

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^2.

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. 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 materially 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^3/s (105,200 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1925-29).--Maximum discharge observed, 11,500 ft^3/s May 20, 1928 (gage height, 18.00 ft), site then in use; no flow at times.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	3.1	3.4	2.4	9.7	1.8	265	0.54	94	0.38	4.9	0.73
2	0.91	2.7	6.5	2.4	8.5	1.8	85	0.49	30	0.34	3.6	0.73
3	0.76	2.7	6.0	2.9	6.4	1.8	41	0.50	16	0.40	3.0	0.69
4	0.74	2.6	5.2	3.3	5.4	1.8	12	0.50	10	22	2.4	0.66
5	0.79	2.8	4.3	3.7	9.8	1.8	2.5	33	7.7	14	2.0	0.61
6	0.88	3.2	3.6	4.1	16	1.8	1.7	482	6.7	341	1.6	0.57
7	0.80	2.9	3.1	4.5	16	2.0	1.5	152	5.5	983	1.4	0.73
8	0.80	2.6	2.5	4.5	18	2.4	1.4	47	4.9	329	1.1	0.74
9	0.96	2.4	2.2	4.5	13	2.4	1.3	69	4.2	11	0.93	0.77
10	1.3	2.6	2.1	4.4	6.9	2.1	0.99	120	3.7	168	0.74	0.93
11	4.0	2.7	2.2	4.5	3.9	1.8	0.99	34	2.8	105	0.67	0.80
12	177	2.7	2.2	4.4	2.8	1.6	0.87	1.7	2.3	43	0.45	0.77
13	272	2.7	2.1	4.5	2.6	1.6	0.74	0.90	1.9	22	0.50	0.78
14	271	4.0	2.1	4.6	2.5	1.5	0.73	0.41	1.6	12	0.73	0.95
15	103	19	2.2	4.3	2.4	1.5	0.74	0.26	1.2	8.6	11	2.4
16	43	47	3.5	3.7	2.4	1.5	0.73	0.19	7.4	15	5.3	2.2
17	27	67	32	3.6	2.2	1.3	0.72	0.12	4.2	14	2.8	2.0
18	21	108	30	3.7	2.1	1.5	0.61	0.12	2.0	8.0	1.9	1.7
19	16	62	28	4.0	2.4	2.8	0.52	0.12	1.1	5.2	1.8	3.9
20	13	7.5	36	4.4	2.4	19	0.51	0.12	0.57	3.8	1.5	39
21	13	1.8	27	4.5	2.4	25	0.73	0.08	0.43	3.2	1.1	59
22	12	1.5	17	4.6	2.2	28	0.67	0.06	0.29	2.8	0.64	19
23	12	1.4	10	6.1	2.1	24	0.50	0.06	0.19	2.6	0.46	7.8
24	12	1.3	7.3	5.4	2.0	19	0.49	0.05	0.14	2.3	0.34	17
25	10	1.3	5.5	4.5	1.8	21	0.60	0.12	0.13	1.9	0.27	12
26	8.6	1.3	4.2	3.9	1.8	16	0.52	12	0.13	1.6	0.23	6.5
27	7.3	1.3	3.7	3.6	1.8	14	0.60	48	0.14	1.3	0.21	4.2
28	5.9	2.1	3.6	3.2	1.8	10	0.64	122	0.14	1.6	0.21	3.3
29	4.8	2.7	3.1	4.2	---	8.6	0.54	133	0.15	1.9	0.81	2.7
30	3.9	2.2	2.9	6.1	---	33	0.64	70	0.22	148	0.87	2.1
31	3.6	---	2.8	9.6	---	74	---	127	---	16	0.71	---
TOTAL	1049.14	367.1	266.3	134.1	151.3	326.4	425.48	1455.34	209.73	2288.92	54.17	195.26
MEAN	33.84	12.24	8.590	4.326	5.404	10.53	14.18	46.95	6.991	73.84	1.747	6.509
MAX	272	108	36	9.6	18	74	265	482	94	983	11	59
MIN	0.74	1.3	2.1	2.4	1.8	1.3	0.49	0.05	0.13	0.34	0.21	0.57
AC-FT	2080	728	528	266	300	647	844	2890	416	4540	107	387

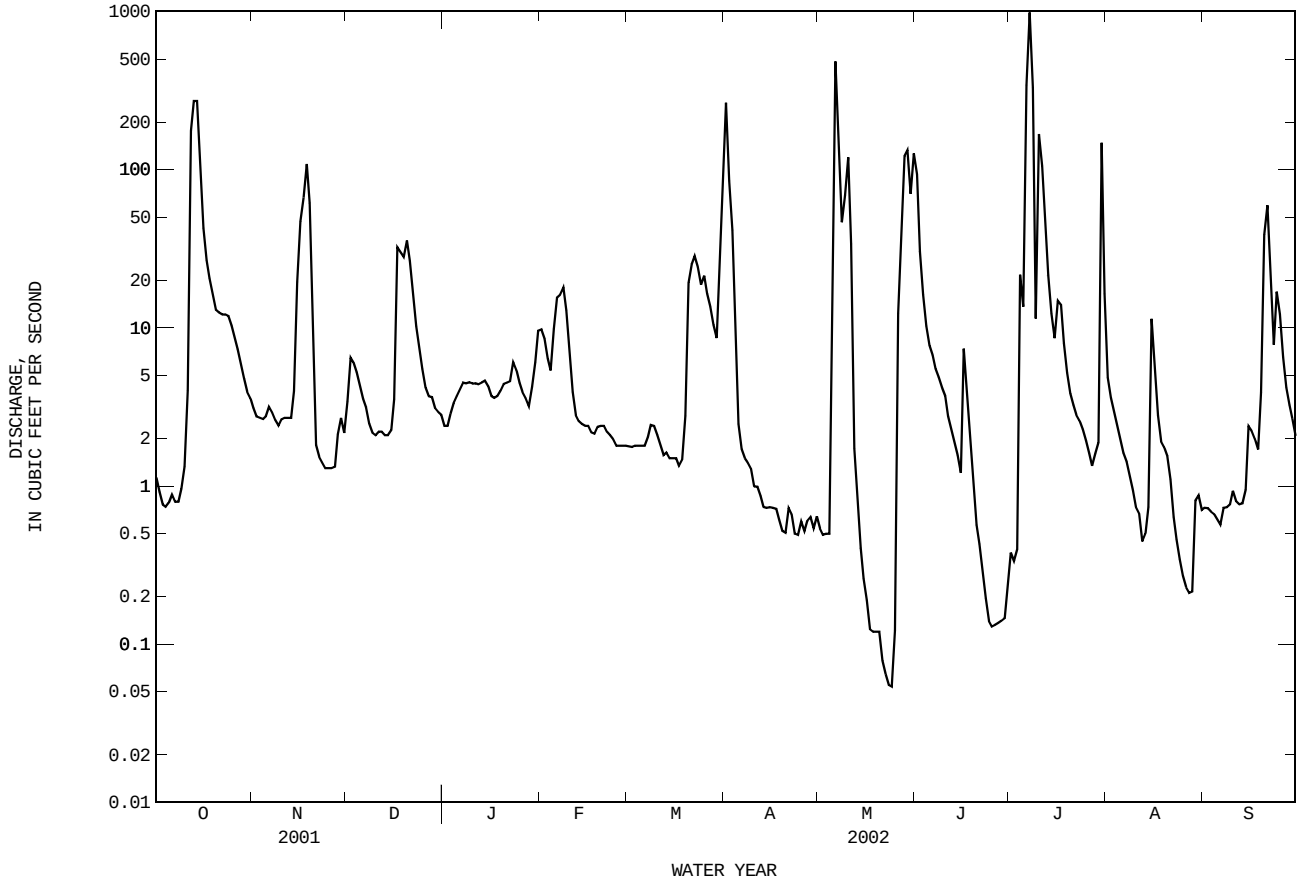
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2002z, BY WATER YEAR (WY)

MEAN	131.0	36.90	40.95	23.15	56.87	40.09	67.65	255.5	182.5	87.47	51.74	163.2
MAX	1438	516	683	244	1370	389	1159	4694	1761	1190	496	3978
(WY)	1987	1975	1992	1992	1992	1987	1957	1957	1935	1938	1940	1932
MIN	0.000	0.078	0.090	0.032	0.046	0.010	0.017	1.16	1.28	0.034	0.000	0.000
(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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1930 - 2002z	
ANNUAL TOTAL	5614.65		6923.24			
ANNUAL MEAN	15.38		18.97		94.83	
HIGHEST ANNUAL MEAN					713	1932
LOWEST ANNUAL MEAN					6.45	1998
HIGHEST DAILY MEAN	388	May 5	983	Jul 7	30800	Sep 8 1932
LOWEST DAILY MEAN	0.00	Jul 22	0.05	May 24	0.00	Jul 27 1930
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 22	0.09	May 18	0.00	Jul 27 1930
MAXIMUM PEAK FLOW			1420	Jul 7	c47000	Sep 8 1932
MAXIMUM PEAK STAGE			6.65	Jul 7	p27.05	Sep 8 1932
ANNUAL RUNOFF (AC-FT)	11140		13730		68700	
10 PERCENT EXCEEDS	27		33		116	
50 PERCENT EXCEEDS	4.0		2.7		12	
90 PERCENT EXCEEDS	0.03		0.50		0.50	

z Period of regulated streamflow.
c From rating curve extended above 25,000 ft^3/s.
p Observed.



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^2.

PERIOD OF RECORD.--July 1953 to Sept. 1986, Feb. 1999 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.--No estimated daily contents. Records good. 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. Conservation pool storage is 51,570 acre-ft. 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.--The capacity table is based on a Mar. 1999 volumetric survey furnished by Texas Water Development Board. 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 contents, 47,860 acre-ft, July 11, 12, elevation, 1,416.05 ft; minimum contents, 13,620 acre-ft, Oct. 10, elevation, 1,405.52 ft.

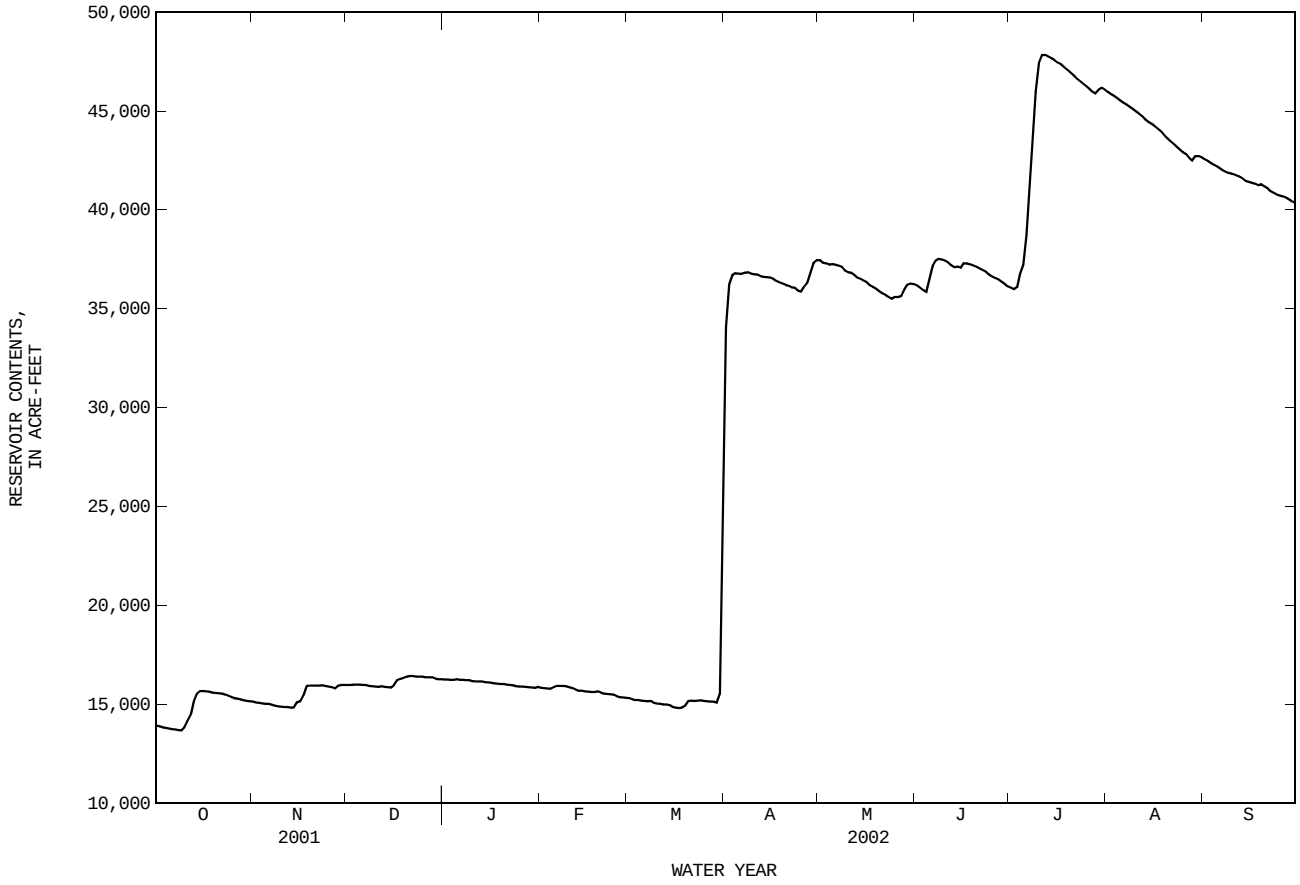
RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13910	15120	15960	16250	15820	15310	34070	37460	36160	36060	45970	42560
2	13880	15080	15970	16240	15800	15240	36210	37330	36070	35980	45850	42460
3	13840	15050	15980	16230	15790	15210	36680	37290	35950	36090	45750	42360
4	13800	15030	15980	16230	15770	15210	36780	37230	35850	36760	45640	42260
5	13760	15020	15990	16250	15860	15170	36770	37250	36530	37200	45520	42180
6	13740	15010	15970	16230	15930	15160	36750	37230	37150	38710	45420	42080
7	13710	14970	15960	16220	15920	15140	36810	37180	37420	41440	45320	41970
8	13680	14920	15920	16220	15920	15150	36830	37110	37510	43950	45200	41890
9	13670	14880	15900	16210	15910	15060	36770	36910	37490	45990	45090	41860
10	13840	14860	15890	16170	15850	15030	36750	36840	37420	47420	44970	41810
11	14170	14850	15870	16150	15810	15020	36730	36810	37330	47820	44860	41740
12	14480	14840	15900	16140	15720	14980	36640	36700	37200	47820	44730	41680
13	15120	14820	15870	16150	15670	14990	36610	36570	37090	47750	44560	41590
14	15530	14830	15860	16110	15680	14940	36590	36490	37130	47670	44440	41460
15	15650	15090	15830	16100	15640	14850	36570	36410	37060	47570	44340	41410
16	15660	15140	15970	16070	15630	14820	36520	36330	37290	47440	44230	41360
17	15640	15450	16210	16050	15610	14810	36400	36180	37280	47360	44100	41320
18	15620	15920	16280	16030	15610	14820	36330	36090	37230	47230	43960	41240
19	15580	15930	16320	16020	15640	14910	36270	36000	37180	47100	43780	41280
20	15560	15940	16380	16010	15580	15160	36210	35870	37110	46960	43620	41200
21	15540	15930	16410	15980	15530	15170	36150	35760	37030	46810	43470	41090
22	15520	15940	16410	15970	15520	15160	36070	35690	36950	46660	43340	40940
23	15490	15950	16390	15940	15510	15170	36050	35580	36870	46540	43200	40850
24	15410	15920	16390	15900	15480	15190	35910	35490	36720	46410	43060	40770
25	15350	15890	16380	15890	15410	15160	35860	35590	36630	46280	42910	40720
26	15310	15850	16360	15880	15350	15140	36120	35590	36540	46130	42820	40670
27	15280	15790	16350	15860	15330	15130	36300	35630	36470	45980	42620	40600
28	15240	15930	16350	15850	15320	15120	36810	35970	36360	45880	42490	40510
29	15200	15970	16290	15840	---	15080	37330	36210	36250	46070	42710	40420
30	15160	15970	16270	15820	---	15530	37460	36260	36110	46160	42710	40330
31	15150	---	16260	15870	---	24060	---	36240	---	46090	42640	---
MEAN	14820	15400	16120	16060	15660	15380	36440	36430	36850	44620	44170	41420
MAX	15660	15970	16410	16250	15930	24060	37460	37460	37510	47820	45970	42560
MIN	13670	14820	15830	15820	15320	14810	34070	35490	35850	35980	42490	40330
(+)	1406.29	1406.68	1406.81	1406.63	1406.37	1409.72	1413.71	1413.40	1413.37	1415.68	1414.93	1414.39
(@)	+1210	+820	+290	-390	-550	+8740	+13400	-1220	-130	+9980	-3450	-2310

CAL YR 2001 MAX 18200 MIN 8710 (@) +7420
WTR YR 2002 MAX 47820 MIN 13670 (@) +26390

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

08084500 Lake Stamford near Haskell, TX--Continued



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^2.

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.--No estimated daily discharges. Records fair. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.39	3.1	1.1	0.94	1.5	1610	4.7	6.0	0.12	2.0	0.96
2	0.00	0.26	2.2	1.0	0.83	1.4	472	3.5	5.3	0.10	2.5	0.84
3	0.00	0.24	1.7	0.99	0.90	1.2	76	2.1	&3.7	0.24	2.2	0.71
4	0.00	0.25	2.3	1.0	1.0	1.2	18	1.4	&2.6	165	2.1	0.57
5	0.00	0.25	3.6	1.2	1.6	1.3	14	395	&5.1	105	2.0	0.50
6	0.00	0.21	4.5	0.94	2.1	1.5	12	170	2.2	&1360	1.9	0.49
7	0.00	0.16	4.2	0.87	2.2	1.7	12	94	1.5	&2060	1.9	0.49
8	0.00	0.14	3.1	0.91	2.6	1.9	10	37	&1.2	&2520	1.8	0.59
9	0.00	0.14	2.5	0.88	2.0	1.6	9.8	16	&1.1	&1790	1.8	0.84
10	3.5	0.13	1.6	0.85	2.6	1.4	9.0	13	&0.97	506	1.6	0.60
11	432	0.10	1.4	0.88	3.2	2.1	8.2	9.7	&0.84	&324	1.6	0.48
12	661	0.08	1.3	0.71	2.2	2.3	7.6	9.0	&0.66	&92	1.5	0.41
13	348	0.07	1.1	0.73	1.7	2.0	7.0	8.1	0.49	&37	1.5	0.42
14	115	0.08	0.86	0.70	1.7	2.1	7.0	&5.2	0.56	&21	1.6	0.39
15	26	2.7	0.90	0.65	1.4	1.5	6.3	&3.5	2.2	&17	1.5	1.3
16	13	39	4.1	0.70	1.4	1.5	5.6	&2.7	8.4	&16	1.4	0.79
17	8.0	65	34	0.68	1.4	1.7	5.0	2.0	14	&9.8	1.3	0.51
18	5.1	79	26	0.68	1.5	1.8	3.9	1.8	6.4	&7.5	1.2	0.46
19	3.7	40	31	0.84	1.6	2.7	3.2	1.6	1.7	&7.1	1.1	3.2
20	3.4	20	30	0.71	14	15	3.0	1.3	0.89	&8.0	1.2	7.5
21	3.1	13	21	0.67	1.7	7.9	2.2	&1.8	0.61	&3.2	1.2	18
22	2.9	10	12	0.64	1.4	9.2	2.6	&2.4	0.34	&2.8	1.3	2.1
23	2.5	8.7	5.9	0.71	1.7	7.7	2.6	&4.3	0.24	&2.3	1.3	1.1
24	1.8	4.9	3.1	0.66	2.1	13	2.5	&4.0	0.19	&2.1	1.2	0.96
25	1.3	3.3	1.8	0.78	1.8	11	3.7	&3.6	0.17	&2.0	1.2	0.60
26	1.1	1.9	1.3	0.88	1.4	5.2	2.4	&3.8	0.14	&1.9	1.2	0.56
27	0.94	1.4	1.3	0.73	1.3	3.1	4.4	5.6	0.12	&1.9	0.86	0.61
28	0.74	2.0	1.2	0.76	1.3	2.0	4.3	9.0	0.10	2.0	0.84	0.41
29	0.59	1.6	1.1	0.89	---	1.5	4.1	9.9	0.08	1.9	1.4	0.49
30	0.50	2.5	1.0	1.1	---	78	3.4	12	0.08	2.0	1.2	0.47
31	0.47	---	1.0	1.3	---	1340	---	8.3	---	2.0	1.0	---
TOTAL	1634.64	297.50	210.16	26.14	59.57	1526.0	2331.8	846.3	67.88	9069.96	46.40	47.35
MEAN	52.73	9.917	6.779	0.843	2.127	49.23	77.73	27.30	2.263	292.6	1.497	1.578
MAX	661	79	34	1.3	14	1340	1610	395	14	2520	2.5	18
MIN	0.00	0.07	0.86	0.64	0.83	1.2	2.2	1.3	0.08	0.10	0.84	0.39
AC-FT	3240	590	417	52	118	3030	4630	1680	135	17990	92	94
CFSM	0.11	0.02	0.01	0.00	0.00	0.10	0.16	0.06	0.00	0.61	0.00	0.00

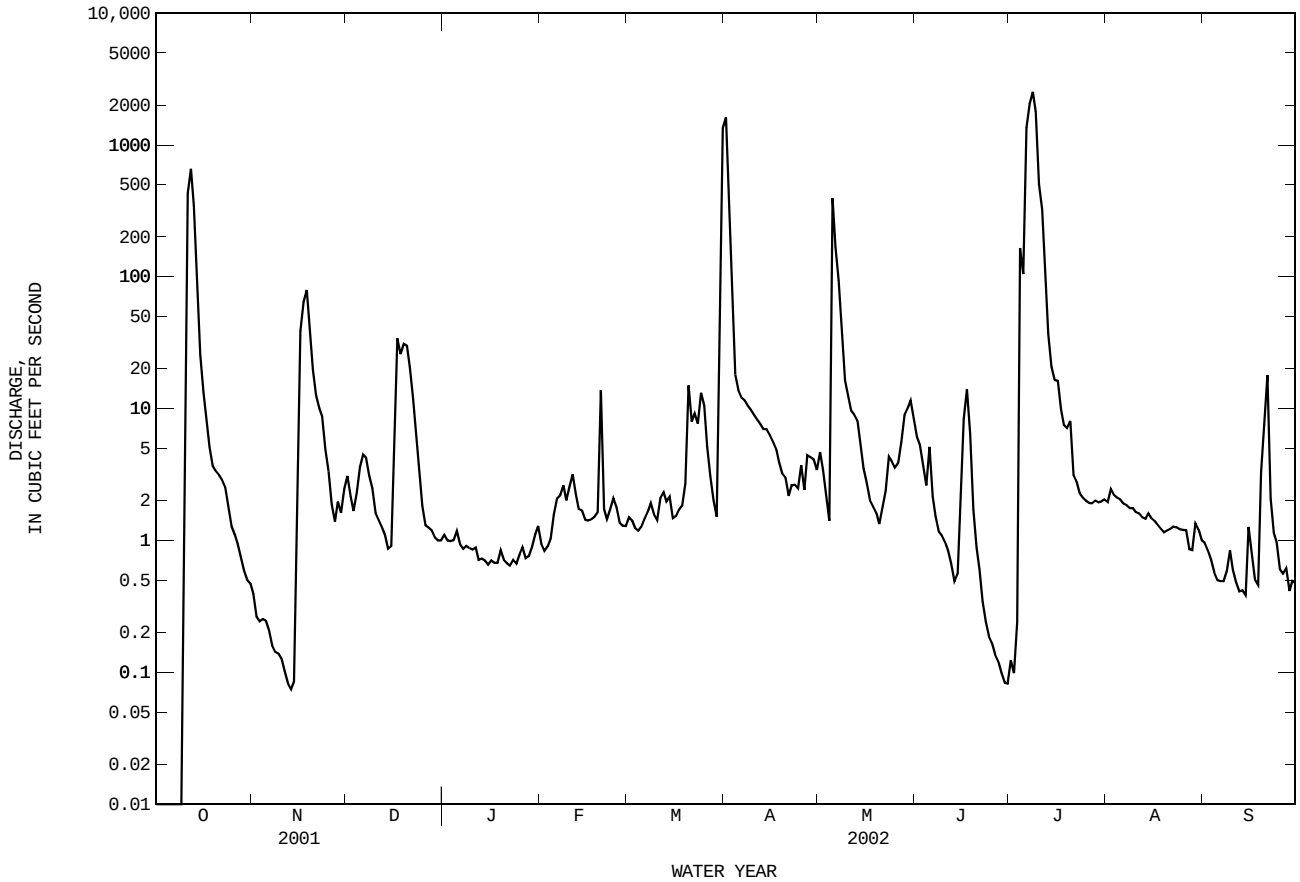
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002, BY WATER YEAR (WY)

MEAN	39.49	14.37	11.23	10.22	34.73	15.22	21.38	72.93	69.15	25.66	55.12	47.14
MAX	481	229	169	84.0	750	132	174	741	400	293	930	575
(WY)	1987	1973	1992	1968	1992	1973	1985	1982	1991	2002	1971	1980
MIN	0.002	0.11	0.10	0.081	0.13	0.092	0.25	0.12	0.15	0.000	0.000	0.017
(WY)	1969	1971	1965	1965	2000	1966	1967	2000	1976	1964	1965	1968

08084800 California Creek near Stamford, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1963 - 2002	
ANNUAL TOTAL	6015.53		16163.70			
ANNUAL MEAN	16.48		44.28		34.68	
HIGHEST ANNUAL MEAN					156	1992
LOWEST ANNUAL MEAN					1.95	1964
HIGHEST DAILY MEAN	1230	Feb 16	2520	Jul 8	20400	Aug 4 1978
LOWEST DAILY MEAN	0.00	Jun 19	0.00	Oct 1	0.00	Sep 11 1963
ANNUAL SEVEN-DAY MINIMUM	0.00	Sep 29	0.00	Oct 1	0.00	May 17 1964
MAXIMUM PEAK FLOW			&2560	Jul 8	c40000	Aug 4 1978
MAXIMUM PEAK STAGE			22.35	Jul 8	a31.00	Aug 4 1978
ANNUAL RUNOFF (AC-FT)	11930		32060		25130	
ANNUAL RUNOFF (CFSM)	0.034		0.093		0.073	
10 PERCENT EXCEEDS	16		18		28	
50 PERCENT EXCEEDS	1.1		1.8		2.4	
90 PERCENT EXCEEDS	0.01		0.40		0.09	

& Value was computed from affected unit values
c From rating curve extended above 3,310 ft^3/s on basis of field discharge estimates of 7,420 ft^3/s and 40,000 ft^3/s.
a From floodmark.



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^2.

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.--No estimated daily discharges. Records good except those for Oct. 15 to Jan. 15, which are 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^3/s (219,500 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1925-38).--Maximum discharge, 33,600 ft^3/s Sept. 10, 1932 (gage height, 35.09 ft) from rating curve extended above 31,500 ft^3/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Sept. 1900 reached a stage of 38.0 ft, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	4.4	24	25	22	11	2100	51	168	9.3	48	3.2
2	20	4.0	24	23	20	9.7	1670	36	146	20	133	3.3
3	13	3.4	23	22	19	8.6	670	28	159	15	73	2.7
4	7.1	2.4	22	22	18	8.8	322	23	110	300	40	2.7
5	5.6	1.8	22	25	22	10	197	275	1420	162	27	2.7
6	4.1	2.3	21	24	23	5.6	155	388	1120	585	20	3.1
7	2.4	2.6	18	24	27	5.3	125	428	476	2250	15	3.1
8	1.4	2.3	18	24	29	7.0	102	524	210	3670	12	3.1
9	1.0	2.0	18	24	28	6.8	85	292	121	4430	10	3.1
10	1.3	2.0	17	24	32	5.7	75	236	75	1860	9.2	3.1
11	8.7	2.3	15	22	33	6.4	68	150	49	663	7.8	3.1
12	4.5	3.0	15	21	31	7.3	55	154	33	520	6.3	3.1
13	550	3.0	16	20	28	6.3	45	154	23	349	5.8	3.1
14	440	3.1	15	19	25	7.7	39	112	18	218	9.2	5.3
15	377	119	15	19	23	7.7	36	72	16	158	9.2	37
16	264	144	19	19	22	7.0	32	50	47	125	11	6.0
17	159	95	27	17	22	9.3	30	37	81	94	10	3.3
18	100	78	29	17	27	7.0	29	27	54	75	8.7	3.4
19	67	187	32	18	30	10	26	21	61	59	6.2	5.5
20	43	180	47	18	29	14	23	16	51	48	5.1	5.5
21	34	154	65	16	27	13	29	14	33	46	4.4	4.1
22	29	110	62	17	25	16	21	15	22	37	5.0	38
23	22	71	60	17	22	16	20	14	13	31	6.0	95
24	17	53	54	18	20	32	20	10	9.3	26	5.3	72
25	11	40	51	19	21	34	19	287	7.7	21	4.5	46
26	9.5	32	47	20	19	32	21	185	6.5	17	4.2	32
27	9.5	27	41	21	14	30	534	119	7.6	15	3.7	22
28	8.6	25	36	20	11	28	204	237	7.1	64	3.3	15
29	7.8	24	33	22	---	26	116	544	4.4	125	4.1	13
30	6.7	22	31	24	---	132	84	500	5.1	52	4.4	16
31	5.0	---	29	26	---	3310	---	262	---	23	3.4	---
TOTAL	2236.2	1399.6	946	647	669	3830.2	6952	5261	4553.7	16067.3	514.8	458.5
MEAN	72.14	46.65	30.52	20.87	23.89	123.6	231.7	169.7	151.8	518.3	16.61	15.28
MAX	550	187	65	26	33	3310	2100	544	1420	4430	133	95
MIN	1.0	1.8	15	16	11	5.3	19	10	4.4	9.3	3.3	2.7
AC-FT	4440	2780	1880	1280	1330	7600	13790	10440	9030	31870	1020	909

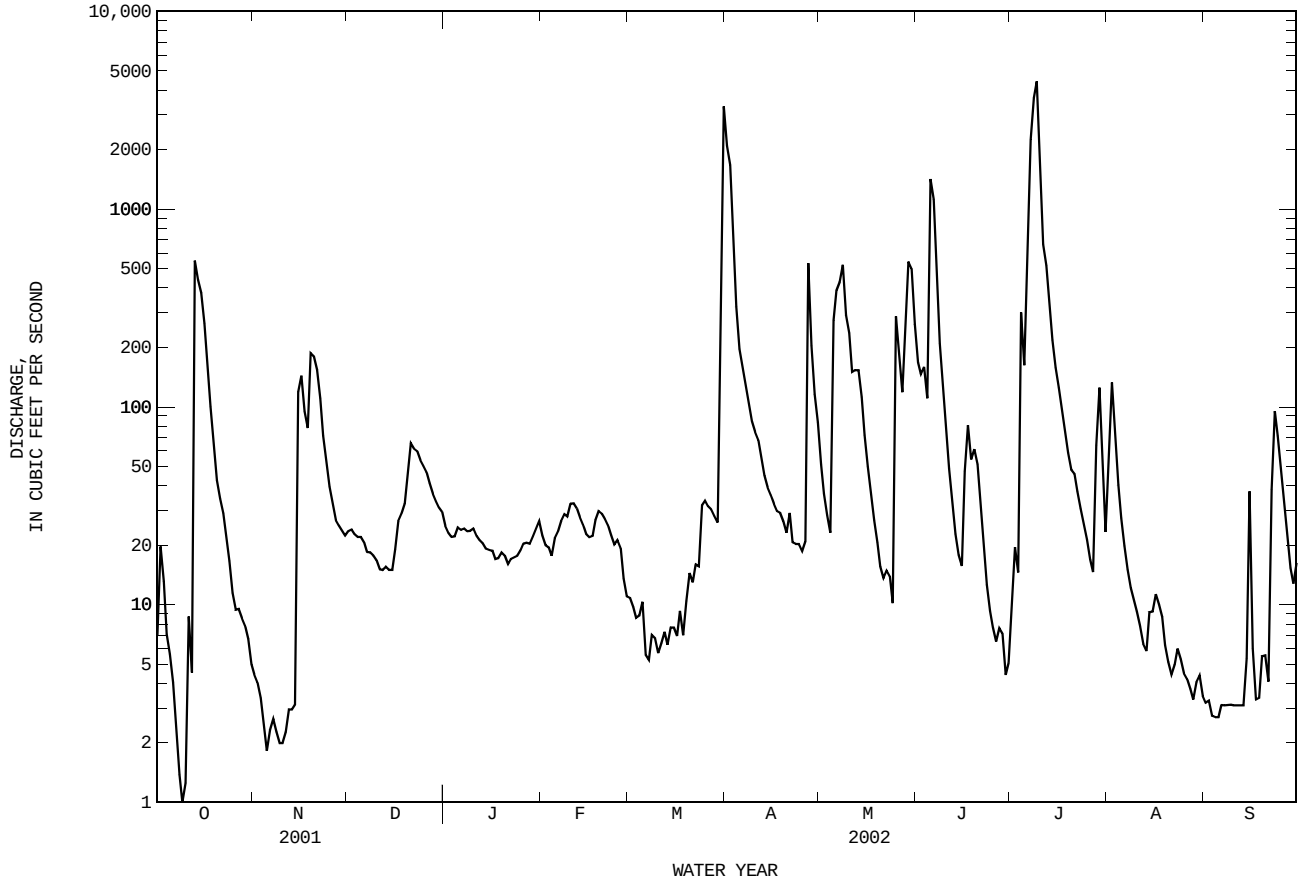
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002z, BY WATER YEAR (WY)

MEAN	249.7	78.78	74.76	59.07	156.5	94.71	170.5	519.6	409.0	161.2	194.0	232.7
MAX	2866	1010	1593	689	4268	1066	3098	7312	2205	1417	6071	1997
(WY)	1942	1975	1992	1992	1992	1992	1957	1957	1957	1953	1978	1962
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.90	0.078	0.000	0.000	0.000
(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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1939 - 2002z	
ANNUAL TOTAL	22027.48		43535.3			
ANNUAL MEAN	60.35		119.3		200.1	
HIGHEST ANNUAL MEAN					1177	1957
LOWEST ANNUAL MEAN					8.78	1952
HIGHEST DAILY MEAN	2080	Feb 17	4430	Jul 9	72800	Aug 4 1978
LOWEST DAILY MEAN	0.00	Jul 8	1.0	Oct 9	0.00	May 11 1939
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 8	2.2	Nov 5	0.00	Sep 12 1939
MAXIMUM PEAK FLOW			5220	Jul 9	c149000	Aug 4 1978
MAXIMUM PEAK STAGE			16.23	Jul 9	a38.88	Aug 4 1978
ANNUAL RUNOFF (AC-FT)	43690		86350		145000	
10 PERCENT EXCEEDS	117		200		268	
50 PERCENT EXCEEDS	19		22		24	
90 PERCENT EXCEEDS	0.00		4.1		0.00	

z Period of regulated streamflow.
c From rating curve extended above 31,500 ft^3/s on basis of contracted opening measurement of 149,000 ft^3/s.
a From floodmark.



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^2.

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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.03	0.00	0.08	0.00	0.00	0.00	85	16	9.8	0.28	39	0.93
2	0.00	0.00	0.03	0.00	0.00	0.00	33	12	5.4	0.18	18	0.64
3	0.00	0.00	0.03	0.00	0.00	0.00	16	9.5	3.7	24	10	0.47
4	0.00	0.00	0.04	0.00	0.00	0.00	8.3	8.2	2.7	219	5.1	0.31
5	0.00	0.00	0.08	0.00	0.00	0.00	5.1	6.9	2.6	176	2.8	0.14
6	0.00	0.00	0.08	0.00	0.00	0.00	4.2	6.9	1.8	2520	1.8	0.14
7	0.00	0.00	0.06	0.00	0.00	0.00	4.1	25	1.7	7720	1.3	0.14
8	0.00	0.00	0.03	0.00	0.00	0.00	31	21	1.7	559	1.0	0.24
9	0.00	0.00	0.03	0.00	0.00	0.00	10	15	1.4	192	0.42	0.14
10	0.00	0.00	0.03	0.00	0.00	0.00	4.6	9.3	1.2	110	0.11	0.14
11	0.07	0.00	0.03	0.00	0.00	0.00	4.1	6.0	0.73	76	0.08	0.13
12	0.08	0.00	0.03	0.00	0.00	0.00	3.2	4.7	0.57	49	0.08	0.09
13	0.06	0.00	0.00	0.00	0.00	0.00	2.1	3.8	0.48	36	0.11	0.08
14	0.03	0.00	0.00	0.00	0.00	0.00	1.7	2.9	0.62	34	0.33	0.21
15	0.03	0.00	0.00	0.00	0.00	0.00	1.2	2.3	0.76	27	0.55	1.0
16	0.03	80	0.02	0.00	0.00	0.00	0.81	1.9	1.5	22	0.24	0.87
17	0.02	29	0.56	0.00	0.00	0.00	0.81	1.7	1.0	16	0.12	0.90
18	0.00	17	0.40	0.00	0.00	0.00	1.0	1.6	0.97	12	0.13	0.17
19	0.00	9.9	0.26	0.00	0.00	0.71	1.4	1.7	1.6	9.4	0.14	0.37
20	0.00	7.2	0.12	0.00	0.00	551	1.3	1.8	2.0	6.8	0.14	0.35
21	0.00	4.7	0.08	0.00	0.00	149	1.2	1.6	1.5	4.9	0.14	0.48
22	0.00	2.9	0.08	0.00	0.00	44	1.2	1.5	0.56	3.8	0.22	0.21
23	0.00	1.8	0.06	0.00	0.00	19	1.6	1.3	0.22	2.9	0.63	0.14
24	0.00	1.1	0.03	0.00	0.00	9.9	2.9	1.1	0.03	1.9	0.83	0.14
25	0.00	0.52	0.03	0.00	0.00	6.2	4230	4.6	0.01	0.99	0.85	0.14
26	0.00	0.14	0.03	0.00	0.00	5.3	760	2.0	0.06	0.41	1.1	0.14
27	0.00	0.08	0.02	0.00	0.00	4.7	105	1.5	0.12	0.09	1.1	0.14
28	0.00	0.10	0.00	0.00	0.00	4.1	53	185	0.14	0.02	0.96	0.15
29	0.00	0.08	0.00	0.00	---	3.5	32	132	0.09	0.02	1.7	0.14
30	0.00	0.08	0.00	0.00	---	83	23	64	0.20	460	1.2	0.10
31	0.00	---	0.00	0.00	---	691	---	21	---	130	0.96	---
TOTAL	0.35	154.60	2.24	0.00	0.00	1571.41	5428.82	573.8	45.16	12413.69	91.14	9.24
MEAN	0.011	5.153	0.072	0.000	0.000	50.69	181.0	18.51	1.505	400.4	2.940	0.308
MAX	0.08	80	0.56	0.00	0.00	691	4230	185	9.8	7720	39	1.0
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.81	1.1	0.01	0.02	0.08	0.08
AC-FT	0.7	307	4.4	0.00	0.00	3120	10770	1140	90	24620	181	18
CFSM	0.00	0.01	0.00	0.00	0.00	0.08	0.30	0.03	0.00	0.65	0.00	0.00
IN.	0.00	0.01	0.00	0.00	0.00	0.10	0.33	0.03	0.00	0.75	0.01	0.00

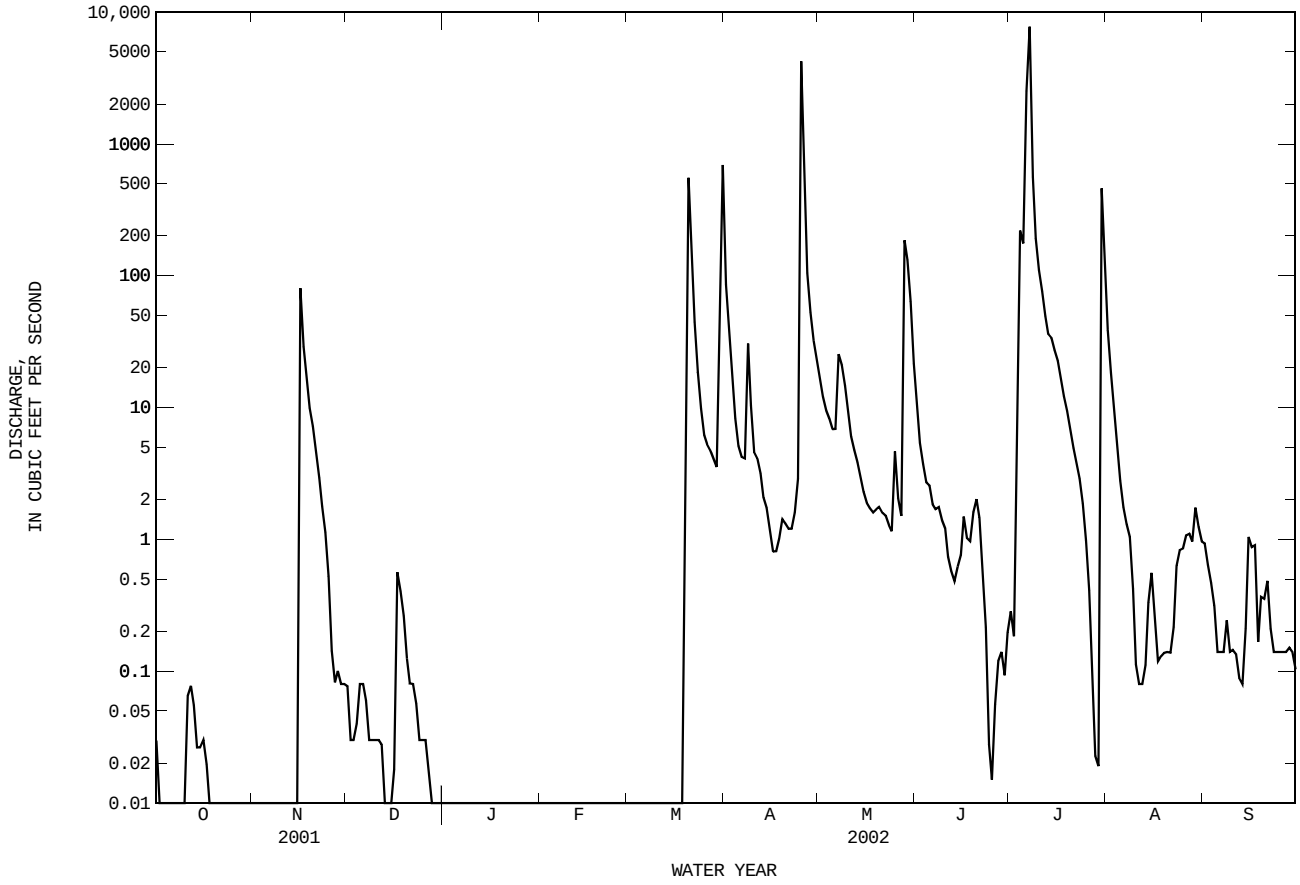
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2002, BY WATER YEAR (WY)

MEAN	85.40	15.30	44.16	54.14	75.64	48.83	54.41	122.6	59.64	17.26	105.0	69.13
MAX	1483	228	1161	1544	1532	284	502	906	628	402	3365	1170
(WY)	1982	1975	1992	1968	1992	1998	1968	1969	1997	2002	1978	1974
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1969	1971	1971	1969	1971	1971	1971	1984	1984	1974	1968	1968

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1967 - 2002	
ANNUAL TOTAL	1977.61		20290.45			
ANNUAL MEAN	5.418		55.59		62.67	
HIGHEST ANNUAL MEAN					303	1992
LOWEST ANNUAL MEAN					0.49	1984
HIGHEST DAILY MEAN	1140	Feb 16	7720	Jul 7	94700	Aug 4 1978
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 2	0.00	Apr 5 1967
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 2	0.00	Apr 24 1967
MAXIMUM PEAK FLOW			21100	Apr 25	c330000	Aug 4 1978
MAXIMUM PEAK STAGE			a27.42	Apr 25	a41.41	Aug 4 1978
ANNUAL RUNOFF (AC-FT)	3920		40250		45400	
ANNUAL RUNOFF (CFSM)	0.009		0.091		0.10	
ANNUAL RUNOFF (INCHES)	0.12		1.23		1.39	
10 PERCENT EXCEEDS	2.9		22		43	
50 PERCENT EXCEEDS	0.00		0.14		1.1	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a From floodmark.
c From rating curve extended above 110 ft^3/s on basis of step-backwater method and computation of flow-through-culverts, contracted-openings, and flow-over-road determination of 330,000 ft^3/s at site 4.5 mi downstream.

08086212 Hubbard Creek below Albany, TX--Continued



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 recorder since Dec. 1970. Water-temperature recorder since Mar. 1982.

REMARKS.--No estimated daily specific conductance or water temperature. Records good. Interruptions in the record was due to malfunction of the instrument and to no flow. No flow Oct. 2-10, Oct. 18 to Nov. 15, Dec. 13-15, Dec. 28 to Mar. 18. 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, 3,690 microsiemens/cm, Mar. 19; minimum, 162 microsiemens/cm, Apr. 25.
WATER TEMPERATURE: Maximum, 36.1°C, June 28; minimum, 4.2°C, Nov. 29.

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

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT													
11...	1255	.11	1060	--	22.5	--	--	210	60.5	14.0	112	3	5.36
MAR													
20...	0915	1370	403	--	13.1	--	--	150	44.9	8.60	31.5	1	5.71
26...	1400	5.5	394	--	13.7	--	--	120	37.4	7.27	28.0	1	4.46
APR													
26...	1310	250	388	--	12.5	--	--	120	37.8	6.15	28.1	1	4.03
MAY													
02...	1600	12	1100	--	22.8	--	--	290	82.2	20.1	104	3	4.90
30...	0855	69	1240	--	22.7	--	--	300	79.0	25.0	118	3	5.26
JUN													
27...	1120	.18	1390	8.0	29.7	6.5	90	310	83.4	25.5	164	4	5.83

Date	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
OCT					
11...	59.0	218	.3	7.5	547
MAR					
20...	33.3	46.9	.2	4.9	247
26...	26.9	49.7	.2	6.5	215
APR					
26...	23.6	52.6	.1	5.9	207
MAY					
02...	72.3	218	.2	8.2	590
30...	84.2	276	.2	5.0	649
JUN					
27...	84.9	328	.3	7.2	780

08086212 Hubbard Creek below Albany, TX--Continued

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

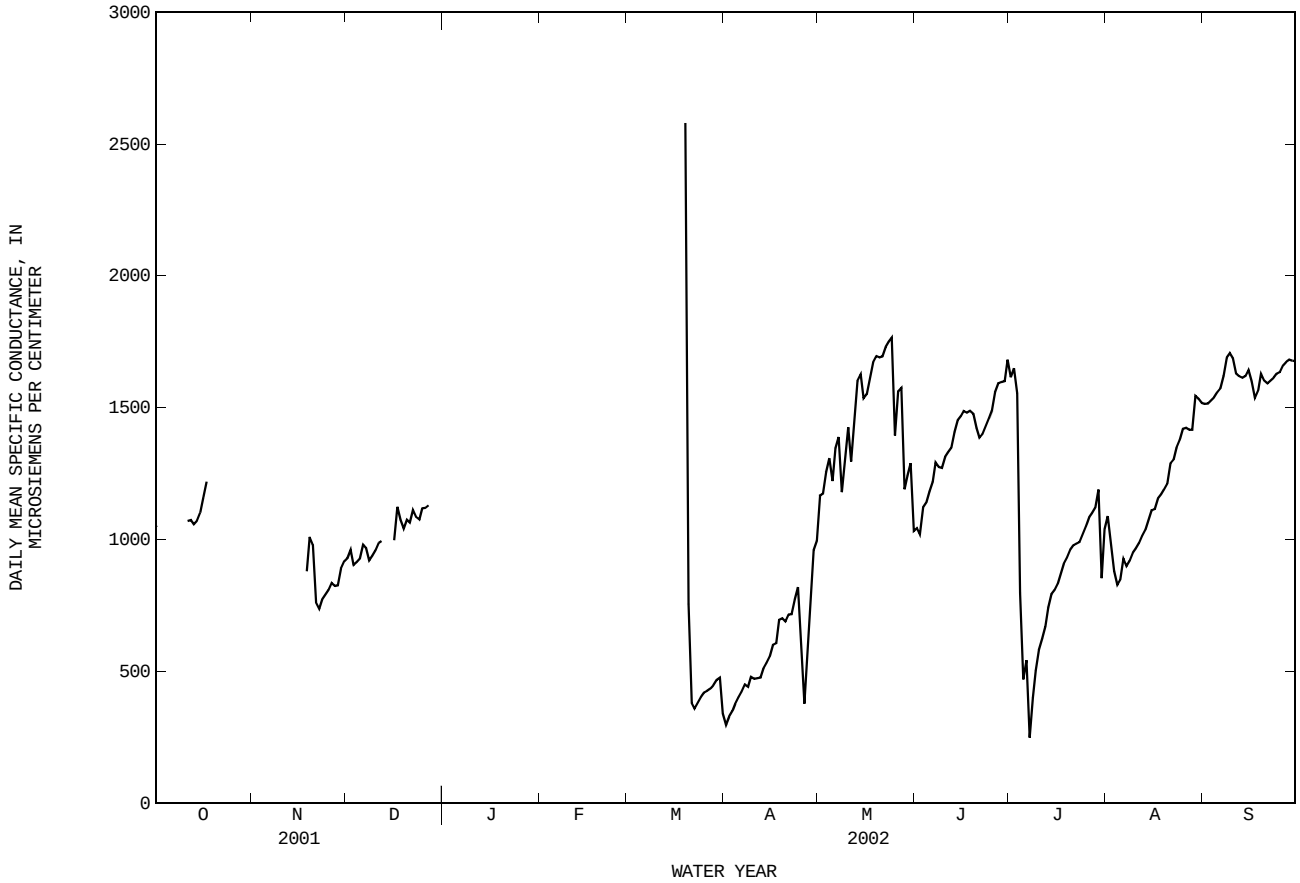
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1080	1030	1050	---	---	---	975	891	930	---	---	---
2	---	---	---	---	---	---	1090	883	961	---	---	---
3	---	---	---	---	---	---	926	892	904	---	---	---
4	---	---	---	---	---	---	967	894	915	---	---	---
5	---	---	---	---	---	---	1030	896	929	---	---	---
6	---	---	---	---	---	---	1040	920	980	---	---	---
7	---	---	---	---	---	---	1030	934	968	---	---	---
8	---	---	---	---	---	---	947	874	920	---	---	---
9	---	---	---	---	---	---	951	931	938	---	---	---
10	---	---	---	---	---	---	1010	944	959	---	---	---
11	1160	1000	1070	---	---	---	1020	960	987	---	---	---
12	1170	1040	1070	---	---	---	1060	974	994	---	---	---
13	1090	1040	1060	---	---	---	---	---	---	---	---	---
14	1090	1060	1070	---	---	---	---	---	---	---	---	---
15	1140	1060	1100	---	---	---	---	---	---	---	---	---
16	1380	1100	1160	---	---	---	1080	895	998	---	---	---
17	1380	1140	1220	---	---	---	1380	987	1120	---	---	---
18	---	---	---	1020	775	880	1180	1000	1070	---	---	---
19	---	---	---	1190	751	1010	1140	993	1040	---	---	---
20	---	---	---	1120	786	981	1110	1040	1080	---	---	---
21	---	---	---	786	711	762	1100	1010	1060	---	---	---
22	---	---	---	768	693	738	1150	1050	1110	---	---	---
23	---	---	---	786	761	772	1140	1050	1090	---	---	---
24	---	---	---	799	785	790	1120	1060	1080	---	---	---
25	---	---	---	831	799	809	1190	1080	1120	---	---	---
26	---	---	---	858	815	835	1200	1080	1120	---	---	---
27	---	---	---	857	819	824	1170	1080	1130	---	---	---
28	---	---	---	836	819	826	---	---	---	---	---	---
29	---	---	---	977	836	891	---	---	---	---	---	---
30	---	---	---	1010	876	917	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	326	265	297	1260	1010	1170
2	---	---	---	---	---	---	339	320	329	1320	1050	1170
3	---	---	---	---	---	---	366	338	350	1300	1130	1260
4	---	---	---	---	---	---	392	366	377	1400	1140	1310
5	---	---	---	---	---	---	412	392	401	1300	1080	1220
6	---	---	---	---	---	---	434	412	423	1470	1280	1350
7	---	---	---	---	---	---	538	427	450	1510	1190	1390
8	---	---	---	---	---	---	528	391	441	1230	1110	1180
9	---	---	---	---	---	---	486	466	479	1560	1100	1310
10	---	---	---	---	---	---	479	466	472	1510	1340	1430
11	---	---	---	---	---	---	484	461	474	1360	1250	1300
12	---	---	---	---	---	---	492	464	477	1520	1350	1460
13	---	---	---	---	---	---	530	492	510	1720	1490	1600
14	---	---	---	---	---	---	550	513	533	1690	1570	1630
15	---	---	---	---	---	---	579	533	557	1570	1520	1540
16	---	---	---	---	---	---	645	558	601	1580	1520	1550
17	---	---	---	---	---	---	676	554	607	1640	1580	1610
18	---	---	---	---	---	---	758	612	696	1720	1630	1670
19	---	---	---	3690	1820	2580	764	630	701	1730	1660	1700
20	---	---	---	2010	377	755	773	649	689	1710	1680	1690
21	---	---	---	451	339	381	841	653	716	1720	1680	1690
22	---	---	---	373	344	359	817	678	717	1740	1710	1730
23	---	---	---	392	373	381	891	697	773	1770	1730	1750
24	---	---	---	420	392	403	944	748	819	1790	1710	1770
25	---	---	---	425	412	420	806	162	612	1790	868	1390
26	---	---	---	430	416	426	504	259	378	1590	1530	1560
27	---	---	---	440	429	434	677	504	578	1620	1520	1580
28	---	---	---	458	440	448	875	677	775	1620	862	1190
29	---	---	---	474	458	467	1060	875	960	1430	1090	1240
30	---	---	---	516	409	476	1090	889	995	1480	1110	1290
31	---	---	---	767	249	339	---	---	---	1160	985	1030
MONTH	---	---	---	---	---	---	1090	162	573	1790	862	1440

08086212 Hubbard Creek below Albany, TX--Continued

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1130	928	1040	1720	1560	1620	1140	1020	1090	1560	1450	1510
2	1130	921	1020	1720	1610	1650	1030	887	983	1560	1470	1520
3	1140	1100	1120	1890	882	1560	911	825	880	1570	1500	1530
4	1180	1120	1140	1190	461	797	853	795	827	1590	1490	1540
5	1350	1060	1180	627	394	470	896	795	847	1610	1510	1560
6	1320	1180	1220	760	294	543	951	896	928	1650	1520	1570
7	1340	1240	1290	319	218	249	913	885	900	1700	1550	1620
8	1290	1250	1280	447	319	400	940	904	920	1930	1450	1690
9	1300	1260	1270	552	447	503	966	939	950	1880	1590	1710
10	1340	1290	1310	604	552	582	975	960	966	1800	1600	1690
11	1370	1290	1330	656	596	623	1020	974	986	1700	1600	1630
12	1420	1300	1350	722	635	670	1050	998	1020	1660	1580	1620
13	1460	1340	1410	799	695	742	1060	1020	1040	1650	1580	1610
14	1560	1370	1450	817	772	792	1150	1040	1070	1650	1590	1620
15	1560	1340	1470	827	798	809	1150	1070	1110	1680	1620	1640
16	1650	1220	1490	847	824	833	1170	1100	1110	1640	1510	1600
17	1580	1410	1480	911	847	874	1200	1130	1160	1610	1470	1540
18	1540	1430	1490	921	893	909	1210	1150	1170	1590	1510	1560
19	1510	1430	1480	957	919	932	1250	1160	1190	1750	1470	1630
20	1450	1370	1420	979	948	961	1280	1180	1210	1690	1560	1600
21	1420	1370	1390	990	964	979	1440	1220	1290	1620	1560	1590
22	1420	1380	1400	996	971	984	1460	1240	1300	1620	1580	1600
23	1450	1410	1430	1010	980	991	1480	1260	1350	1630	1600	1610
24	1470	1440	1460	1040	1010	1020	1540	1280	1380	1650	1610	1630
25	1510	1470	1490	1080	1040	1050	1510	1340	1420	1650	1600	1640
26	1600	1500	1560	1090	1080	1080	1520	1340	1420	1680	1630	1660
27	1640	1520	1590	1110	1090	1100	1480	1350	1420	1710	1630	1670
28	1710	1510	1600	1130	1110	1120	1510	1380	1420	1740	1640	1680
29	1710	1530	1600	1260	1080	1190	1860	1320	1540	1720	1640	1680
30	1850	1580	1680	1200	524	853	1750	1480	1530	1700	1650	1680
31	---	---	---	1140	698	1040	1550	1490	1520	---	---	---
MONTH	1850	921	1380	1890	218	901	1860	795	1160	1930	1450	1610



08086212 Hubbard Creek below Albany, TX--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

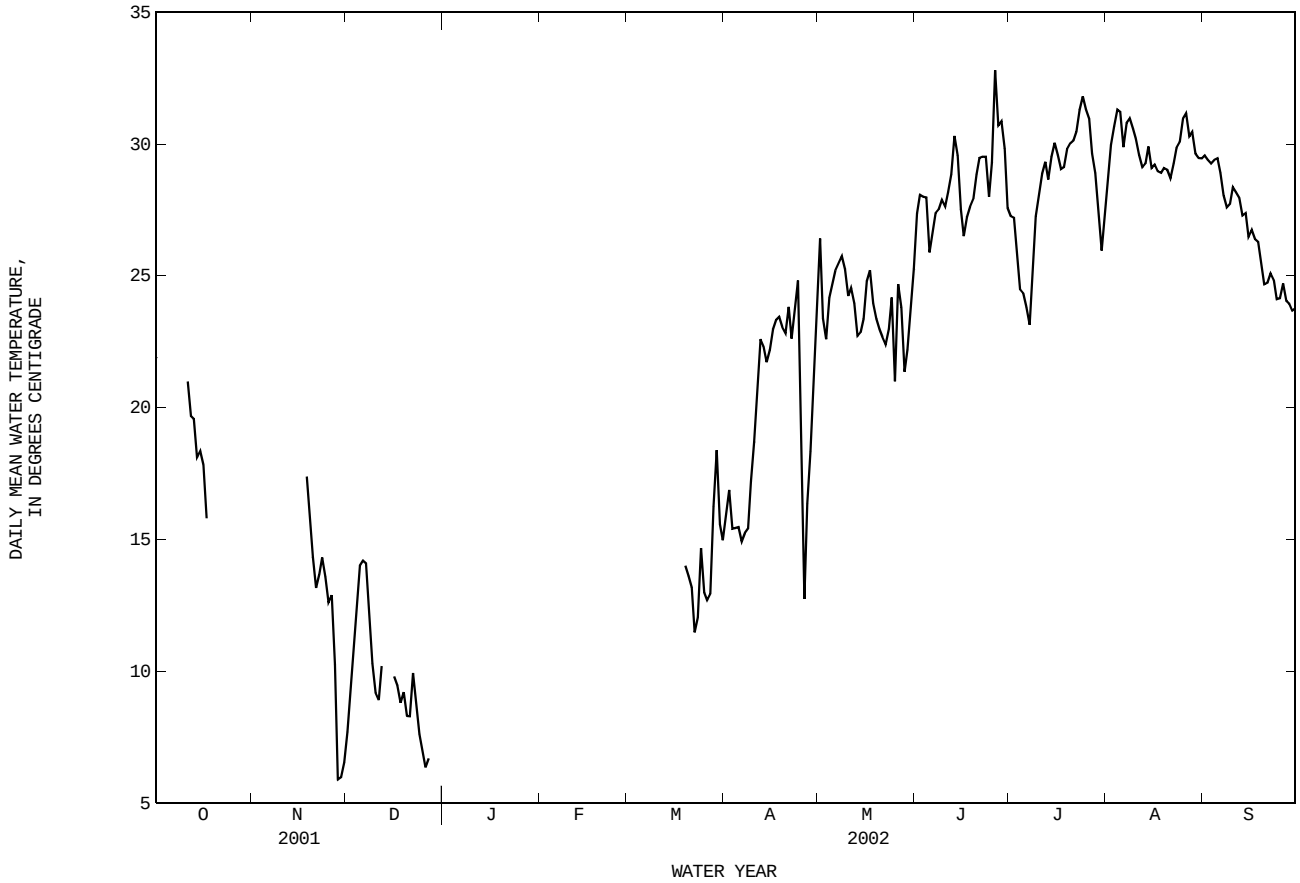
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	26.8	19.0	21.9	---	---	---	10.5	5.8	7.7	---	---	---
2	---	---	---	---	---	---	10.2	9.0	9.3	---	---	---
3	---	---	---	---	---	---	11.8	9.6	10.8	---	---	---
4	---	---	---	---	---	---	13.3	11.5	12.3	---	---	---
5	---	---	---	---	---	---	14.9	12.9	14.0	---	---	---
6	---	---	---	---	---	---	15.5	12.7	14.2	---	---	---
7	---	---	---	---	---	---	15.4	13.0	14.1	---	---	---
8	---	---	---	---	---	---	13.5	10.4	12.2	---	---	---
9	---	---	---	---	---	---	12.1	8.7	10.3	---	---	---
10	---	---	---	---	---	---	10.7	7.6	9.2	---	---	---
11	25.0	18.3	21.0	---	---	---	9.5	8.4	8.9	---	---	---
12	21.6	18.2	19.7	---	---	---	12.0	9.1	10.2	---	---	---
13	22.6	17.4	19.6	---	---	---	---	---	---	---	---	---
14	19.2	16.7	18.1	---	---	---	---	---	---	---	---	---
15	21.2	16.8	18.3	---	---	---	---	---	---	---	---	---
16	21.1	15.5	17.8	---	---	---	10.1	9.6	9.8	---	---	---
17	17.4	14.7	15.8	---	---	---	11.7	7.8	9.5	---	---	---
18	---	---	---	18.6	16.6	17.4	11.0	7.3	8.8	---	---	---
19	---	---	---	17.3	14.5	16.1	11.4	7.5	9.2	---	---	---
20	---	---	---	16.2	12.8	14.3	10.2	6.8	8.3	---	---	---
21	---	---	---	14.8	11.6	13.2	10.2	6.6	8.3	---	---	---
22	---	---	---	15.5	11.9	13.7	11.9	8.3	9.9	---	---	---
23	---	---	---	15.8	13.3	14.3	10.8	7.0	8.7	---	---	---
24	---	---	---	15.4	12.1	13.6	9.3	6.4	7.6	---	---	---
25	---	---	---	14.5	10.9	12.6	9.1	5.3	7.0	---	---	---
26	---	---	---	14.1	12.0	12.9	8.7	4.4	6.4	---	---	---
27	---	---	---	12.3	8.6	10.2	7.5	4.9	6.7	---	---	---
28	---	---	---	8.6	4.9	5.9	---	---	---	---	---	---
29	---	---	---	8.4	4.2	6.0	---	---	---	---	---	---
30	---	---	---	8.8	4.7	6.5	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	17.4	14.7	15.9	29.6	23.8	26.4
2	---	---	---	---	---	---	18.0	16.1	16.9	27.2	21.1	23.4
3	---	---	---	---	---	---	16.8	14.4	15.4	25.3	20.4	22.6
4	---	---	---	---	---	---	17.3	14.1	15.4	26.9	21.7	24.2
5	---	---	---	---	---	---	16.7	14.2	15.5	27.2	22.7	24.7
6	---	---	---	---	---	---	15.6	14.1	14.9	26.9	23.5	25.2
7	---	---	---	---	---	---	17.0	14.0	15.2	27.2	24.5	25.5
8	---	---	---	---	---	---	16.5	14.7	15.4	27.9	24.3	25.7
9	---	---	---	---	---	---	20.1	15.3	17.2	26.7	24.1	25.3
10	---	---	---	---	---	---	22.4	15.6	18.7	25.6	23.1	24.2
11	---	---	---	---	---	---	23.4	18.5	20.8	26.4	23.1	24.5
12	---	---	---	---	---	---	26.7	19.7	22.6	25.3	22.3	24.0
13	---	---	---	---	---	---	23.6	21.3	22.3	25.7	20.1	22.7
14	---	---	---	---	---	---	23.9	19.8	21.7	26.0	20.0	22.9
15	---	---	---	---	---	---	23.9	20.1	22.2	25.6	21.2	23.4
16	---	---	---	---	---	---	24.9	21.1	23.0	27.6	21.8	24.8
17	---	---	---	---	---	---	25.2	21.3	23.3	26.5	23.3	25.2
18	---	---	---	---	---	---	24.8	21.6	23.5	27.2	21.3	24.0
19	---	---	---	14.4	13.7	14.0	23.7	22.4	23.1	26.1	20.7	23.4
20	---	---	---	14.0	12.9	13.6	23.5	22.2	22.8	25.1	20.9	23.0
21	---	---	---	13.7	12.4	13.2	26.8	21.9	23.8	24.8	20.6	22.7
22	---	---	---	12.4	10.9	11.5	24.1	20.6	22.6	24.4	20.7	22.4
23	---	---	---	14.0	10.4	12.1	25.6	21.7	23.7	24.9	21.4	23.0
24	---	---	---	17.7	12.3	14.7	29.4	22.3	24.8	26.7	22.2	24.2
25	---	---	---	15.2	11.5	13.0	23.6	9.0	17.7	26.7	7.5	21.0
26	---	---	---	16.3	10.3	12.7	14.1	10.2	12.7	28.0	21.7	24.7
27	---	---	---	15.9	10.1	12.9	18.4	14.1	16.4	26.1	21.8	23.8
28	---	---	---	19.5	13.0	16.2	20.1	16.7	18.3	22.1	19.6	21.4
29	---	---	---	21.2	16.8	18.4	24.1	19.9	21.4	23.7	21.2	22.2
30	---	---	---	16.9	14.1	15.6	27.2	21.8	24.1	24.7	22.8	23.7
31	---	---	---	15.6	14.4	15.0	---	---	---	27.7	23.5	25.3
MONTH	---	---	---	---	---	---	29.4	9.0	19.7	29.6	7.5	23.9

08086212 Hubbard Creek below Albany, TX--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	30.5	25.0	27.4	29.0	26.1	27.3	31.1	27.0	28.7	32.1	27.5	29.6
2	30.7	25.8	28.1	29.9	25.9	27.2	33.1	27.7	30.0	31.4	27.5	29.4
3	30.7	25.5	28.0	26.9	23.5	25.6	33.8	28.1	30.7	31.7	27.4	29.3
4	29.6	26.1	28.0	25.5	23.6	24.5	34.4	28.6	31.3	32.1	27.0	29.4
5	27.9	25.0	25.9	24.8	23.9	24.3	34.4	28.7	31.2	31.9	27.3	29.5
6	30.5	24.2	26.7	24.7	23.0	23.8	32.1	27.8	29.9	31.0	26.7	28.9
7	30.4	25.0	27.4	24.5	22.5	23.1	34.3	28.0	30.8	29.6	26.5	28.1
8	29.4	26.0	27.5	26.6	24.5	25.5	34.2	28.6	31.0	30.2	26.0	27.6
9	29.7	25.9	27.9	28.4	26.5	27.3	33.5	28.2	30.6	30.1	26.3	27.7
10	29.0	25.7	27.6	29.5	26.8	28.1	32.1	28.2	30.2	31.3	26.4	28.4
11	29.9	26.4	28.2	30.1	27.9	28.9	31.5	27.8	29.6	31.4	25.6	28.2
12	31.1	26.8	28.9	30.9	28.1	29.3	30.8	27.3	29.1	29.7	26.0	28.0
13	33.9	28.0	30.3	29.6	27.8	28.7	31.4	27.6	29.3	28.5	25.8	27.3
14	33.2	27.0	29.6	31.5	28.1	29.5	34.3	27.4	29.9	30.3	25.7	27.4
15	29.1	25.9	27.5	32.3	28.1	30.0	31.0	27.2	29.1	28.0	25.5	26.5
16	29.9	24.2	26.5	31.1	27.9	29.6	30.8	27.9	29.2	29.8	24.7	26.7
17	30.8	24.3	27.2	30.7	28.0	29.0	30.7	27.1	29.0	27.7	24.8	26.4
18	30.3	25.2	27.6	31.2	27.4	29.1	30.6	27.1	28.9	28.1	24.5	26.3
19	30.7	25.6	27.9	32.0	27.9	29.8	30.6	27.4	29.1	27.0	24.1	25.5
20	31.8	26.7	28.9	32.2	28.1	30.0	30.6	27.4	29.0	26.9	22.5	24.7
21	32.3	27.1	29.5	32.6	28.0	30.1	30.1	27.3	28.7	27.0	22.6	24.7
22	31.9	27.3	29.5	33.1	28.1	30.5	31.6	27.5	29.3	27.2	23.1	25.1
23	33.8	26.5	29.5	34.7	28.4	31.3	32.2	27.9	29.9	28.2	22.2	24.9
24	29.8	26.7	28.0	34.4	29.1	31.8	32.2	28.2	30.1	27.2	21.6	24.1
25	33.4	27.6	29.3	33.6	29.0	31.3	35.1	28.4	31.0	28.4	21.2	24.2
26	35.8	28.0	32.8	33.1	28.8	31.0	33.4	29.0	31.2	28.7	21.5	24.7
27	34.7	27.7	30.7	31.6	27.2	29.6	31.8	28.4	30.3	26.4	21.7	24.1
28	36.1	27.4	30.9	31.1	27.5	28.9	33.9	28.3	30.5	25.2	22.2	23.9
29	32.3	27.9	29.8	29.4	25.0	27.5	32.1	27.5	29.6	25.0	22.0	23.7
30	28.9	26.5	27.6	27.5	24.1	26.0	31.7	27.7	29.5	25.0	22.3	23.8
31	---	---	---	28.7	26.1	27.2	32.6	27.1	29.5	---	---	---
MONTH	36.1	24.2	28.5	34.7	22.5	28.3	35.1	27.0	29.9	32.1	21.2	26.6



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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^2.

PERIOD OF RECORD.--Feb. 1999 to current year.

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

REMARKS.--Records good except those for estimated daily contents, 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. Conservation pool storage is 8,800 acre-ft. 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.--Capacity table dated May 24, 1920, developed from surface area and capacity curve from Texas Water Development Board Report 126, Engineering Data on Dams and Reservoirs in Texas, Part II, Nov. 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 18,080 acre-ft, June 26, 1999, elevation, 1,511.14 ft; minimum estimated daily contents, 10,500 acre-ft, July 2, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 12,200 acre-ft, July 14, elevation, 1,502.72 ft; minimum estimated daily contents, 10,500 acre-ft, July 2.

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

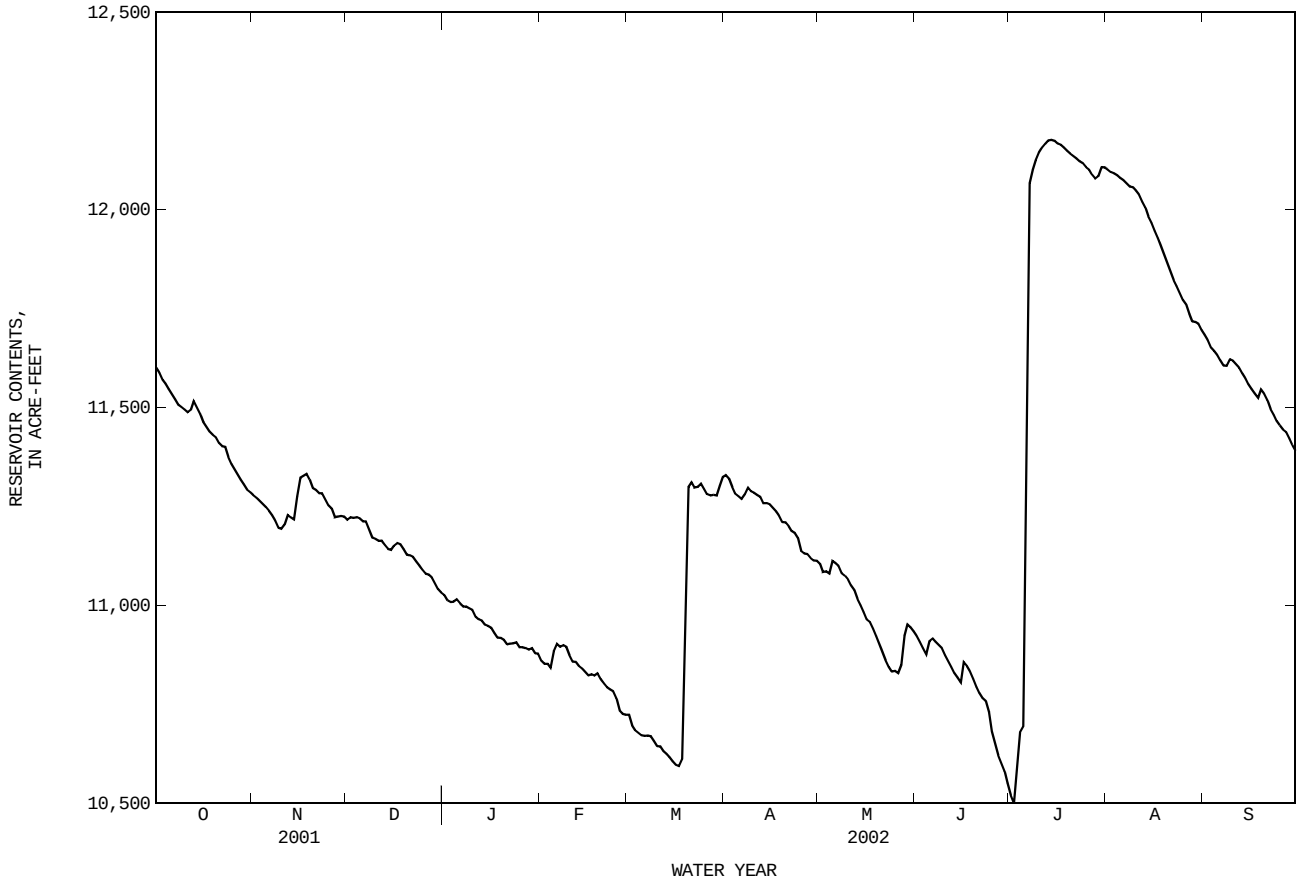
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11600	11280	11220	11030	10860	10720	11330	11100	10920	e10520	12100	11680
2	11590	11270	11220	11010	10850	10700	11320	11080	10910	e10500	12090	11670
3	11570	11260	11220	11010	10850	10680	11300	11090	10890	10600	12090	11650
4	11560	11260	11220	11010	10840	10680	11280	11080	10880	10680	12090	11640
5	11550	11250	11220	11010	10880	10670	11280	11110	10910	10690	12080	11630
6	11530	11240	11210	11000	10900	10670	11270	11110	10920	11330	12070	11620
7	11520	11230	11210	11000	10890	10670	11280	11100	10910	12070	12070	11610
8	11510	11210	11190	11000	10900	10670	11300	11080	10900	12100	12060	11610
9	11500	11200	11170	10990	10890	10660	11290	11070	10890	12120	12060	11620
10	11500	11190	11170	10990	10870	10640	11280	11070	10870	12140	12050	11620
11	11490	11200	11160	10970	10860	10640	11280	11050	10860	12160	12040	11610
12	11490	11230	11160	10960	10860	10630	11270	11040	10840	12170	12020	11600
13	11520	11220	11150	10960	10850	10620	11260	11020	10830	12170	12010	11590
14	11500	11220	11140	10950	10840	10620	11260	11000	10820	12180	11980	11570
15	11480	11280	11140	10950	10830	10600	11260	10980	10810	12170	11970	11560
16	11460	11320	11150	10940	10820	10600	11250	10960	10860	12170	11950	11550
17	11450	11330	11160	10930	10830	10590	11240	10960	10850	12160	11930	11530
18	11440	11330	11150	10920	10820	10610	11230	10940	10830	12160	11910	11520
19	11430	11320	11140	10920	10830	10850	11210	10920	10810	12150	11890	11550
20	11420	11300	11130	10910	10810	11300	11210	10900	10790	12140	11870	11540
21	11410	11290	11130	10900	10800	11310	11200	10880	10780	12140	11840	11520
22	11400	11280	11120	10900	10790	11300	11190	10860	10770	12130	11820	11500
23	11400	11280	11110	10900	10790	11300	11180	10840	10760	12120	11810	11480
24	11370	11270	11100	10910	10780	11310	11170	10830	10730	12120	11790	11470
25	11360	11250	11090	10890	10760	11290	11140	10830	10680	12110	11770	11450
26	11340	11240	11080	10890	10730	11280	11130	10830	e10650	12100	11760	11440
27	11330	11220	11080	10890	10730	11280	11130	10850	e10620	12090	11740	11440
28	11320	11220	11070	10890	10720	11280	11120	10920	e10600	12080	11720	11420
29	11310	11230	11060	10890	---	11280	11110	10950	e10580	12090	11720	11410
30	11290	11220	11040	10880	---	11300	11110	10940	e10550	12110	11710	11390
31	11290	---	11030	10880	---	11320	---	10930	---	12110	11700	---
MEAN	11450	11250	11140	10940	10830	10910	11230	10980	10800	11860	11930	11550
MAX	11600	11330	11220	11030	10900	11320	11330	11110	10920	12180	12100	11680
MIN	11290	11190	11030	10880	10720	10590	11110	10830	10550	10500	11700	11390
(+)	1501.12	1501.01	1500.67	1500.40	1500.13	1501.18	1500.81	1500.49	1499.78	1502.56	1501.84	1501.30
(@)	-320	-70	-190	-150	-160	+600	-210	-180	-380	+1560	-410	-310

CAL YR 2001 MAX 13640 MIN 11030 (@) -920
WTR YR 2002 MAX 12180 MIN 10500 (@) -220

e Estimated

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

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^2.

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 fair. 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 2001 TO SEPTEMBER 2002
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	11	0.02	0.35	0.00	2.6	0.02
2	0.00	0.00	0.00	0.00	0.00	0.00	11	0.01	0.12	0.00	0.59	0.02
3	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.01	0.03	47	0.24	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	1.2	0.01	0.00	48	0.12	0.00
5	0.00	0.00	0.00	0.00	0.10	0.00	0.53	0.02	2.3	27	0.09	0.00
6	0.00	0.00	0.00	0.00	0.03	0.00	0.43	0.01	12	1840	0.08	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	7.4	0.01	1.1	3410	0.05	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	44	0.03	0.27	159	0.06	0.02
9	0.00	0.00	0.00	0.00	0.00	0.00	9.7	0.01	0.09	61	0.06	0.04
10	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.01	0.01	43	0.05	0.04
11	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	18	0.04	0.02
12	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06	0.00	11	0.03	0.02
13	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.13	0.00	6.9	0.03	0.02
14	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.00	4.7	0.03	0.03
15	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.00	2.8	0.03	0.04
16	0.00	3.0	0.00	0.00	0.00	0.00	0.03	0.03	20	1.8	0.03	0.03
17	0.00	3.6	0.00	0.00	0.00	0.00	0.02	0.01	9.7	1.3	0.03	0.03
18	0.00	0.35	0.00	0.00	0.00	0.00	0.03	0.00	1.1	0.99	0.03	0.03
19	0.00	0.00	0.00	0.00	0.02	144	0.03	0.00	0.21	0.64	0.03	0.11
20	0.00	0.00	0.00	0.00	0.00	673	0.03	0.00	0.05	0.42	0.03	0.06
21	0.00	0.00	0.00	0.00	0.00	72	0.03	0.00	0.00	0.22	0.03	0.05
22	0.00	0.00	0.00	0.00	0.00	20	0.03	0.00	0.00	0.14	0.04	0.04
23	0.00	0.00	0.00	0.00	0.00	7.6	0.04	0.00	0.00	0.10	0.04	0.03
24	0.00	0.00	0.00	0.00	0.00	3.1	0.02	0.00	0.00	0.08	0.03	0.03
25	0.00	0.00	0.00	0.00	0.00	1.2	0.01	421	0.00	0.06	0.03	0.02
26	0.00	0.00	0.00	0.00	0.00	0.60	0.03	30	0.00	0.05	0.03	0.02
27	0.00	0.00	0.00	0.00	0.00	0.33	0.03	5.8	0.00	0.05	0.03	0.00
28	0.00	0.00	0.00	0.00	0.00	0.24	0.02	823	0.00	0.05	0.02	0.00
29	0.00	0.00	0.00	0.00	---	0.14	0.03	90	0.00	1.9	0.03	0.00
30	0.00	0.00	0.00	0.00	---	0.57	0.04	12	0.00	607	0.02	0.00
31	0.00	---	0.00	0.00	---	11	---	1.7	---	30	0.02	---
TOTAL	0.00	6.95	0.00	0.00	0.15	933.78	91.38	1383.96	47.33	6323.20	4.57	0.72
MEAN	0.000	0.232	0.000	0.000	0.005	30.12	3.046	44.64	1.578	204.0	0.147	0.024
MAX	0.00	3.6	0.00	0.00	0.10	673	44	823	20	3410	2.6	0.11
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.02	0.00
AC-FT	0.00	14	0.00	0.00	0.3	1850	181	2750	94	12540	9.1	1.4
CFSM	0.00	0.00	0.00	0.00	0.00	0.11	0.01	0.16	0.01	0.73	0.00	0.00
IN.	0.00	0.00	0.00	0.00	0.00	0.12	0.01	0.18	0.01	0.84	0.00	0.00

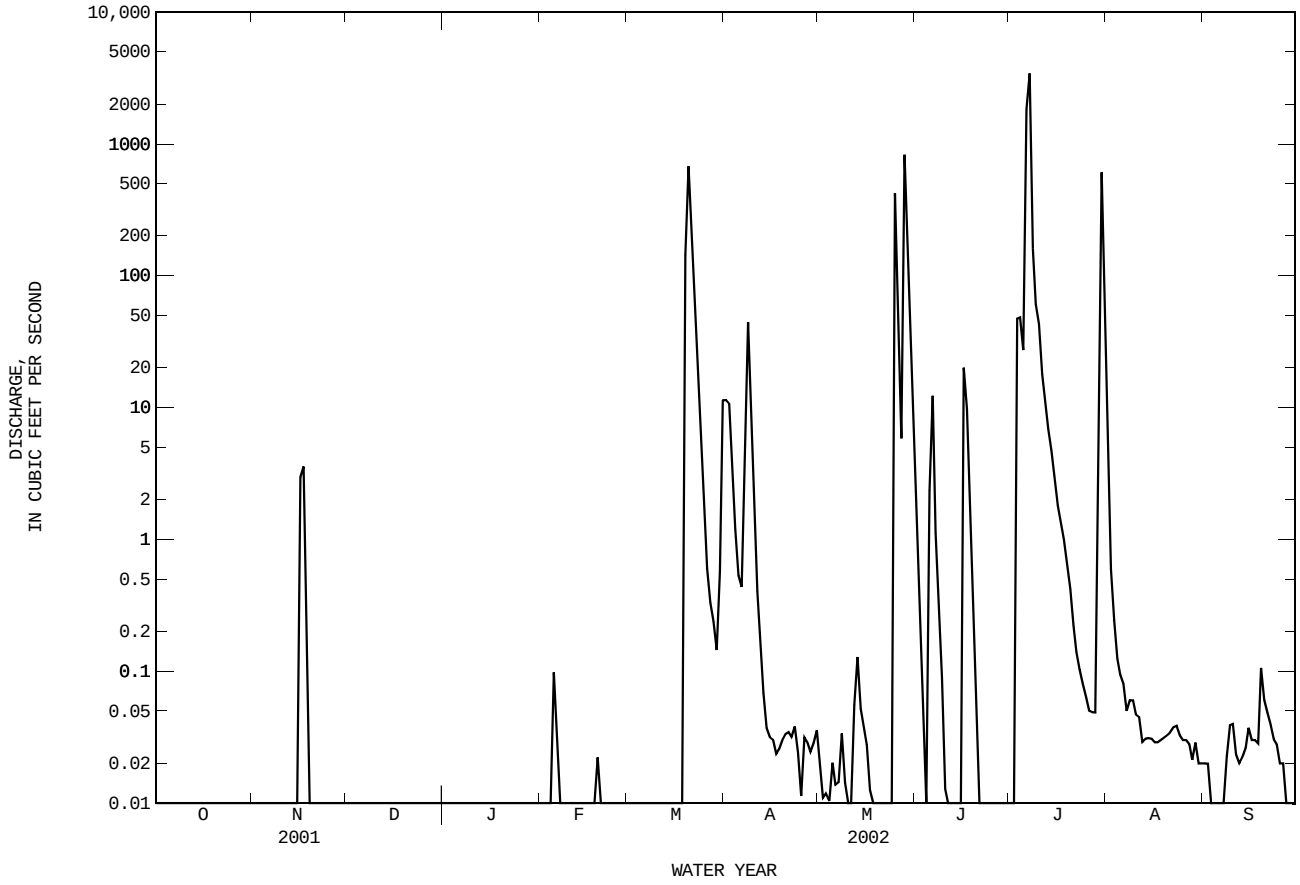
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002, BY WATER YEAR (WY)

MEAN	48.17	13.89	15.09	17.07	31.41	29.39	27.24	61.53	39.68	10.82	16.77	28.09
MAX	1151	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1969	1971	1971	1971	1962	1966	2000	1984	1964	1964	1980	1968

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002	
ANNUAL TOTAL	4415.40		8792.04			
ANNUAL MEAN	12.10		24.09		28.24	
HIGHEST ANNUAL MEAN					114	1992
LOWEST ANNUAL MEAN					1.67	2000
HIGHEST DAILY MEAN	2140	Feb 16	3410	Jul 7	28100	Oct 13 1981
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Feb 1 1962
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Feb 1 1962
MAXIMUM PEAK FLOW			5520	Jul 7	i80000	Oct 13 1981
MAXIMUM PEAK STAGE			a22.46	Jul 7	a28.60	Oct 13 1981
ANNUAL RUNOFF (AC-FT)	8760		17440		20460	
ANNUAL RUNOFF (CFSM)	0.043		0.086		0.10	
ANNUAL RUNOFF (INCHES)	0.59		1.17		1.37	
10 PERCENT EXCEEDS	4.0		3.1		14	
50 PERCENT EXCEEDS	0.00		0.00		0.07	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a From floodmark.
i From field determination, based on 2-section slope-area measurement of peak flow.

08086290 Big Sandy Creek above Breckenridge, TX--Continued



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 fair except those for daily specific conductance for Apr. 9 to May 3, which are poor. Interruptions in the specific conductance and water temperature values were due to no flow except those for specific conductance on Aug. 1-19 and water temperature on Aug. 16-19, 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, 15,300 microsiemens/cm, Sept. 14; minimum, 107 microsiemens/cm, May 25.
WATER TEMPERATURE: Maximum, 36.0°C, Aug. 15; minimum, 5.0°C, Feb. 6.

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

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
MAR													
20...	1455	425	197	14.2	100	35.6	3.10	6.71	.3	5.57	10.6	10.6	.2
26...	1515	.55	556	15.9	150	49.2	6.47	48.5	2	5.13	31.8	97.4	.2
MAY													
03...	0900	.01	9500	19.7	1800	555	109	1350	14	4.38	510	2910	.2
29...	1610	46	240	24.0	77	26.5	2.52	9.53	.5	5.32	10.2	15.6	.2
JUL													
08...	1220	132	261	25.5	100	33.9	3.74	10.2	.4	5.44	12.0	15.3	.2
30...	1510	1060	160	24.7	73	25.5	2.30	8.14	.4	5.44	8.1	12.6	.1

Date	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAR		
20...	7.8	137
26...	6.8	300
MAY		
03...	4.4	5520
29...	6.9	118
JUL		
08...	11.1	145
30...	7.7	107

08086290 Big Sandy Creek above Breckenridge, TX--Continued

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

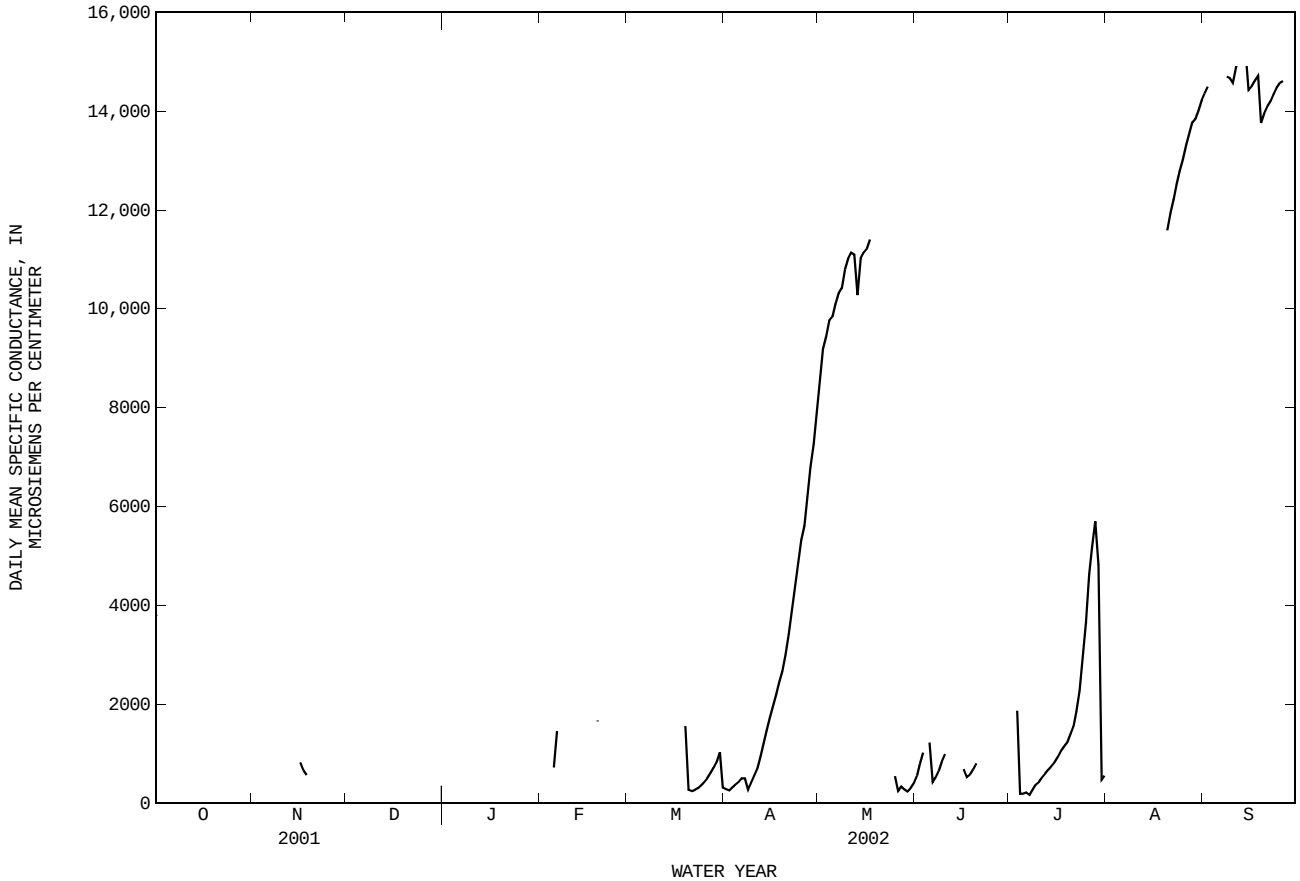
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	1760	612	827	---	---	---	---	---	---
17	---	---	---	965	572	665	---	---	---	---	---	---
18	---	---	---	574	534	566	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	363	215	282	8960	8410	8650
2	---	---	---	---	---	---	302	223	255	9400	8910	9190
3	---	---	---	---	---	---	350	299	324	9750	9320	9440
4	---	---	---	---	---	---	427	331	373	9900	9690	9770
5	1050	635	725	---	---	---	463	401	426	10100	9730	9850
6	1810	877	1460	---	---	---	574	413	504	10300	9980	10100
7	---	---	---	---	---	---	1050	277	505	10500	10200	10300
8	---	---	---	---	---	---	332	214	268	10600	10200	10400
9	---	---	---	---	---	---	480	332	408	11000	10600	10800
10	---	---	---	---	---	---	640	480	555	11200	10800	11000
11	---	---	---	---	---	---	794	640	695	11300	11000	11100
12	---	---	---	---	---	---	1060	794	947	11500	9470	11100
13	---	---	---	---	---	---	1370	1060	1180	11100	9460	10300
14	---	---	---	---	---	---	1620	1350	1470	11200	10900	11000
15	---	---	---	---	---	---	1840	1620	1730	11300	11000	11100
16	---	---	---	---	---	---	2080	1840	1960	11400	11100	11200
17	---	---	---	---	---	---	2330	2080	2200	11600	11300	11400
18	---	---	---	---	---	---	2570	2330	2440	---	---	---
19	1970	1520	1660	8230	360	1560	2840	2570	2670	---	---	---
20	---	---	---	360	224	269	3210	2840	3000	---	---	---
21	---	---	---	259	226	243	3710	3210	3420	---	---	---
22	---	---	---	286	248	264	4140	3690	3860	---	---	---
23	---	---	---	329	286	305	4630	4120	4340	---	---	---
24	---	---	---	394	329	359	5170	4610	4830	---	---	---
25	---	---	---	452	394	424	5490	5170	5320	10400	107	548
26	---	---	---	543	452	495	5780	5480	5610	296	179	243
27	---	---	---	679	543	601	6570	5780	6160	384	296	334
28	---	---	---	736	679	713	7100	6560	6800	419	190	276
29	---	---	---	923	736	834	7520	7090	7260	269	213	237
30	---	---	---	1580	789	1030	8410	7510	7940	344	267	301
31	---	---	---	789	220	316	---	---	---	479	344	401
MONTH	---	---	---	---	---	---	8410	214	2590	---	---	---

08086290 Big Sandy Creek above Breckenridge, TX--Continued

SPECIFIC CONDUCTANCE FROM DCP, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	632	479	553	---	---	---	---	---	---	14500	14300	14400
2	921	632	793	---	---	---	---	---	---	14600	14400	14500
3	1160	921	1020	4590	182	1870	---	---	---	---	---	---
4	---	---	---	286	171	191	---	---	---	---	---	---
5	1840	516	1230	214	180	193	---	---	---	---	---	---
6	680	368	428	351	158	220	---	---	---	---	---	---
7	589	437	517	225	153	168	---	---	---	---	---	---
8	737	589	650	327	225	276	---	---	---	15200	14200	14700
9	958	737	844	406	327	373	---	---	---	15000	14000	14700
10	1040	958	997	483	331	427	---	---	---	14700	14400	14600
11	---	---	---	563	483	525	---	---	---	15000	14700	14900
12	---	---	---	638	563	598	---	---	---	15100	14900	15000
13	---	---	---	716	638	676	---	---	---	15200	15000	15100
14	---	---	---	785	716	751	---	---	---	15300	14500	15200
15	---	---	---	876	781	827	---	---	---	14800	14100	14400
16	2220	459	694	1000	876	930	---	---	---	14600	14400	14500
17	548	507	532	1130	1000	1060	---	---	---	14700	14500	14600
18	629	548	580	1200	1090	1140	---	---	---	14800	14600	14700
19	743	629	683	1290	1200	1220	---	---	---	14800	12600	13800
20	888	743	807	1430	1290	1390	11800	11400	11600	14000	13800	14000
21	---	---	---	1720	1430	1550	12100	11800	11900	14200	14000	14100
22	---	---	---	2050	1720	1850	12400	12100	12200	14300	14100	14200
23	---	---	---	2600	2040	2280	12700	12400	12500	14400	14300	14300
24	---	---	---	3260	2600	2910	13000	12600	12800	14500	14400	14500
25	---	---	---	4390	3260	3660	13300	12900	13000	14600	14500	14600
26	---	---	---	4940	4390	4630	13600	13100	13300	14700	14500	14600
27	---	---	---	5440	4930	5180	13700	13400	13600	---	---	---
28	---	---	---	5960	5440	5700	14000	13700	13800	---	---	---
29	---	---	---	7090	1120	4820	14000	13700	13800	---	---	---
30	---	---	---	1120	257	468	14200	13900	14000	---	---	---
31	---	---	---	685	430	558	14300	14100	14200	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



08086290 Big Sandy Creek above Breckenridge, TX--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

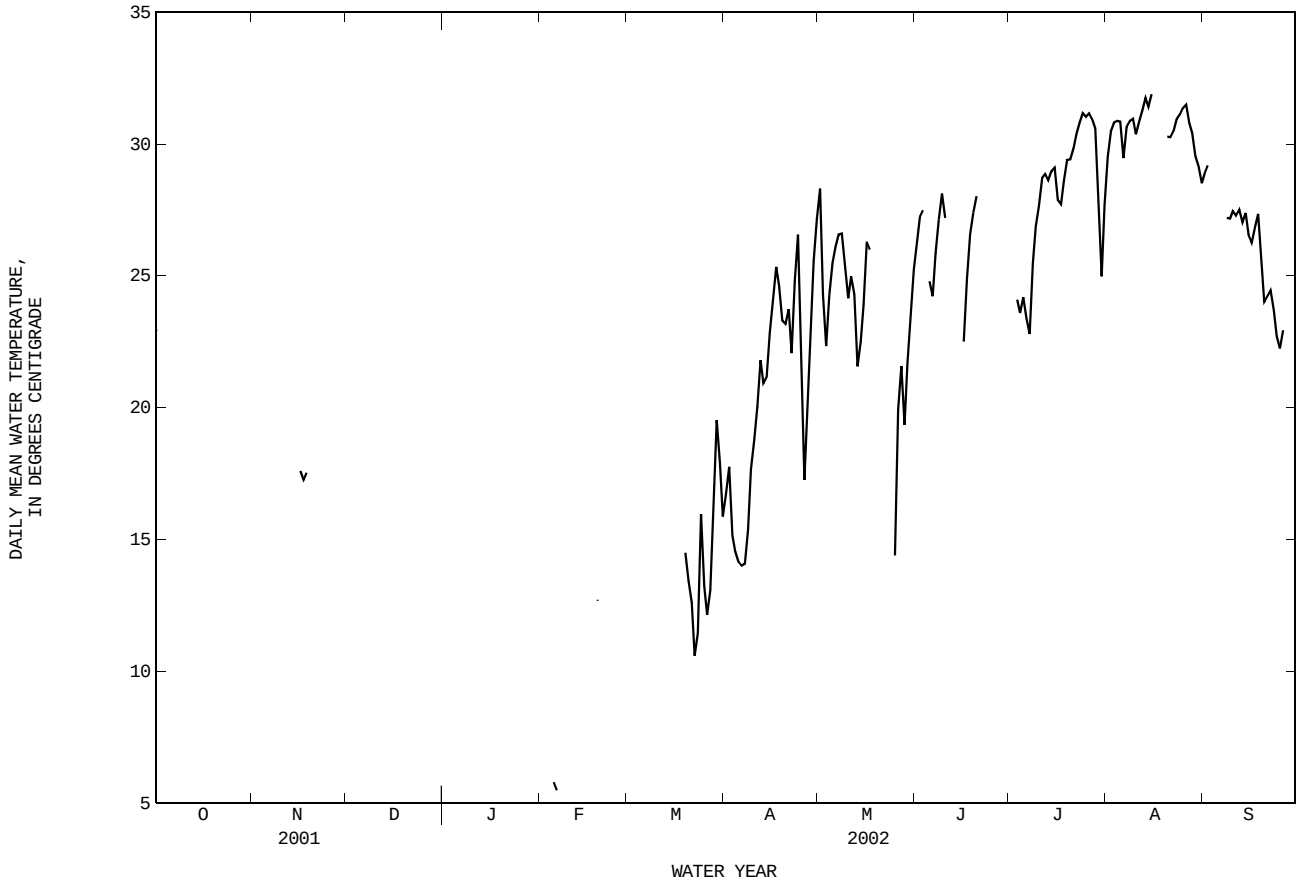
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	18.1	17.4	17.6	---	---	---	---	---	---
17	---	---	---	17.7	16.3	17.3	---	---	---	---	---	---
18	---	---	---	19.3	16.3	17.5	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	20.4	13.9	16.7	33.1	24.7	28.3
2	---	---	---	---	---	---	19.6	16.3	17.8	28.4	21.7	24.3
3	---	---	---	---	---	---	17.1	13.2	15.2	26.5	19.6	22.3
4	---	---	---	---	---	---	16.7	13.2	14.5	29.8	20.4	24.3
5	6.0	5.5	5.8	---	---	---	16.4	12.1	14.2	29.1	22.6	25.5
6	5.9	5.0	5.5	---	---	---	14.8	12.9	14.0	28.1	24.3	26.1
7	---	---	---	---	---	---	16.9	12.8	14.1	29.5	24.3	26.6
8	---	---	---	---	---	---	17.8	13.5	15.4	29.7	24.5	26.6
9	---	---	---	---	---	---	20.4	15.4	17.7	27.1	23.6	25.5
10	---	---	---	---	---	---	23.0	15.6	18.8	26.6	22.1	24.2
11	---	---	---	---	---	---	24.8	16.8	20.0	27.1	23.4	25.0
12	---	---	---	---	---	---	27.1	18.6	21.8	25.7	20.0	24.3
13	---	---	---	---	---	---	22.6	20.0	20.9	26.3	17.7	21.6
14	---	---	---	---	---	---	25.2	18.3	21.2	26.9	18.7	22.5
15	---	---	---	---	---	---	27.5	19.8	22.9	28.4	20.3	23.9
16	---	---	---	---	---	---	27.4	21.7	24.1	31.0	22.5	26.3
17	---	---	---	---	---	---	30.1	22.2	25.3	27.7	23.4	26.0
18	---	---	---	---	---	---	26.8	22.8	24.6	---	---	---
19	14.3	11.3	12.7	15.4	12.4	14.5	24.8	22.6	23.3	---	---	---
20	---	---	---	14.3	11.9	13.4	25.0	21.8	23.2	---	---	---
21	---	---	---	13.7	11.4	12.6	26.2	21.8	23.7	---	---	---
22	---	---	---	12.3	9.0	10.6	24.8	19.1	22.1	---	---	---
23	---	---	---	15.0	8.1	11.5	29.2	21.6	24.8	---	---	---
24	---	---	---	20.4	12.5	16.0	31.8	23.2	26.6	---	---	---
25	---	---	---	17.3	10.6	13.2	25.0	17.7	20.5	19.7	6.7	14.4
26	---	---	---	18.1	8.2	12.2	17.9	16.4	17.3	23.4	17.1	19.9
27	---	---	---	17.7	9.4	13.1	24.4	17.5	20.6	23.4	20.5	21.6
28	---	---	---	21.1	12.4	16.2	28.7	18.8	23.2	20.8	17.9	19.3
29	---	---	---	24.6	16.1	19.5	32.1	21.2	25.6	24.2	19.7	21.7
30	---	---	---	19.8	15.4	17.9	31.0	24.1	27.2	25.8	21.5	23.5
31	---	---	---	17.8	14.1	15.9	---	---	---	29.6	21.7	25.2
MONTH	---	---	---	---	---	---	32.1	12.1	20.6	---	---	---

08086290 Big Sandy Creek above Breckenridge, TX--Continued

WATER TEMPERATURE FROM DCP, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	30.9	22.7	26.3	---	---	---	33.3	26.7	29.5	31.9	26.4	28.9
2	32.7	23.6	27.2	---	---	---	35.3	27.1	30.5	32.6	26.4	29.2
3	33.3	23.2	27.5	25.0	23.1	24.1	35.5	27.2	30.8	---	---	---
4	---	---	---	24.5	22.8	23.6	35.2	27.4	30.9	---	---	---
5	26.0	23.4	24.8	25.5	23.2	24.2	34.4	27.8	30.9	---	---	---
6	26.5	22.4	24.2	24.5	22.5	23.4	30.8	27.8	29.5	---	---	---
7	29.5	22.9	25.9	24.4	22.0	22.8	35.3	27.3	30.7	---	---	---
8	30.7	24.4	27.1	27.2	24.1	25.5	33.5	28.7	30.9	28.9	25.4	27.2
9	33.0	24.7	28.1	28.2	25.7	26.9	34.7	28.2	31.0	28.6	26.0	27.2
10	31.0	25.3	27.2	29.7	26.0	27.7	31.8	28.8	30.4	29.6	26.0	27.5
11	---	---	---	31.1	26.9	28.7	34.4	28.3	30.9	30.3	24.8	27.3
12	---	---	---	31.6	26.8	28.9	35.0	28.4	31.3	29.8	25.4	27.5
13	---	---	---	30.6	26.8	28.6	34.7	29.5	31.7	28.9	25.1	27.0
14	---	---	---	32.3	26.4	29.0	35.3	28.6	31.4	30.0	25.3	27.4
15	---	---	---	32.5	26.5	29.1	36.0	28.9	31.9	27.5	25.3	26.6
16	24.9	19.8	22.5	30.1	26.0	27.9	---	---	---	29.1	24.2	26.3
17	28.3	22.2	24.9	31.2	25.7	27.7	---	---	---	29.7	24.6	26.8
18	31.4	23.2	26.6	32.8	25.9	28.6	---	---	---	30.1	25.3	27.4
19	32.6	23.6	27.4	34.3	26.4	29.4	---	---	---	27.7	24.2	25.8
20	33.7	24.3	28.0	34.3	26.0	29.4	32.7	28.2	30.3	27.0	21.5	24.0
21	---	---	---	34.7	26.1	29.8	32.8	28.0	30.3	27.2	21.6	24.2
22	---	---	---	34.6	27.2	30.4	32.9	28.3	30.5	26.9	22.4	24.4
23	---	---	---	35.3	27.5	30.8	34.3	28.5	30.9	26.4	21.4	23.7
24	---	---	---	35.6	27.8	31.2	34.4	28.6	31.1	25.4	20.4	22.7
25	---	---	---	34.6	28.4	31.0	34.8	28.7	31.4	25.5	19.9	22.3
26	---	---	---	35.1	28.2	31.2	34.9	28.8	31.5	26.2	20.4	22.9
27	---	---	---	34.5	28.4	31.0	33.3	28.4	30.8	---	---	---
28	---	---	---	33.4	28.4	30.6	33.8	27.9	30.4	---	---	---
29	---	---	---	30.6	24.0	27.4	32.1	27.1	29.5	---	---	---
30	---	---	---	27.1	22.8	25.0	32.0	27.0	29.1	---	---	---
31	---	---	---	30.3	25.6	27.7	31.6	26.0	28.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



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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^2.

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Oct. 1962 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 except those for estimated daily contents, which are fair. 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^3/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. Conservation pool storage is 318,070 acre-ft. 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.--The capacity table dated Oct. 1, 1998, was furnished by the Texas Water Development Board and is based on a Feb. 1997 volumetric survey.

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 contents, 161,800 acre-ft, July 31, Aug. 1, elevation, 1,169.77 ft; minimum contents, 113,200 acre-ft, Mar. 18, 19, elevation, 1,164.08 ft.

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

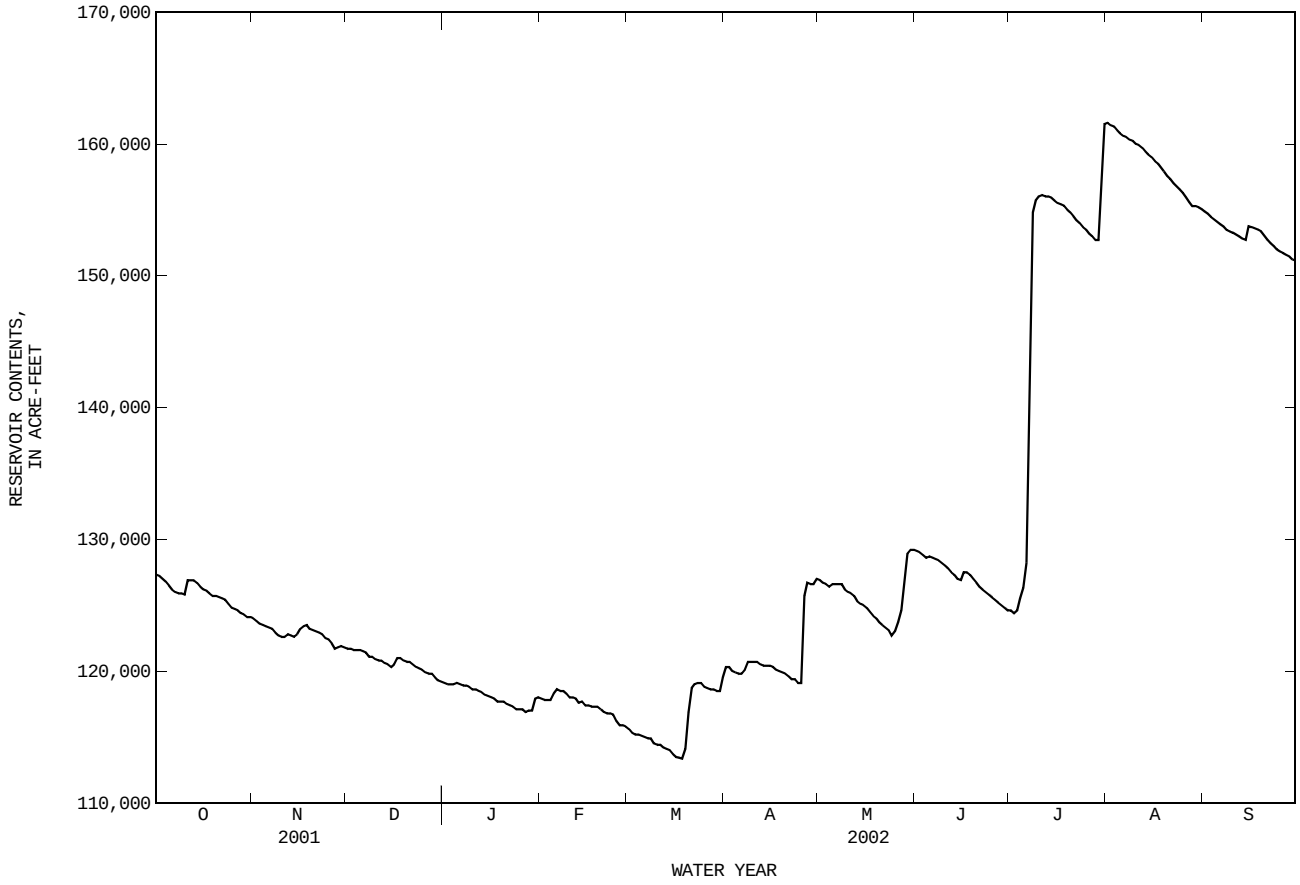
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127300	124000	121700	119100	117900	115600	120300	126900	129100	124600	161600	154900
2	127200	123800	121700	119000	117800	115300	120300	126700	129000	124400	161400	154700
3	127000	123600	121600	119000	117800	115200	120000	126600	128800	124600	161300	154500
4	126800	123500	121600	119000	117800	115200	119900	126400	128600	125500	161000	154200
5	126500	123400	121600	119100	118300	115100	119800	126600	128700	126300	160800	154100
6	126200	123300	121500	119000	118600	115000	119800	126600	128600	128200	160600	153900
7	126000	123200	121400	118900	118500	114900	120100	126600	128500	142300	160500	153700
8	125900	122900	121100	118900	118500	114900	120700	126600	128400	154800	160300	153500
9	125900	122700	121100	118800	118300	114500	120700	126200	128200	155700	160200	153300
10	125800	122600	120900	118600	118000	114400	120700	126000	128000	156000	160000	153300
11	126900	122600	120800	118600	118000	114400	120700	125900	127800	156100	159900	153100
12	126900	122800	120800	118500	117900	114200	120500	125700	127500	156000	159700	153000
13	126900	122700	120600	118400	117600	114100	120400	125300	127300	156000	159400	152800
14	126700	122600	120500	118200	117700	114000	120400	125100	127000	155900	159200	152700
15	126400	122800	120300	118100	117400	113700	120400	125000	126900	155700	159000	153700
16	126200	123200	120500	118000	117400	113500	120300	124800	127500	155500	158700	153700
17	126100	123400	121000	117900	117300	113400	120100	124500	127500	155400	158500	153600
18	125900	123500	121000	117700	117300	113400	120000	124200	127300	155300	158200	153500
19	125700	123200	120800	117700	117300	114100	119900	124000	127000	155000	157900	153300
20	125700	123100	120700	117700	117100	116900	119800	123700	126700	154800	157600	153000
21	125600	123000	120700	117500	116900	118700	119600	123500	126400	154500	157300	152700
22	125500	122900	120500	117400	116800	119000	119400	123300	126200	154200	157000	152500
23	125400	122800	120300	117300	116800	119100	119400	123100	126000	154000	156800	152200
24	125100	122500	120200	117100	116700	119100	119100	122700	125800	153700	156500	152000
25	124800	122400	120100	117100	116200	118800	119100	123000	125600	153500	156300	151800
26	124700	122100	119900	117100	115900	118700	125700	123700	125400	153200	155900	151700
27	124600	121700	119800	116900	115900	118600	126700	124600	125200	153000	155600	151600
28	124400	121800	119800	e117000	115800	118600	126600	126800	125000	152700	155300	151400
29	124300	121900	119500	e117000	---	118500	126600	128900	124800	152700	155300	151200
30	124100	121800	119300	117900	---	118500	127000	129200	124600	157300	155200	151100
31	124100	---	119200	118000	---	119500	---	129200	---	161500	155000	---
MEAN	125800	122900	120700	118100	117400	116100	121100	125500	127100	149000	158500	153000
MAX	127300	124000	121700	119100	118600	119500	127000	129200	129100	161500	161600	154900
MIN	124100	121700	119200	116900	115800	113400	119100	122700	124600	124400	155000	151100
(+)	1165.49	1165.21	1164.87	1164.72	1164.42	1164.91	1165.86	1166.13	1165.55	1169.74	1169.05	1168.63
(@)	-3400	-2300	-2600	-1200	-2200	+3700	+7500	+2200	-4600	+36900	-6500	-3900

CAL YR 2001 MAX 160700 MIN 119200 (@) -21200
WTR YR 2002 MAX 161600 MIN 113400 (@) +23600

e Estimated

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

08086400 Hubbard Creek Reservoir near Breckenridge, TX--Continued



PERIOD OF RECORD.--
CHEMICAL DATA: Sept. 1963 to current year.
BIOCHEMICAL DATA: Sept. 1963 to current year.

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

324932098575101 -- Hubbard Ck Res Site P01

Date	Time	RESER-VOIR STORAGE (AC-FT) (00054)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
APR													
03...	0916	120000	1.16	1.00	1630	8.0	14.0	9.1	91	340	240	85.7	31.7
03...	0921	--	--	10.0	1630	8.0	14.0	9.0	90	--	--	--	--
03...	0926	--	--	20.0	1630	8.0	14.0	9.1	91	--	--	--	--
03...	0931	--	--	30.0	1630	7.9	13.0	9.1	89	--	--	--	--
03...	0936	--	--	40.0	1630	7.8	12.5	8.3	80	--	--	--	--
03...	0940	--	--	52.0	1640	7.6	12.0	7.4	71	350	240	86.3	31.7
JUL													
24...	1035	154000	1.16	1.00	1260	8.6	30.0	7.9	109	280	190	71.0	24.1
24...	1040	--	--	10.0	1260	8.6	29.5	7.5	103	--	--	--	--
24...	1045	--	--	20.0	1350	8.2	28.0	6.0	80	--	--	--	--
24...	1050	--	--	30.0	1380	7.2	25.5	.2	3	--	--	--	--
24...	1055	--	--	40.0	1440	7.2	24.5	.3	4	--	--	--	--
24...	1100	--	--	52.0	1520	7.2	23.5	.4	5	330	190	85.3	28.9

324932098575101 -- Hubbard Ck Res Site P01

Date	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
APR													
03...	174	4	51	10.1	1	130	108	114	374	.4	5.6	861	<.008
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	174	4	51	10.0	<1	132	110	114	372	.4	6.0	860	<.008
JUL													
24...	129	3	49	8.69	1	109	92	87.7	276	.4	6.8	659	<.008
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	<.008
24...	--	--	--	--	--	--	--	--	--	--	--	--	<.008
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	158	4	50	9.26	1	166	137	86.5	338	.4	9.6	804	<.008

324932098575101 -- Hubbard Ck Res Site P01

Date	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
APR									
03...	<.05	<.04	--	.42	<.06	<.02	--	<10	E.9n
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	E.04	.12	.44	.55	<.06	<.02	--	<10	77.1
JUL									
24...	<.05	<.04	--	.38	<.06	<.02	--	<10	33.0
24...	--	--	--	--	--	--	--	--	--
24...	<.05	<.04	--	.36	<.06	<.02	--	E6	32.4
24...	<.05	E.04	--	.39	<.06	<.02	--	<10	96.6
24...	--	--	--	--	--	--	--	--	--
24...	<.05	.86	.50	1.4	.07	.05	.166	1140	2800

08086400 Hubbard Creek Reservoir near Breckenridge, TX--Continued

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

324649099000501 -- Hubbard Ck Res Site P09

Date	Time	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
APR													
03...	1006	.34	1.00	1500	7.9	14.0	8.9	89	320	220	80.2	28.7	160
03...	1010	--	10.0	1490	7.9	14.0	9.0	90	--	--	--	--	--
03...	1015	--	20.0	1480	7.9	14.0	9.2	92	--	--	--	--	--
03...	1021	--	29.0	1510	7.9	14.0	9.3	93	320	220	81.0	29.2	161
JUL													
24...	1122	.76	1.00	1240	8.3	28.0	7.5	100	280	180	71.7	23.3	124
24...	1128	--	10.0	1240	8.3	28.0	7.4	99	--	--	--	--	--
24...	1134	--	20.0	1260	7.5	27.0	3.4	45	--	--	--	--	--
24...	1138	--	33.0	1300	7.3	26.0	.5	6	280	180	74.3	24.2	130

324649099000501 -- Hubbard Ck Res Site P09

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
APR													
03...	4	51	9.55	1	123	103	107	338	.4	5.3	792	<.008	E.04
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	4	51	9.69	1	124	103	109	346	.4	5.4	803	<.008	E.03
JUL													
24...	3	48	8.93	1	119	100	83.8	269	.4	6.9	647	<.008	<.05
24...	--	--	--	--	--	--	--	--	--	--	--	<.008	<.05
24...	--	--	--	--	--	--	--	--	--	--	--	<.008	<.05
24...	3	49	8.96	1	130	107	85.7	281	.4	7.4	678	.008	E.03

324649099000501 -- Hubbard Ck Res Site P09

Date	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
APR							
03...	<.04	--	.43	<.06	<.02	<10	E1.2n
03...	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--
03...	<.04	--	.40	<.06	<.02	<10	E2.1b
JUL							
24...	<.04	--	.35	<.06	<.02	<10	3.3
24...	<.04	--	.36	<.06	<.02	<10	5.6
24...	<.04	--	.37	<.06	<.02	<10	96.6
24...	.07	.39	.47	<.06	<.02	<10	986

324606099000201 -- Hubbard Ck Res Site P10

Date	Time	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
APR							
03...	1037	1.00	1460	8.0	13.5	9.0	89
03...	1040	10.0	1450	8.0	13.5	9.1	90
03...	1043	19.0	1470	8.0	13.5	9.7	96
JUL							
24...	1148	1.00	1220	8.2	28.0	7.1	95
24...	1152	10.0	1230	7.9	27.0	5.5	72
24...	1156	23.0	1250	7.4	26.5	2.1	27

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

324949098594301 -- Hubbard Ck Res Site P13

Date	Time	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
APR							
03...	1132	1.00	1620	8.0	14.0	9.1	91
03...	1135	10.0	1620	8.0	14.0	9.1	91
03...	1138	20.0	1610	8.0	14.0	9.1	91
03...	1141	27.0	1600	8.0	14.0	9.2	92
JUL							
24...	1217	1.00	1250	8.6	30.0	7.9	109
24...	1222	10.0	1250	8.6	29.0	7.7	104
24...	1229	20.0	1270	7.9	28.0	4.3	57
24...	1235	30.0	1400	7.3	25.0	.2	3
24...	1239	45.0	1440	7.3	24.5	.3	4

324802099021601 -- Hubbard Ck Res Site P15

Date	Time	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
APR							
03...	1159	1.00	1330	8.0	13.5	9.0	89
03...	1201	10.0	1310	7.9	13.0	9.2	90
03...	1203	15.0	1310	7.9	13.0	9.3	91
JUL							
24...	1253	1.00	1240	8.5	29.0	7.7	104
24...	1256	10.0	1250	8.2	28.0	5.6	75
24...	1259	20.0	1260	7.6	27.5	3.1	41

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

Value qualifier codes used in this report:
b -- Value was extrapolated below
n -- Below the NDV

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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^2.

PERIOD OF RECORD.--Mar. 1999 to current year.

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

REMARKS.--No estimated daily contents. Records good. The lake is formed by a rolled earthfill dam 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. Conservation pool storage is 9,515 acre-ft. 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.--The capacity table provided by the city of Breckenridge is based on Natural Resources Conservation Service 1970 survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,400 acre-ft, Apr. 1, 1999, elevation, 1,271.94 ft; minimum contents, 200 acre-ft, Feb. 15, 2001, elevation, 1,259.97 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 997 acre-ft, Mar. 23, elevation, 1,263.84 ft; minimum contents, 258 acre-ft, Sept. 30, elevation, 1,260.31 ft.

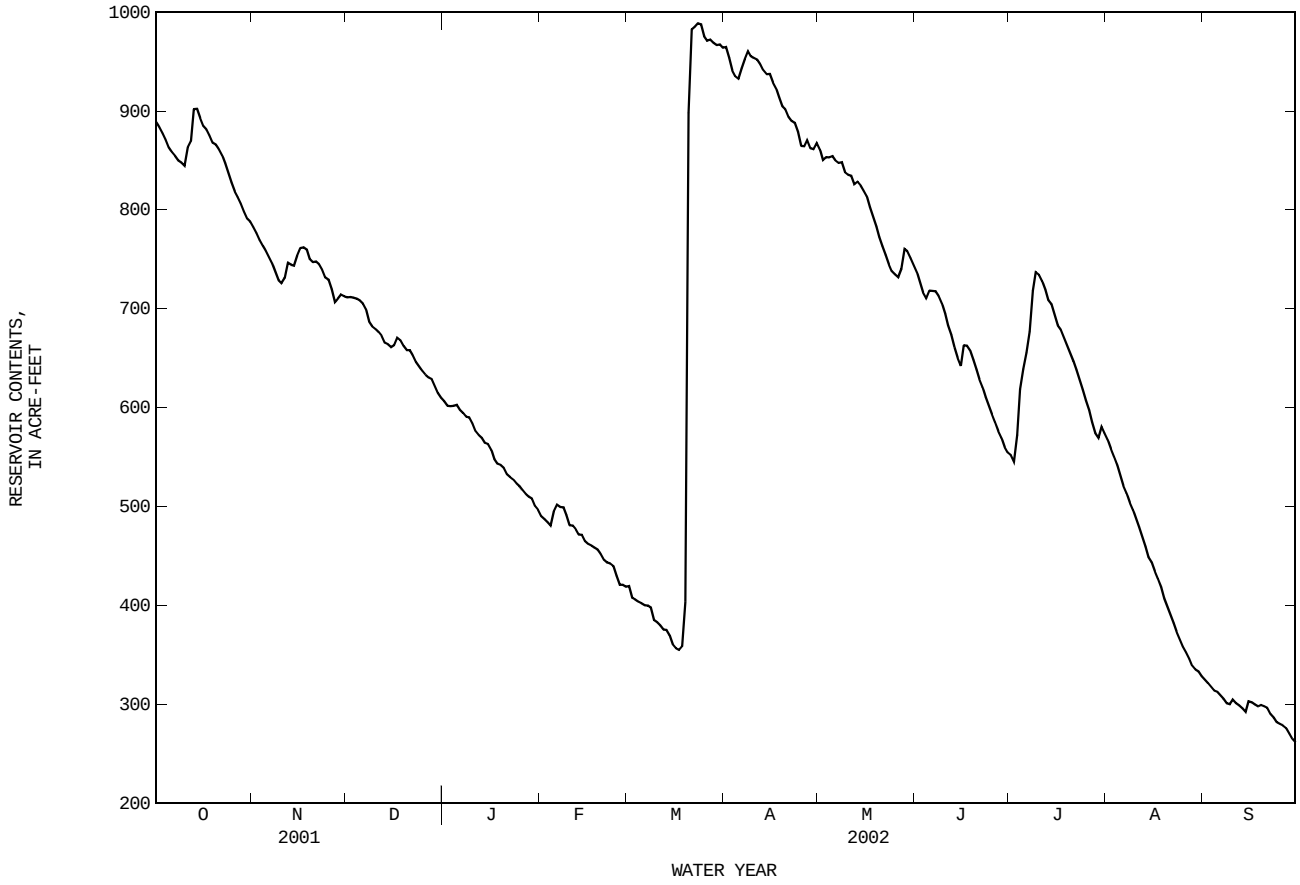
RESERVOIR STORAGE FROM DCP, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	889	783	712	606	490	419	965	861	737	552	568	325
2	883	776	712	602	487	407	954	850	727	545	558	321
3	877	769	711	601	484	406	941	853	716	572	550	317
4	871	763	710	602	481	403	935	853	710	618	542	314
5	863	759	708	603	495	402	932	854	718	639	531	312
6	858	752	705	598	502	400	943	850	718	656	521	309
7	854	746	699	594	499	400	952	847	718	677	513	305
8	850	737	687	591	499	398	960	848	713	718	504	301
9	848	729	682	590	491	385	955	838	705	737	497	300
10	845	726	679	584	481	383	953	835	695	735	488	304
11	863	731	676	576	480	379	952	835	683	728	479	301
12	869	746	673	572	477	375	947	826	674	719	469	299
13	902	744	666	569	472	375	941	828	661	709	459	296
14	902	743	664	564	471	369	937	825	650	705	449	292
15	893	753	661	563	465	360	937	820	642	694	444	303
16	885	761	663	557	462	356	929	814	663	683	435	302
17	881	762	671	548	460	355	923	802	663	678	427	300
18	875	760	668	543	458	359	914	793	658	671	418	298
19	868	750	662	542	456	403	905	783	648	663	407	299
20	866	747	658	539	452	898	902	772	638	655	399	298
21	861	748	658	533	446	983	894	763	628	647	391	296
22	855	745	653	530	443	985	890	754	620	638	382	290
23	847	740	646	527	442	989	888	745	610	628	373	286
24	837	731	641	523	440	988	879	738	601	618	366	282
25	827	729	637	520	430	975	865	735	593	607	358	280
26	819	720	633	516	421	971	864	732	585	597	353	278
27	813	707	630	513	421	972	870	740	576	585	346	276
28	806	710	629	510	419	969	862	760	569	574	339	270
29	798	714	621	508	---	967	861	758	560	569	335	265
30	791	713	614	500	---	967	867	751	555	581	333	261
31	788	---	610	496	---	964	---	744	---	574	328	---
MEAN	854	743	666	555	465	612	917	800	654	644	437	296
MAX	902	783	712	606	502	989	965	861	737	737	568	325
MIN	788	707	610	496	419	355	861	732	555	545	328	261
(+)	1263.03	1262.71	1262.25	1261.72	1261.31	1263.72	1263.36	1262.84	1261.99	1262.09	1260.74	1260.33
(@)	-108	-75	-103	-114	-77	+545	-97	-123	-189	+19	-246	-67

CAL YR 2001 MAX 2450 MIN 207 (@) +343
WTR YR 2002 MAX 989 MIN 261 (@) -635

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

08086600 Lake Daniel near Breckenridge, TX--Continued



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^2, of which 9,566 mi^2 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.--Records fair except those for estimated daily discharges, which are poor. Since water year 1962, at least 10% of contributing drainage area has been regulated. Flow is also affected at times by discharge from the flood-detention pools of 12 floodwater-retarding structures. These structures control runoff from 108 mi^2 in the Duck Creek basin. There are many small diversions upstream from station for municipal supply and oil field operations. No flow at times.

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.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--23 years (water years 1939-61), 993 ft^3/s (719,100 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1939-61).--Maximum discharge, 87,400 ft^3/s May 4, 1941 (gage height, 27.35 ft); no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	0.77	82	29	14	14	2610	979	429	89	1870	24
2	108	0.28	122	26	15	11	2100	686	279	86	1190	47
3	77	0.04	100	25	15	11	1690	515	200	125	779	48
4	55	0.00	101	25	17	11	943	388	194	108	602	50
5	34	0.00	95	28	31	10	633	1980	287	821	440	42
6	27	0.00	85	26	33	9.3	418	1280	2580	1320	340	45
7	19	0.00	84	25	39	9.2	330	534	3740	1390	277	44
8	11	0.00	73	24	45	8.9	1090	700	1640	2900	234	37
9	7.6	0.00	67	24	41	5.9	1890	640	1020	4890	204	30
10	6.5	0.00	60	21	34	6.3	672	574	834	5110	187	23
11	e486	0.00	55	20	31	5.9	477	473	651	3170	162	19
12	e477	0.00	53	18	27	2.8	312	378	496	1810	139	16
13	e232	0.00	49	17	26	2.7	247	280	375	1380	136	14
14	e341	0.00	47	16	29	1.8	235	268	305	e1070	213	13
15	e425	5.8	44	16	29	2.7	239	252	245	e825	139	13
16	e471	16	51	14	29	2.8	171	209	235	637	109	13
17	e426	599	61	12	29	2.3	137	171	246	530	97	18
18	e369	520	60	13	28	4.2	108	140	303	449	149	81
19	e281	410	63	12	31	22	95	122	455	386	184	135
20	e326	287	63	12	27	607	86	106	434	342	156	105
21	e579	539	51	13	24	304	77	96	428	302	112	76
22	e184	740	41	14	24	101	74	86	328	270	84	56
23	e75	508	50	13	22	66	68	77	261	243	70	164
24	e25	357	61	12	20	66	56	70	215	223	59	147
25	e5.0	264	62	11	17	42	54	66	172	205	49	102
26	e0.50	202	55	11	14	30	1460	166	140	181	41	147
27	e0.00	160	51	10	14	41	1470	446	117	159	34	184
28	e0.00	149	46	9.5	14	47	2300	1270	100	141	28	133
29	e0.00	131	39	10	---	42	1610	968	88	181	31	76
30	1.7	106	35	10	---	49	1260	694	84	477	27	43
31	1.3	---	32	16	---	125	---	675	---	2120	21	---
TOTAL	5192.60	4994.89	1938	532.5	719	1663.8	22912	15289	16881	31940	8163	1945
MEAN	167.5	166.5	62.52	17.18	25.68	53.67	763.7	493.2	562.7	1030	263.3	64.83
MAX	579	740	122	29	45	607	2610	1980	3740	5110	1870	184
MIN	0.00	0.00	32	9.5	14	1.8	54	66	84	86	21	13
AC-FT	10300	9910	3840	1060	1430	3300	45450	30330	33480	63350	16190	3860

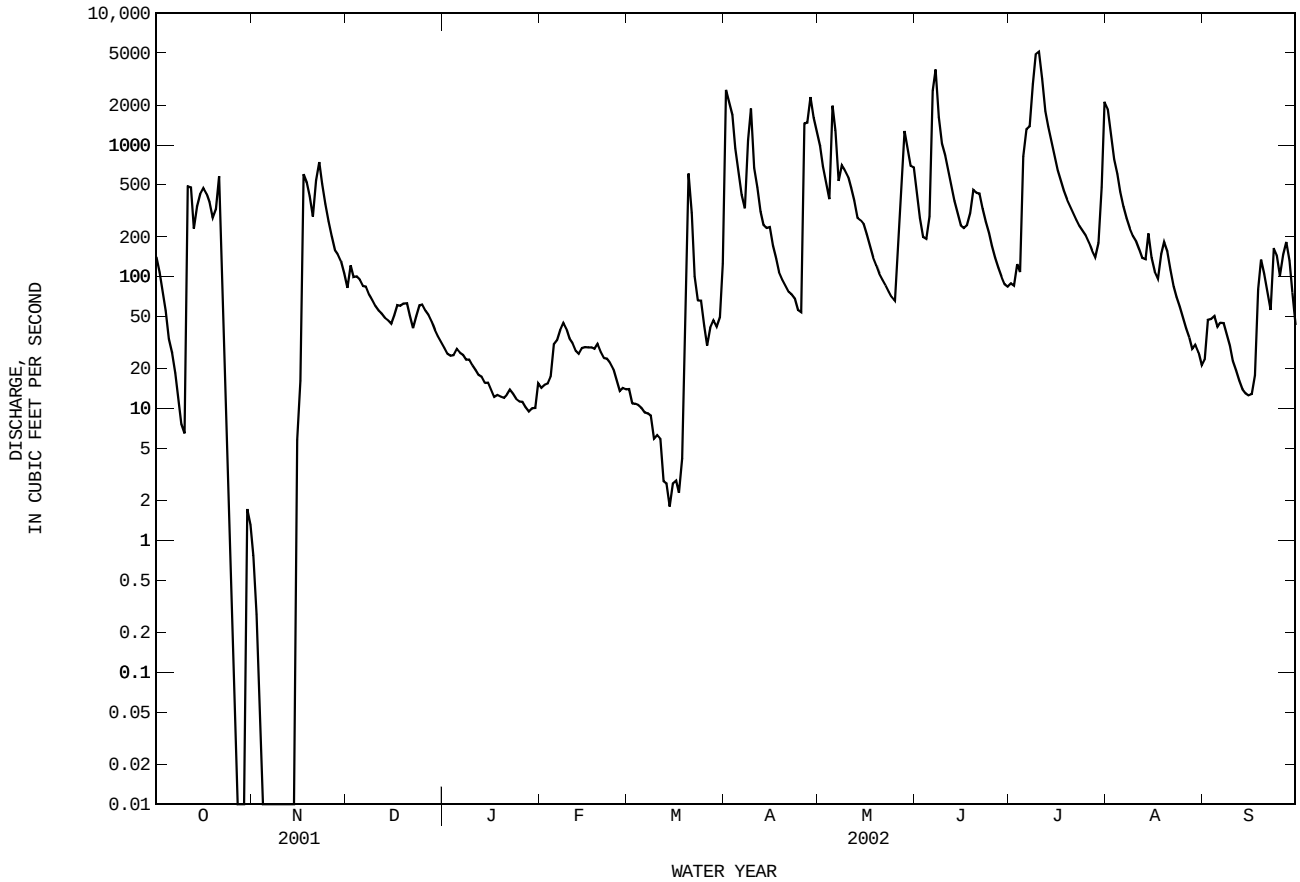
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002z, BY WATER YEAR (WY)

MEAN	843.4	358.3	331.1	229.6	511.9	502.4	561.2	1298	1567	390.9	660.6	946.0
MAX	7600	2143	6024	1743	8987	4143	5435	6872	8652	2236	9363	6231
(WY)	1982	1975	1992	1968	1992	1992	1990	1982	1982	1967	1978	1962
MIN	3.82	7.45	6.05	5.92	3.33	7.17	0.82	20.0	5.61	2.88	0.096	0.000
(WY)	1999	2000	1971	2000	2000	1971	1971	1996	1984	1978	1998	1998

08088000 Brazos River near South Bend, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002z	
ANNUAL TOTAL	135425.99		112170.79			
ANNUAL MEAN	371.0		307.3		682.7	
HIGHEST ANNUAL MEAN					2966	1992
LOWEST ANNUAL MEAN					174	2000
HIGHEST DAILY MEAN	9870	Feb 17	5110	Jul 10	74700	Aug 6 1978
LOWEST DAILY MEAN	0.00	Oct 27	0.00	Oct 27	0.00	Aug 3 1964
ANNUAL SEVEN-DAY MINIMUM	0.00	Nov 4	0.00	Nov 4	0.00	Aug 3 1964
MAXIMUM PEAK FLOW			5560	Jun 6	78100	Aug 6 1978
MAXIMUM PEAK STAGE			14.37	Jun 6	41.50	Aug 6 1978
ANNUAL RUNOFF (AC-FT)	268600		222500		494600	
10 PERCENT EXCEEDS	635		756		1210	
50 PERCENT EXCEEDS	117		82		127	
90 PERCENT EXCEEDS	6.0		9.3		13	

e Estimated
z Period of regulated streamflow.



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^2.

PERIOD OF RECORD.--Oct. 1963 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 fair. 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^3/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. Conservation pool storage is 45,260 acre-ft. Data regarding the dam are given in the following table:

	Gage height (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, 23,130 acre-ft Oct. 18, 2000, gage height, 1,064.25 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 35,570 acre-ft, Oct. 13, gage height, 1,070.82 ft; minimum contents, 30,240 acre-ft, Sept. 30, gage height, 1,068.22 ft.

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

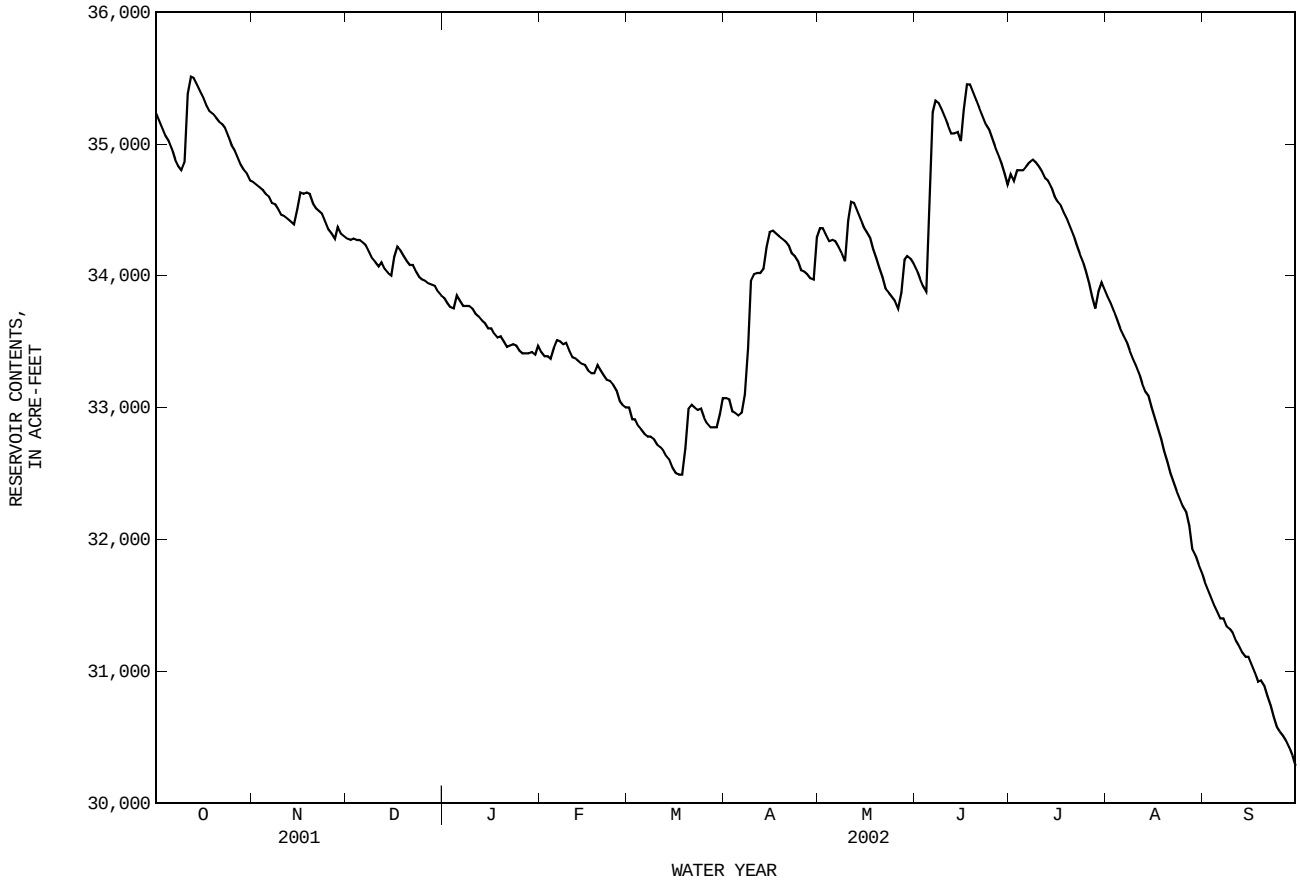
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35230	34710	34280	33830	33420	33000	33070	34360	34040	34770	33840	31680
2	35170	34690	34270	33790	33390	32910	33060	34360	33980	34720	33790	31620
3	35110	34670	34280	33760	33390	32910	32970	34310	33920	34800	33730	31560
4	35060	34650	34270	33750	33370	32860	32960	34260	33880	34800	33660	31500
5	35020	34620	34270	33850	33450	32830	32940	34270	34490	34800	33600	31450
6	34960	34600	34250	33810	33510	32800	32960	34260	35240	34830	33550	31400
7	34880	34550	34230	33770	33500	32780	33100	34220	35330	34860	33500	31400
8	34830	34540	34180	33770	33480	32780	33450	34170	35310	34880	33430	31340
9	34800	34500	34130	33770	33490	32760	33960	34110	35260	34860	33370	31320
10	34860	34460	34100	33750	33430	32720	34010	34420	35200	34830	33320	31290
11	35380	34450	34070	33710	33380	32700	34020	34560	35140	34790	33260	31230
12	35510	34430	34100	33690	33370	32670	34020	34550	35080	34740	33180	31190
13	35500	34410	34050	33660	33350	32630	34050	34490	35080	34720	33120	31140
14	35450	34390	34020	33640	33330	32600	34220	34430	35090	34670	33090	31110
15	35400	34500	34000	33600	33320	32540	34330	34370	35020	34600	33000	31110
16	35350	34630	34140	33600	33280	32500	34340	34330	35260	34560	32920	31050
17	35290	34620	34220	33560	33260	32490	34320	34290	35450	34530	32840	30990
18	35250	34630	34190	33530	33260	32490	34300	34200	35450	34480	32760	30920
19	35230	34620	34150	33540	33320	32690	34280	34130	35390	34430	32670	30930
20	35200	34550	34110	33500	33280	32990	34260	34060	35330	34370	32590	30890
21	35170	34510	34080	33460	33240	33020	34230	33990	35270	34310	32500	30810
22	35150	34490	34080	33470	33210	33000	34170	33900	35210	34240	32430	30740
23	35120	34470	34030	33480	33200	32980	34150	33870	35150	34170	32370	30650
24	35060	34410	33990	33470	33170	32990	34110	33840	35110	34110	32310	30580
25	34990	34350	33970	33430	33130	32920	34040	33810	35050	34030	32250	30540
26	34950	34320	33960	33410	33050	32880	34030	33750	34980	33940	32210	30510
27	34900	34280	33940	33410	33020	32850	34010	33870	34920	33840	e32100	30470
28	34840	e34370	33930	33410	33000	32850	33980	34120	34850	33750	31930	30420
29	34800	34320	33920	33420	---	32850	33970	34150	34770	33880	31880	30360
30	34770	34300	33880	33400	---	32950	34290	34130	34690	33950	31810	30280
31	34720	---	33850	33470	---	33070	---	34090	---	33900	31750	---
MEAN	35100	34500	34090	33600	33310	32810	33850	34180	34960	34460	32860	31020
MAX	35510	34710	34280	33850	33510	33070	34340	34560	35450	34880	33840	31680
MIN	34720	34280	33850	33400	33000	32490	32940	33750	33880	33750	31750	30280
(+)	1070.42	1070.23	1070.02	1069.83	1069.60	1069.63	1070.22	1070.13	1070.41	1070.04	1068.99	1068.24
(@)	-560	-420	-450	-380	-470	+70	+1220	-208	+600	-790	-2150	-1470

CAL YR 2001 MAX 48360 MIN 29540 (@) +3650
WTR YR 2002 MAX 35510 MIN 30280 (@) -5000

e Estimated

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

08088400 Lake Graham near Graham, TX--Continued



08088500 Possum Kingdom Lake near Graford, TX

LOCATION.--Lat 32°52′20", long 98°25′32", Palo Pinto County, Hydrologic Unit 12060201, at Morris Sheppard Dam on the Brazos River, 2.6 mi upstream from Loving Creek, 11.3 mi southwest of Graford, and at mile 687.5.

DRAINAGE AREA.--23,596 mi^2, approximately, of which 9,566 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Mar. 1941 to current year. Prior to Oct. 1977, published as "Possum Kingdom Reservoir".
Water-quality records.--Chemical data: Mar. 1962 to Sept. 1977. Biochemical data: Feb. 1978 to Sept. 1997.

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. The lake is formed by reinforced concrete dam, Ambursen-type, massive buttress with flat-slab deck, a controlled spillway, two bulkhead sections, and an earthen-dike section. Total length of dam is 2,740 ft long. The dam, owned by the Brazos River Authority, was completed and storage begun Mar. 21, 1941. The spillway has nine roof-weir gates (modified bear-trap type) that are 73.66 x 13 ft each and are designed to discharge about 100,000 ft^3/s at a gage height of 1,000.0 ft. The outlet works consist of one controlled 54-in diameter conduit. Water is used for power development, irrigation, municipal, industrial, and recreational purposes. Two generators located in the powerhouse at dam can produce 22,500 kilowatts at a 1,000 ft gage height. Eleven major reservoirs, with a combined capacity of 607,800 acre-ft, largely regulate the inflow. Flow is affected at times by discharge from the flood-detention pools of 12 floodwater-retarding structures with a combined detention capacity of 24,710 acre-ft. These structures control runoff from 108 mi^2. Conservation pool storage is 556,220 acre-ft. Data regarding the dam are given in the following table:

	Gage height (feet)
Top of dam	1,024.0
Design flood (top of gates)	1,000.0
Crest of spillway	987.0
Invert of penstock	911.5
Lowest gated outlet (invert of 54-inch conduit)	874.8

COOPERATION.--Capacity table 3-C was provided by the Brazos River Authority. Capacity table 4-C, provided by the Texas Water Development Board, was put into use Oct. 1, 1996. All contents values above 556,200 acre-ft are estimated.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 743,700 acre-ft, Oct. 5, 1941, gage height, 1,001.00 ft; maximum gage height, 1,003.60 ft Oct. 13, 1981; minimum contents observed, 273,000 acre-ft, Feb. 19 to Mar. 17, 1953, gage height, 967.00 ft, using capacity table 3-C.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 544,000 acre-ft, July 11, elevation, 999.29 ft; minimum contents, 444,800 acre-ft, Mar. 18, elevation, 993.11 ft.

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

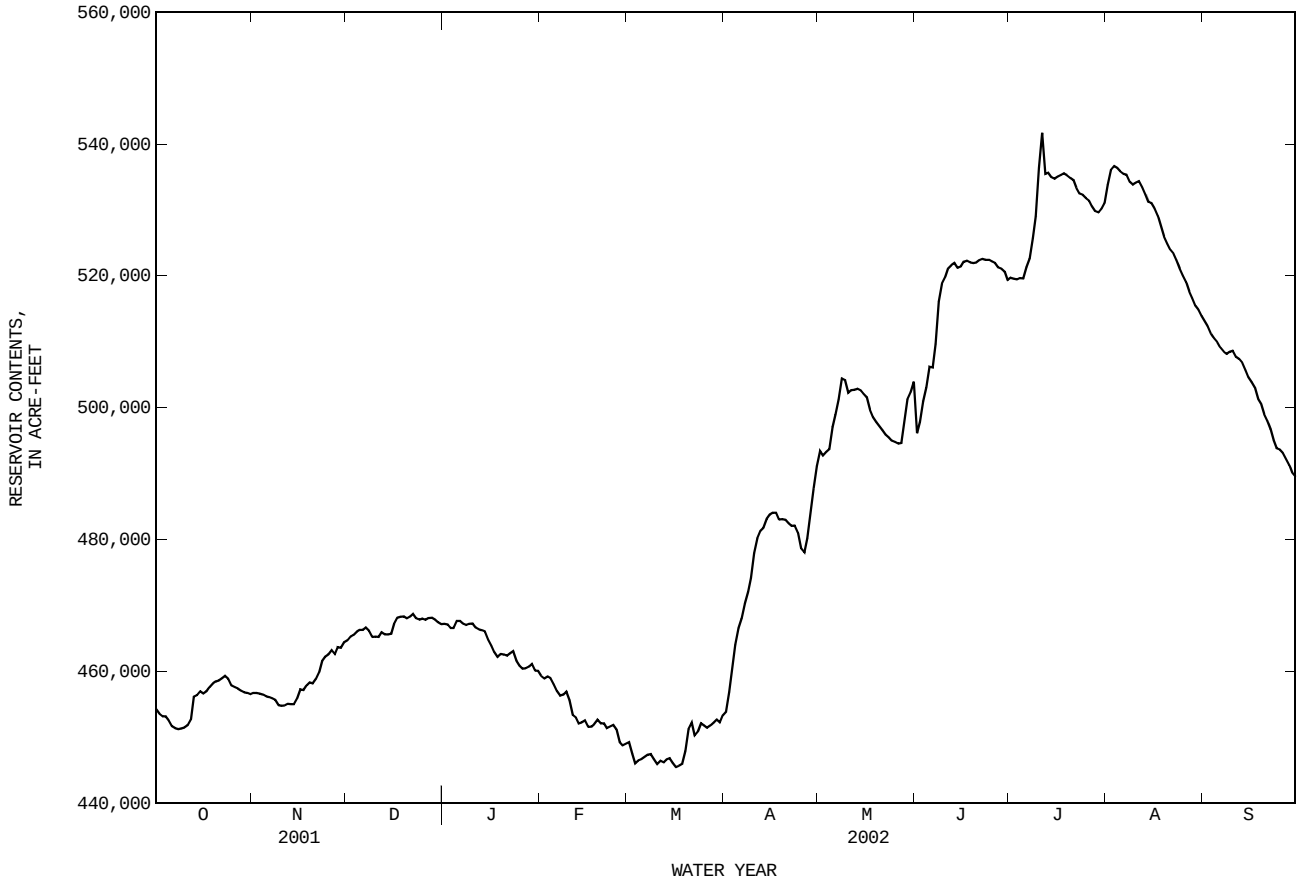
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	454200	456700	464600	467200	459300	449200	453800	493400	e496100	519700	533800	513100
2	453500	456700	465200	467100	458900	447500	456800	492700	e497800	519500	536000	512300
3	453200	456600	465500	466500	459200	446000	460700	493200	e500900	519400	536600	511200
4	453100	456400	466000	466600	458900	446400	464000	493700	e503000	519600	536300	510400
5	452500	456200	466300	467600	458000	446600	466500	497000	e506200	519600	535800	509900
6	451600	456000	466300	467600	457000	447000	468000	e498900	506100	521300	535500	509100
7	451300	455800	466600	467200	456300	447300	470300	e501200	509600	522600	535300	508500
8	451200	455600	466100	467000	456500	447400	472000	e504400	516100	525700	534200	508100
9	451300	454800	465200	467200	456900	446600	474100	504200	518800	529000	533800	508500
10	451400	454700	465200	467200	455600	445900	477900	502300	519800	536400	534100	508600
11	451800	454800	465200	466600	453400	446400	480200	502600	521100	541700	534300	507700
12	452600	455000	465900	466400	453000	446200	481300	502700	521600	535400	533400	507400
13	456100	455000	465600	466200	452100	446600	481800	502800	521900	535600	532300	506800
14	456400	455000	465600	466000	452200	446800	483000	502600	e521200	534900	531200	505600
15	456900	455900	465700	464800	452500	446000	483700	502100	e521400	534700	531000	504600
16	456600	457200	467200	463900	451500	445400	484000	501600	522100	535000	530200	503800
17	456900	457100	468100	462900	451600	445600	484000	499700	522200	535300	529000	503000
18	457600	457900	468200	462200	452000	445900	483000	498500	522000	535500	527400	501300
19	458100	458300	468300	e462600	452600	447900	483100	497800	521900	535200	526000	500600
20	458400	458200	468000	e462500	452100	451200	483000	497200	522000	534800	524900	499000
21	458600	458800	468200	e462300	452100	452200	482400	496600	522300	534500	523900	498000
22	458900	459900	468700	462700	451300	450200	482100	495900	522500	533300	523300	496700
23	459300	461500	468000	463000	451600	450800	482100	495400	522400	532500	522400	495000
24	458800	462200	467800	461600	451800	452100	481000	494900	522400	532300	521100	493800
25	457800	462500	467900	460800	451200	451700	478600	494800	522100	531800	520000	493600
26	457600	463100	467700	460400	449200	451400	478000	494500	521900	531400	519000	493100
27	457400	462600	468000	460400	448700	451800	480100	494600	521200	530500	517600	492200
28	457000	463600	468100	460700	449000	452200	483700	498000	521100	529800	516600	491200
29	456800	463500	467800	461100	---	452600	487800	501200	520600	529600	515400	490000
30	456700	464300	467400	460100	---	452200	491100	502300	519300	530200	514800	489500
31	456500	---	467100	460000	---	453300	---	503900	---	531000	513800	---
MEAN	455500	458200	466800	464100	453700	448700	477300	498700	516900	530300	527700	502400
MAX	459300	464300	468700	467600	459300	453300	491100	504400	522500	541700	536600	513100
MIN	451200	454700	464600	460000	448700	445400	453800	492700	496100	519400	513800	489500
(+)	993.89	994.41	994.59	994.13	993.39	993.68	996.12	996.91	997.84	998.53	997.51	996.02
(@)	+2000	+7800	+2800	-7100	-11000	+4300	+37800	+12800	+15400	+11700	-17200	-24300

CAL YR 2001 MAX 544200 MIN 451200 (@) -11900
WTR YR 2002 MAX 541700 MIN 445400 (@) +35000

e Estimated

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

08088500 Possum Kingdom Lake near Graford, TX--Continued



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, 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^2, approximately, of which 9,566 mi^2 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) at site 1.25 mi upstream.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 800.00 ft above NGVD of 1929. 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 FROM DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

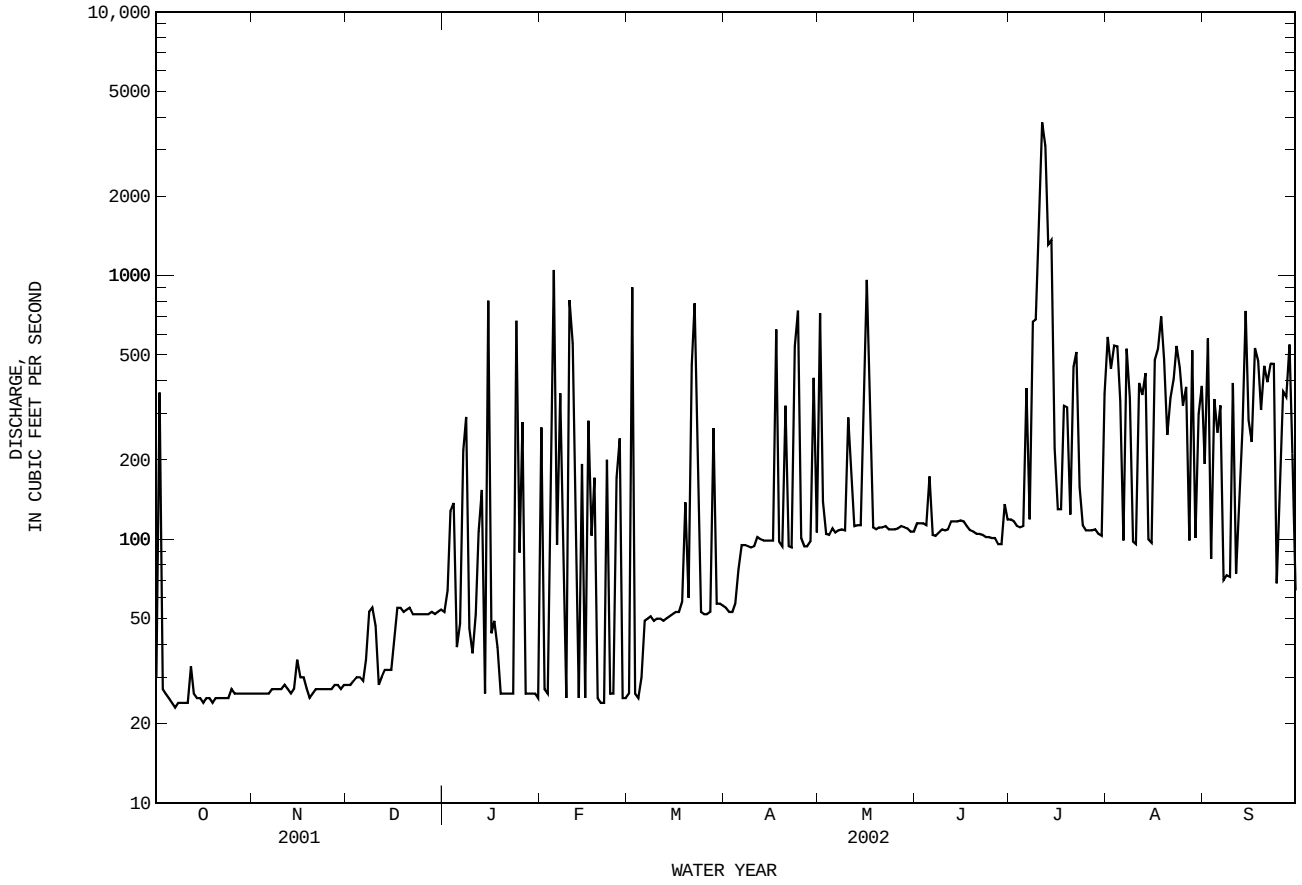
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	26	28	53	265	26	55	720	115	119	585	193
2	360	26	28	64	27	902	53	139	115	117	444	577
3	27	26	29	128	26	26	53	105	115	112	542	84
4	26	26	30	137	214	25	57	104	113	111	539	340
5	25	26	30	39	1050	30	77	110	173	112	336	254
6	24	26	29	48	95	49	95	106	104	374	99	322
7	23	27	35	217	358	50	95	108	103	119	528	70
8	24	27	53	291	105	51	94	109	106	668	344	73
9	24	27	55	46	25	49	93	108	109	681	98	72
10	24	27	47	37	807	50	94	289	108	1500	96	391
11	24	28	28	52	553	50	102	185	109	3810	391	74
12	33	27	30	107	66	49	100	112	117	3110	353	156
13	26	26	32	154	25	50	99	113	117	1310	427	262
14	25	27	32	26	193	51	99	113	117	1360	100	734
15	25	35	32	802	25	52	99	249	118	221	97	284
16	24	30	42	44	281	53	99	964	117	130	478	234
17	25	30	55	49	103	53	624	374	112	130	528	531
18	25	27	55	39	171	58	98	111	108	321	700	475
19	24	25	53	26	25	138	94	109	107	316	481	309
20	25	26	54	26	24	60	321	111	105	124	249	455
21	25	27	55	26	24	458	94	111	105	451	344	395
22	25	27	52	26	200	786	93	112	104	513	406	464
23	25	27	52	26	26	147	539	109	102	158	541	463
24	25	27	52	673	26	53	736	109	102	113	449	68
25	27	27	52	89	171	52	101	109	101	108	322	183
26	26	27	52	278	241	52	94	110	101	108	378	364
27	26	28	52	26	25	53	94	112	96	108	99	347
28	26	28	53	26	25	264	98	111	96	109	520	547
29	26	27	52	26	---	57	409	110	136	105	101	211
30	26	28	53	26	---	57	106	107	119	103	299	64
31	26	---	54	25	---	56	---	107	---	356	382	---
TOTAL	1126	818	1356	3632	5176	3907	4865	5546	3350	16977	11256	8996
MEAN	36.32	27.27	43.74	117.2	184.9	126.0	162.2	178.9	111.7	547.6	363.1	299.9
MAX	360	35	55	802	1050	902	736	964	173	3810	700	734
MIN	23	25	28	25	24	25	53	104	96	103	96	64
AC-FT	2230	1620	2690	7200	10270	7750	9650	11000	6640	33670	22330	17840

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2002, BY WATER YEAR (WY)

MEAN	328.8	224.7	771.9	321.8	1062	956.0	974.0	1317	1853	464.6	522.7	565.7
MAX	1819	656	7172	2197	8659	4948	7952	8503	8024	1201	1228	1751
(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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1990 - 2002	
ANNUAL TOTAL	115094		67005			
ANNUAL MEAN	315.3		183.6		776.7	
HIGHEST ANNUAL MEAN					3170	1992
LOWEST ANNUAL MEAN					103	2000
HIGHEST DAILY MEAN	6740	Mar 26	3810	Jul 11	43800	May 5 1990
LOWEST DAILY MEAN	23	Oct 7	23	Oct 7	4.1	Oct 31 1998
ANNUAL SEVEN-DAY MINIMUM	24	Oct 5	24	Oct 5	6.6	Oct 29 1998
MAXIMUM PEAK FLOW			7670	Jul 11	48000	Apr 26 1990
MAXIMUM PEAK STAGE			77.22	Jul 11	89.79	Apr 26 1990
ANNUAL RUNOFF (AC-FT)	228300		132900		562700	
10 PERCENT EXCEEDS	493		463		1240	
50 PERCENT EXCEEDS	88		99		138	
90 PERCENT EXCEEDS	27		26		31	

08088610 Brazos River near Graford, TX--Continued



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^2, of which 9,566 mi^2 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 fair, except for estimated daily mean discharges, which are poor. 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^3/s (724,700 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1925-40).--Maximum discharge, 95,600 ft^3/s Jun. 16, 1930, at site then in use (gage height, 30 ft, present site and datum); no flow at times.

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 Jun. 16, 1930, which reached a stage of about 30 ft and was the highest since at least 1876.

DISCHARGE FROM DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	34	31	42	137	36	111	147	99	127	386	376
2	129	34	32	41	187	703	82	955	106	110	704	163
3	228	34	33	54	36	446	68	180	104	115	555	620
4	39	33	33	183	31	55	58	125	104	116	624	55
5	34	33	33	135	584	40	59	317	130	135	628	313
6	33	33	33	42	1070	40	101	191	218	130	376	244
7	32	32	33	105	480	40	181	138	106	464	65	330
8	31	33	34	372	230	40	307	143	97	152	576	53
9	31	32	34	253	133	40	228	137	96	857	378	26
10	31	33	36	61	181	40	176	235	99	1690	65	20
11	31	34	38	40	1190	41	158	326	100	3090	39	371
12	31	34	40	87	561	47	158	259	99	8010	380	54
13	32	34	40	113	94	52	224	169	112	1140	368	103
14	31	34	41	144	80	49	223	132	143	1800	464	306
15	31	37	41	530	181	53	166	175	102	1060	65	961
16	31	49	48	580	162	56	149	418	130	129	36	233
17	31	33	76	82	229	58	138	1410	107	71	484	238
18	32	33	62	40	125	74	820	324	95	61	638	885
19	32	33	49	50	206	3050	172	136	84	303	774	332
20	32	31	48	34	41	2350	132	117	80	320	527	352
21	31	32	47	34	34	540	460	112	81	74	226	546
22	31	34	47	34	77	1600	144	112	81	587	332	474
23	32	34	47	34	169	414	123	110	81	509	460	576
24	32	34	47	507	38	198	809	111	83	131	565	571
25	32	33	47	387	35	127	933	115	84	62	466	79
26	32	34	46	351	368	98	172	115	85	44	316	197
27	32	33	43	169	152	82	122	120	85	41	359	426
28	32	33	43	37	e91	206	118	138	82	40	48	480
29	32	33	43	33	---	251	113	130	77	40	495	668
30	32	33	43	33	---	102	537	120	125	49	53	272
31	33	---	43	33	---	231	---	107	---	76	248	---
TOTAL	1287	1016	1311	4640	6902	11159	7242	7324	3075	21533	11700	10324
MEAN	41.52	33.87	42.29	149.7	246.5	360.0	241.4	236.3	102.5	694.6	377.4	344.1
MAX	228	49	76	580	1190	3050	933	1410	218	8010	774	961
MIN	31	31	31	33	31	36	58	107	77	40	36	20
AC-FT	2550	2020	2600	9200	13690	22130	14360	14530	6100	42710	23210	20480

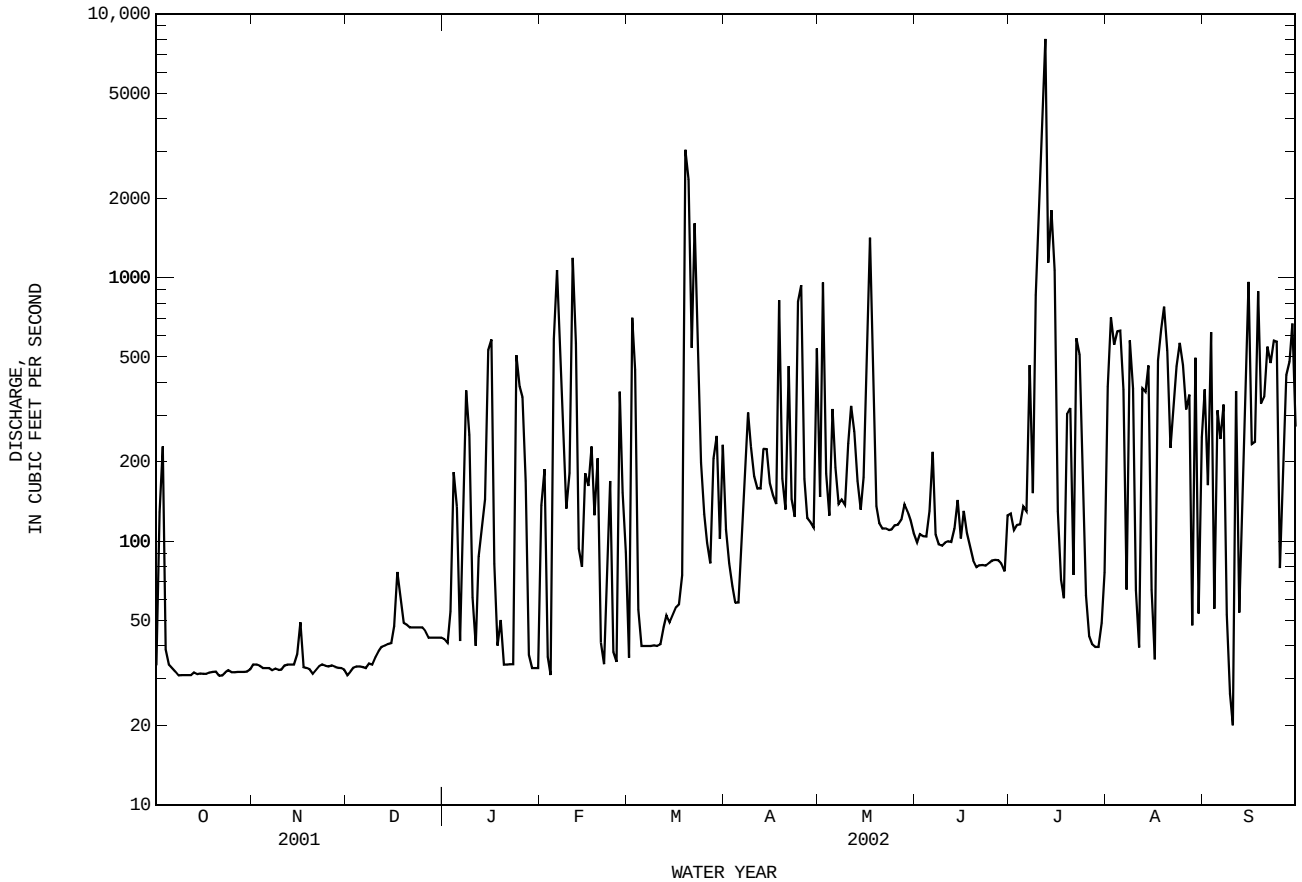
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002z, BY WATER YEAR (WY)

MEAN	1277	494.1	457.4	410.0	569.1	555.2	844.4	1961	1729	852.7	723.6	974.5
MAX	13140	3020	7800	2254	9064	5280	8881	30210	10540	3971	7486	7650
(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 2001 CALENDAR YEAR			FOR 2002 WATER YEAR			WATER YEARS 1941 - 2002z		
ANNUAL TOTAL	190862			87513					
ANNUAL MEAN	522.9			239.8			905.3		
HIGHEST ANNUAL MEAN							4145		1957
LOWEST ANNUAL MEAN							98.5		1988
HIGHEST DAILY MEAN	12100	Mar	9	8010	Jul	12	81700	Apr 29	1957
LOWEST DAILY MEAN	31	Oct	8	20	Sep	10	3.4	Apr 15	1949
ANNUAL SEVEN-DAY MINIMUM	31	Oct	8	31	Oct	8	5.6	Nov 2	1940
MAXIMUM PEAK FLOW				12100	Jul	12	85400	Apr 29	1957
MAXIMUM PEAK STAGE				11.28	Jul	12	28.87	Apr 29	1957
ANNUAL RUNOFF (AC-FT)	378600			173600			655900		
10 PERCENT EXCEEDS	807			550			1630		
50 PERCENT EXCEEDS	87			102			201		
90 PERCENT EXCEEDS	33			33			31		

e Estimated
z Period of regulated streamflow.



08090300 Lake Palo Pinto near Santo, TX

LOCATION.--Lat 32°38′51", long 98°16′08",Palo Pinto County, Hydrologic Unit 12060201, at northwest corner of intake structure on Palo Pinto Creek and 4.4 mi northwest of Santo.

DRAINAGE AREA.--461 mi^2.

PERIOD OF RECORD.--Apr. 1964 to Sept. 1982, Feb. 1999 to current year.

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

REMARKS.--No estimated daily contents. Records fair. The lake is formed by a rock-faced earthfill dam 1,300 ft long with a 550 ft uncontrolled ogee-crested emergency spillway at right end of dam. The dam was completed and storage began in Apr. 1964. During the summer of 1965, the dam was raised 2 ft and the spillway crest was raised 4 ft and lengthened from 500 to 550 ft. The lake is the property of Palo Pinto County Municipal Water District No. 1 and was built to impound water for municipal use, principally for the city of Mineral Wells. Water is released to the downstream channel through a 30 inch gated concrete pipe. It then flows 15 mi downstream to a diversion lake where it is then pumped to the city of Mineral Wells. In addition, water is circulated through a steam generating power plant owned by the Brazos River Electric Power Cooperative, Inc.. Conservation storage pool is 27,650 acre-ft. Data regarding the dam and lake are given in the following table:

	Elevation (feet)
Top of dam	898.0
Top of design flood pool	893.0
Crest of spillway	867.0
Lowest gated outlet (invert)	835.0

COOPERATION.--Capacity table was furnished by HDR Engineering (1985).

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 56,060 acre-ft, Oct. 31, 1974, elevation, 871.15 ft; minimum contents, 6,730 acre-ft, Oct. 28, 2000, elevation, 853.89 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 24,750 acre-ft, Apr. 11, elevation, 865.74 ft; minimum contents, 13,730 acre-ft, Mar. 18, elevation, 859.96 ft.

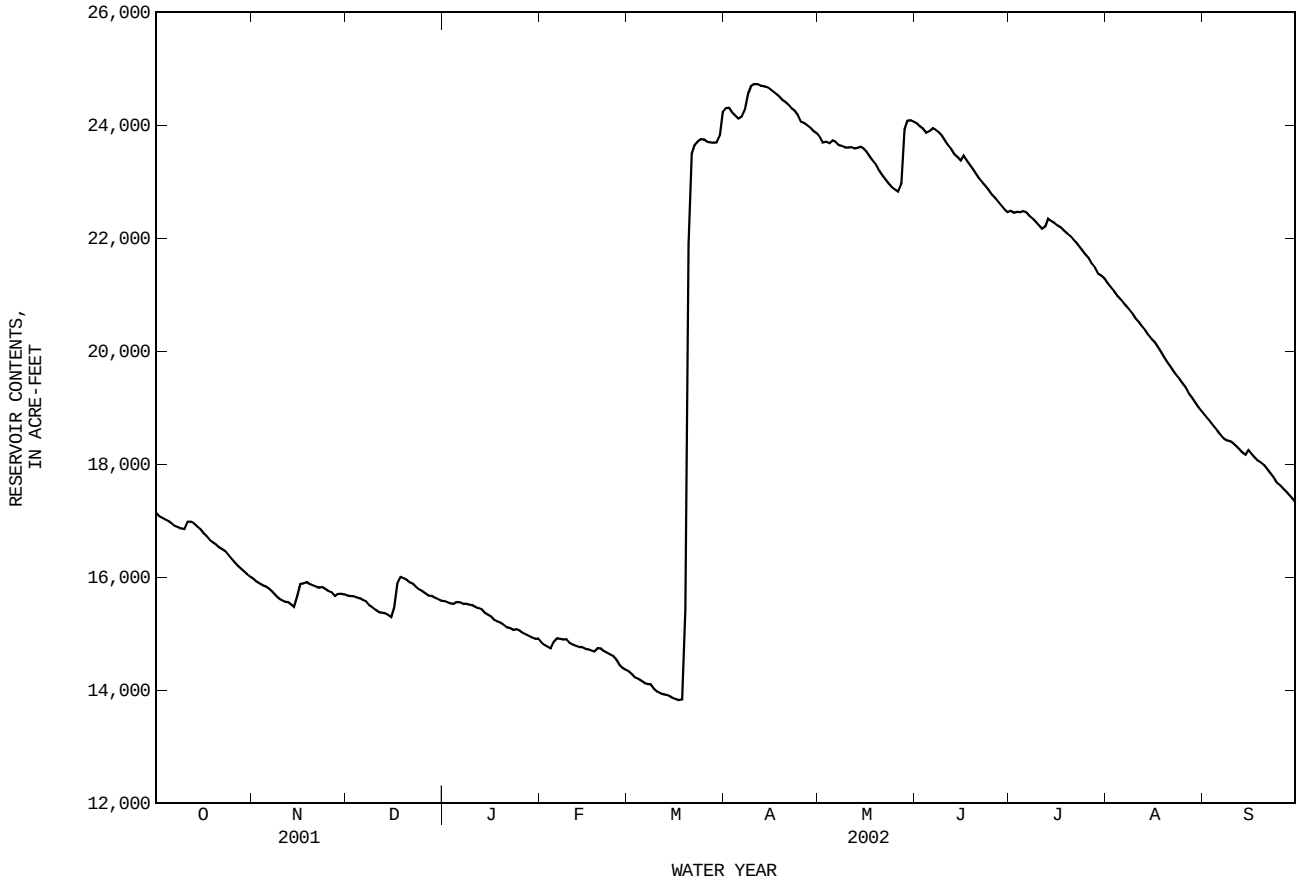
RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17130	15970	15670	15570	14840	14330	24300	23780	24020	22480	21200	18860
2	17070	15920	15660	15550	14800	14280	24300	23690	23970	22450	21120	18800
3	17040	15890	15660	15540	14760	14220	24220	23710	23930	22460	21060	18730
4	17010	15850	15640	15520	14740	14200	24170	23670	23860	22460	20980	18660
5	16990	15840	15630	15560	14850	14160	24110	23730	23890	22480	20920	18590
6	16940	15790	15590	15550	14910	14120	24150	23700	23940	22450	20860	18520
7	16900	15740	15570	15520	14910	14100	24270	23650	23920	22390	20790	18450
8	16880	15680	15500	15530	14890	14100	24550	23630	23870	22340	20720	18420
9	16860	15630	15460	15510	14900	14020	24690	23600	23810	22290	20650	18400
10	16850	15590	15420	15500	14830	13970	24720	23600	23720	22220	20570	18370
11	16980	15560	15380	15470	14800	13940	24730	23610	23640	22170	20510	18320
12	16980	15560	15370	15450	14780	13920	24700	23580	23570	22200	20430	18270
13	16950	15520	15360	15420	14760	13920	24690	23600	23490	22340	20360	18200
14	16900	15470	15330	15360	14760	13890	24670	23620	23430	22300	20280	18170
15	16860	15660	15290	15330	14730	13860	24640	23590	23370	22260	20210	18240
16	16780	15880	15450	15290	14720	13830	24600	23520	23450	22220	20160	18180
17	16720	15880	15880	15240	14700	13820	24560	23440	23370	22190	20070	18110
18	16660	15910	16000	15210	14680	13830	24510	23360	23290	22130	19980	18050
19	16620	15870	15980	15190	14740	15420	24450	23290	23210	22090	19900	18030
20	16580	15850	15950	15160	14730	21890	24410	23200	23120	22040	19810	17980
21	16520	15830	15900	15110	14680	23490	24360	23110	23040	21970	19730	17910
22	16490	15810	15880	15100	14660	23640	24290	23030	22980	21920	19640	17830
23	16460	15820	15820	15060	14630	23710	24250	22960	22910	21840	19570	17760
24	16390	15790	15780	15080	14600	23750	24170	22910	22840	21770	19500	17680
25	16320	15750	15750	15050	14540	23740	24060	22860	22770	21700	19420	17630
26	16260	15720	15710	15010	14440	23700	24030	22820	22710	21630	19350	17570
27	16200	15660	15670	14990	14390	23690	24000	22960	22640	21540	19240	17510
28	16150	15700	15660	14960	14360	23680	23950	23930	22570	21470	19170	17450
29	16100	15700	15630	14930	---	23690	23890	24080	22500	21360	19090	17390
30	16050	15690	15610	14900	---	23820	23850	24080	22450	21330	19000	17320
31	16000	---	15580	14910	---	24230	---	24050	---	21280	18930	---
MEAN	16670	15750	15640	15280	14720	17770	24340	23500	23340	22060	20100	18110
MAX	17130	15970	16000	15570	14910	24230	24730	24080	24020	22480	21200	18860
MIN	16000	15470	15290	14900	14360	13820	23850	22820	22450	21280	18930	17320
(+)	861.20	861.03	860.97	860.61	860.31	865.51	865.35	865.44	864.68	864.05	862.78	861.91
(@)	-1190	-310	-110	-670	-550	+9870	-380	+200	-1600	-1170	-2350	-1610

CAL YR 2001 MAX 28840 MIN 9760 (@) +5690
WTR YR 2002 MAX 24730 MIN 13820 (@) +130

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

08090300 Lake Palo Pinto near Santo, TX--Continued



08090700 Lake Mineral Wells near Mineral Wells, TX

LOCATION.--Lat 32°49′00", long 98°02′30", Parker County, Hydrologic Unit 12060201, 150 ft to left of left side of dam, 1 mi north of US 180 on east side of Mineral Wells.

DRAINAGE AREA.--63 mi^2.

PERIOD OF RECORD.--Feb. 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is 865 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily contents. Records fair. The lake is formed by a rolled earthfill dam 1,760 ft long. There is an uncontrolled spillway with a width of 1,145 ft. The dam was built by the city of Mineral Wells and was completed in 1920. The dam is owned by the Palo Pinto County Municipal Water District. Water is used for municipal, industrial, and recreational uses. Conservation pool storage is 5,494 acre-ft. Data regarding the dam are given in the following table:

	Gage height (feet)
Top of dam	880.0
Conservation pool elevation	863.0

COOPERATION.--Capacity table was furnished by HDR Engineering (1990).

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 6,360 acre-ft, Feb. 16, 2001, elevation, 864.66 ft; minimum contents, 3,870 acre-ft, Mar. 1, 2, 2000, elevation, 858.97 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 5,980 acre-ft, Mar. 20, elevation, 863.97 ft; minimum contents, 4,110 acre-ft, Mar. 14, 16, 17, 18, elevation, 859.68 ft.

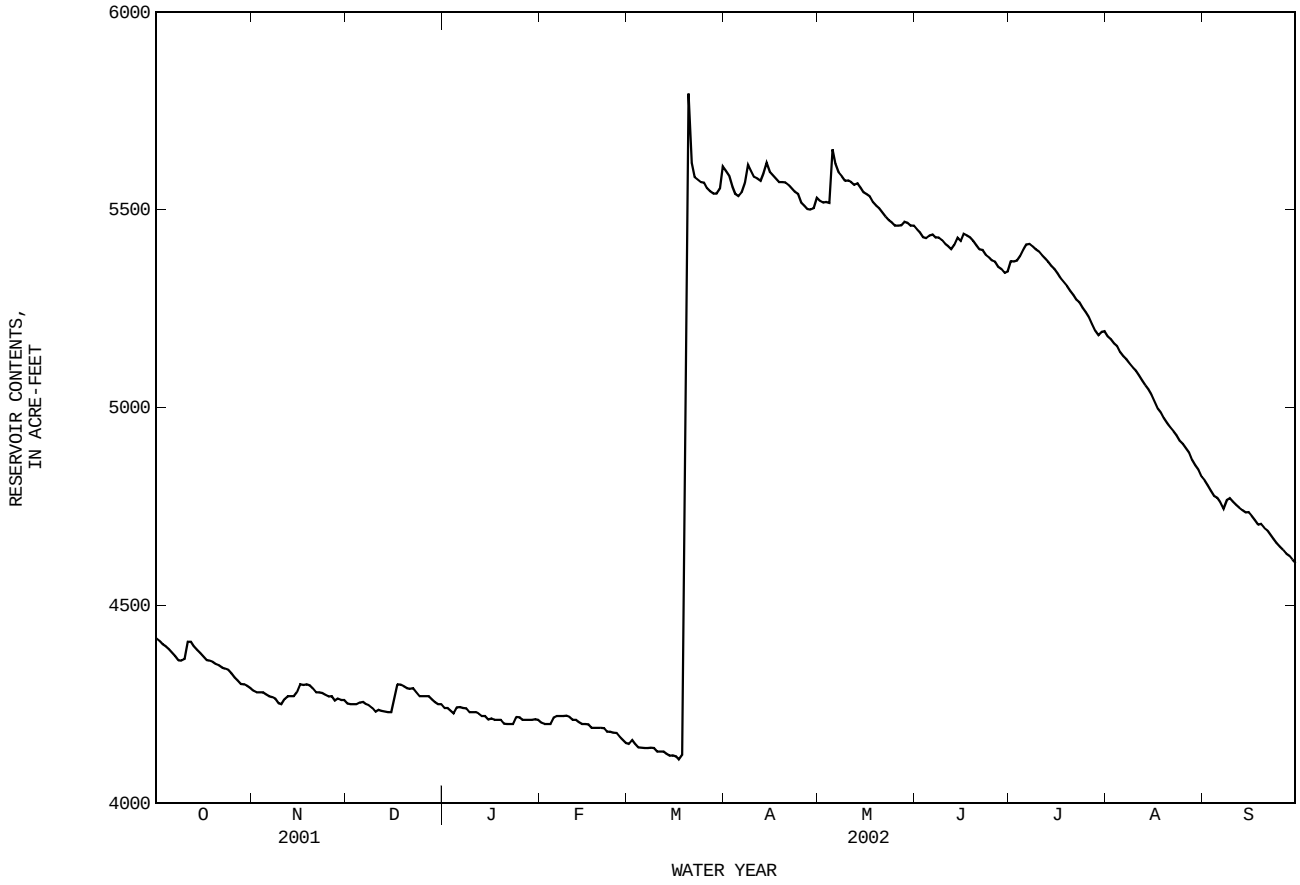
RESERVOIR STORAGE FROM DCP, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4420	4280	4250	4240	4200	4150	5600	5520	5450	5370	5180	4820
2	4410	4280	4250	4240	4200	4160	5590	5520	5440	5370	5170	4800
3	4400	4280	4250	4230	4200	4150	5560	5520	5430	5370	5160	4790
4	4400	4280	4250	4230	4200	4140	5540	5520	5430	5380	5160	4780
5	4390	4280	4250	4240	4220	4140	5530	5650	5430	5400	5140	4770
6	4380	4270	4260	4240	4220	4140	5540	5620	5440	5410	5130	4760
7	4370	4270	4250	4240	4220	4140	5570	5590	5430	5410	5120	4740
8	4360	4260	4250	4240	4220	4140	5610	5580	5430	5410	5110	4770
9	4360	4250	4240	4230	4220	4140	5600	5570	5420	5400	5100	4770
10	4360	4250	4230	4230	4220	4130	5580	5570	5410	5390	5090	4760
11	4410	4260	4240	4230	4210	4130	5580	5570	5410	5380	5080	4750
12	4410	4270	4230	4230	4210	4130	5570	5560	5400	5380	5070	4750
13	4400	4270	4230	4220	4200	4120	5590	5570	5410	5370	5060	4740
14	4390	4270	4230	4220	4200	4120	5620	5560	5430	5360	5050	4730
15	4380	4280	4230	4210	4200	4120	5600	5540	5420	5350	5030	4740
16	4370	4300	4260	4210	4200	4120	5590	5540	5440	5340	5010	4730
17	4360	4300	4300	4210	4190	4110	5580	5530	5430	5330	5000	4710
18	4360	4300	4300	4210	4190	4120	5570	5520	5430	5320	4990	4700
19	4360	4300	4300	4210	4190	4840	5570	5510	5420	5310	4970	4710
20	4350	4290	4290	4200	4190	5790	5570	5500	5410	5290	4960	4700
21	4350	4280	4290	4200	4190	5620	5560	5490	5400	5280	4950	4690
22	4340	4280	4290	4200	4180	5580	5550	5480	5400	5270	4940	4680
23	4340	4280	4280	4200	4180	5580	5550	5470	5390	5270	4930	4670
24	4340	4270	4270	4220	4180	5570	5540	5470	5380	5250	4920	4660
25	4330	4270	4270	4220	4180	5570	5520	5460	5370	5240	4910	4650
26	4320	4270	4270	4210	4170	5550	5510	5460	5370	5230	4900	4640
27	4310	4260	4270	4210	4160	5550	5500	5460	5360	5210	4890	4630
28	4300	4260	4260	4210	4150	5540	5500	5470	5350	5190	4870	4620
29	4300	4260	4250	4210	---	5540	5500	5470	5340	5180	4850	4620
30	4300	4260	4250	4210	---	5550	5530	5460	5340	5190	4840	4610
31	4290	---	4250	4210	---	5610	---	5460	---	5190	4820	---
MEAN	4360	4270	4260	4220	4200	4720	5560	5520	5410	5320	5010	4720
MAX	4420	4300	4300	4240	4220	5790	5620	5650	5450	5410	5180	4820
MIN	4290	4250	4230	4200	4150	4110	5500	5460	5340	5180	4820	4610
(+)	860.14	860.07	860.04	859.95	859.79	863.26	863.05	862.88	862.64	862.29	861.41	860.90
(@)	-170	-30	-10	-30	-60	+1450	-90	-70	-100	-150	-370	-220

CAL YR 2001 MAX 6070 MIN 4220 (@) -760
WTR YR 2002 MAX 5790 MIN 4110 (@) +160

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

08090700 Lake Mineral Wells near Mineral Wells, TX--Continued



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^2, of which 9,566 mi^2 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.--Records good except those for estimated daily discharges, which are poor. Since installation of gage in May 1968, at least 10% of contributing drainage area has been regulated. Flow may be affected at times by discharge from the flood-detention pools of twelve floodwater-retarding structures. These structures control runoff from 53.0 mi^2 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 from dcp, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	14	32	60	92	166	e194	191	152	119	121	273
2	23	16	32	57	72	153	410	320	131	128	116	217
3	22	15	35	57	63	102	328	292	119	148	245	359
4	25	17	38	57	57	230	270	587	108	172	502	273
5	22	20	36	63	170	422	222	495	120	e171	492	472
6	102	19	32	65	154	215	240	680	133	e165	520	285
7	72	17	31	112	453	131	403	690	144	136	510	243
8	49	18	30	140	606	91	844	385	148	121	385	303
9	36	17	29	102	388	67	620	311	165	197	263	357
10	31	20	29	87	352	53	534	330	123	238	387	273
11	42	28	30	268	212	44	418	378	103	478	398	168
12	39	37	31	175	201	42	329	238	100	1210	262	124
13	42	35	31	118	695	39	338	300	98	6950	166	162
14	43	35	e31	90	513	37	509	286	102	2220	225	240
15	32	45	e31	75	293	36	633	256	107	1260	349	181
16	22	77	e31	92	177	34	506	186	135	1400	411	306
17	17	169	e35	242	128	38	350	157	167	823	266	645
18	13	99	232	448	162	66	280	356	150	412	161	363
19	15	70	145	258	200	450	269	763	127	279	269	272
20	17	69	99	157	195	9260	557	395	119	217	546	630
21	20	68	96	109	181	6350	e278	232	104	234	600	424
22	19	57	84	85	175	1610	e255	165	96	346	494	346
23	15	48	72	76	114	1190	e389	139	92	262	314	464
24	13	40	67	76	84	1140	e232	130	90	385	345	422
25	12	35	65	73	64	606	194	127	86	468	430	480
26	13	32	63	e73	92	441	594	139	82	281	508	493
27	14	29	63	e474	93	341	615	260	78	206	455	282
28	16	38	62	e341	66	287	320	1110	78	157	387	170
29	19	35	59	299	---	e246	217	448	77	126	376	267
30	16	34	57	179	---	e181	170	243	91	119	273	402
31	12	---	56	123	---	e350	---	190	---	122	359	---
TOTAL	857	1253	1764	4631	6052	24418	11518	10779	3425	19550	11135	9896
MEAN	27.65	41.77	56.90	149.4	216.1	787.7	383.9	347.7	114.2	630.6	359.2	329.9
MAX	102	169	232	474	695	9260	844	1110	167	6950	600	645
MIN	12	14	29	57	57	34	170	127	77	119	116	124
AC-FT	1700	2490	3500	9190	12000	48430	22850	21380	6790	38780	22090	19630

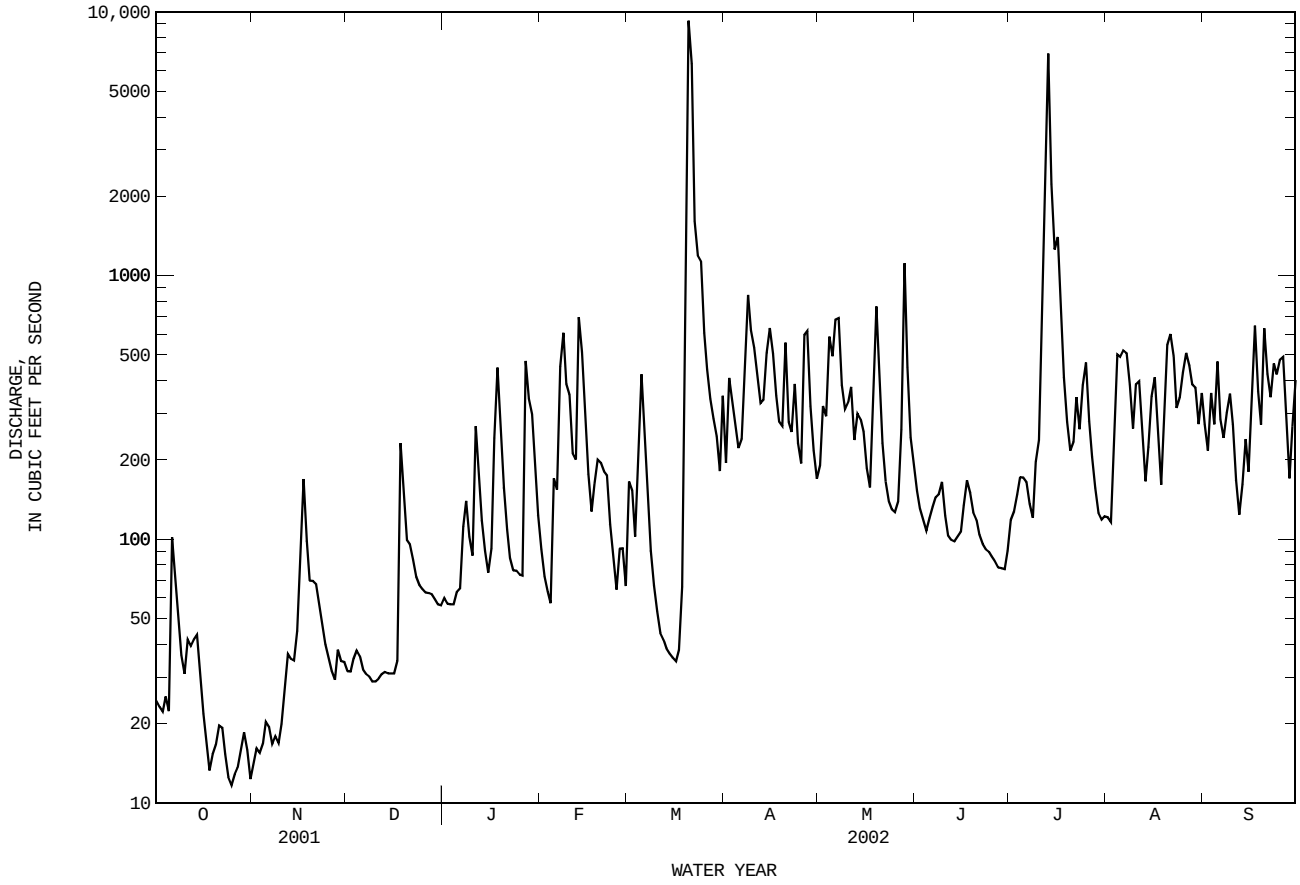
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2002, BY WATER YEAR (WY)

MEAN	1425	666.5	738.4	450.4	972.6	1117	1044	1825	1975	663.6	803.1	742.2
MAX	17690	5000	12240	2835	9530	5970	13320	12090	13490	4376	7600	3680
(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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1968 - 2002	
ANNUAL TOTAL	282110		105278			
ANNUAL MEAN	772.9		288.4		1034	
HIGHEST ANNUAL MEAN					4141	1982
LOWEST ANNUAL MEAN					120	1988
HIGHEST DAILY MEAN	14400	Feb 17	9260	Mar 20	87700	Oct 14 1981
LOWEST DAILY MEAN	12	Oct 25	12	Oct 25	1.2	Aug 2 1978
ANNUAL SEVEN-DAY MINIMUM	15	Oct 22	15	Oct 22	3.0	Jul 29 1978
MAXIMUM PEAK FLOW			11300	Mar 20	96600	Oct 14 1981
MAXIMUM PEAK STAGE			13.08	Mar 20	31.85	Oct 14 1981
ANNUAL RUNOFF (AC-FT)	559600		208800		749000	
10 PERCENT EXCEEDS	2000		504		1970	
50 PERCENT EXCEEDS	141		157		255	
90 PERCENT EXCEEDS	30		30		45	

e Estimated

08090800 Brazos River near Dennis, TX--Continued



08090900 Lake Granbury near Granbury, TX

LOCATION.--Lat 32°22′27", long 97°41′20", Hood County, Hydrologic Unit 12060201, at right end of spillway of DeCordova Bend Dam on the Brazos River, 2.6 mi upstream from Fall Creek, 7.5 mi southeast of Granbury, and at mile 542.5.

DRAINAGE AREA.--25,679 mi^2, of which 9,566 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Oct. 1968 to current year.
Water-quality records.--Chemical data: Sept. 1970 to Sept. 1997. Biochemical data: Sept. 1970 to Sept. 1997.

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

GAGE.--Water-stage recorder. Datum of gage is 1.11 ft below NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair. The lake is formed by an Ambursen-type concrete and earthfill dam 2,256 ft long, including a 932-ft concrete spillway. The dam was completed on Aug. 30, 1969, and deliberate impoundment began Sept. 15, 1969. The spillway consists of sixteen 36- by 35-ft tainter gates and two 7- by 8-ft sluice gates. Outflow through the sluice gates discharges into a bay where the outflow is then controlled by two 4- by 4.5-ft sluice gates with inverts at 625.8 ft. Flow is affected at times by discharge from the flood-detention pools of twelve floodwater-retarding structures with a combined detention capacity of 13,940 acre-ft. These structures control runoff from 53.9 mi^2 in the East Keechi, Kickapoo, and Ruckers Creeks drainage basins. The lake was built by the Brazos River Authority for the conservation of water for irrigation, municipal, and industrial uses. Water is also diverted into Squaw Creek Reservoir (station 08091730, conservation pool storage 151,030 acre-ft). The city of Granbury returns wastewater effluent into Lake Granbury. Conservation pool storage is 136,823 acre-ft. Data regarding the dam are given in the following table:

	Gage height (feet)
Top of dam	706.5
Top of tainter gates (design flood)	693.0
Crest of spillway	658.0
Lowest gated outlet (invert)	640.0

COOPERATION.--The capacity table, Table No. 2-C, was provided by the Texas Water Development Board and put into use Oct. 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 158,800 acre-ft, Mar. 27, 1977, gage height, 693.60 ft; minimum contents since normal operating level was reached in Oct. 1969, 97,600 acre-ft, Aug. 9, 1978, gage height, 685.28 ft, using Capacity Table 1-C.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 137,100 acre-ft, May 27, elevation, 693.04 ft; minimum contents, 114,300 acre-ft, Dec. 15, Jan. 4, 8, 9, 15, elevation, 690.03 ft.

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

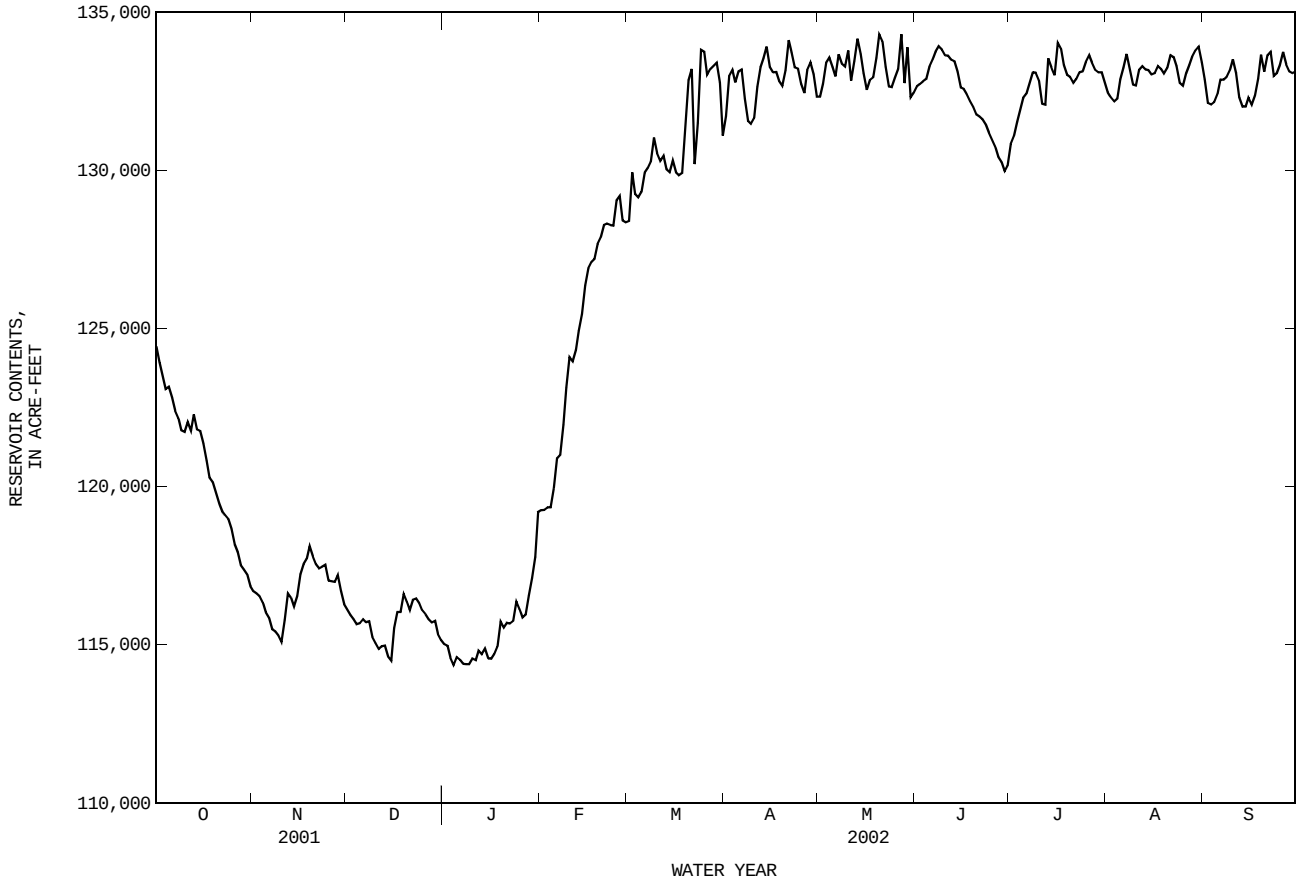
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124400	116700	116100	115000	119300	128400	131700	132300	132700	130800	132500	132900
2	123900	116600	115900	115000	119300	129900	133000	132700	132700	131100	132300	132100
3	123500	116500	115800	114600	119300	129300	133200	133400	132800	131500	132200	132100
4	123100	116300	115700	114400	119300	129100	132800	133600	132900	131900	132300	132200
5	123200	116000	115700	114600	120000	129300	133100	133300	133300	132300	132900	132400
6	122800	115900	115800	114500	120900	129900	133200	133000	133500	132400	133200	132900
7	122400	115500	115700	114400	121000	130100	132300	133700	133700	132800	133700	132900
8	122200	115400	115700	114400	122000	130300	131600	133400	133900	133100	133200	133000
9	121800	115300	115200	114400	123100	131000	131500	133300	133800	133100	132700	133200
10	121700	115100	115100	114600	124100	130500	131700	133800	133600	132800	132700	133500
11	122000	115800	114900	114500	124000	130300	132600	132800	133600	132100	133200	133100
12	121800	116600	115000	114800	124300	130400	133300	133400	133500	132100	133300	132300
13	122300	116500	115000	114700	124900	130000	133500	134200	133400	133500	133200	132000
14	121800	116200	114600	114900	125500	129900	133900	133700	133100	133200	133200	132000
15	121700	116500	114500	114600	126400	130300	133300	133100	132600	133000	133000	132300
16	121400	117200	115500	114600	126900	129900	133100	132500	132600	134000	133100	132100
17	120800	117500	116000	114700	127100	129800	133100	132900	132400	133800	133300	132400
18	120300	117700	116000	114900	127200	129900	132800	132900	132200	133300	133200	132900
19	120100	118100	116600	115700	127700	131500	132700	133600	132000	133000	133100	133700
20	119800	117800	116400	115500	127900	132800	133200	134300	131800	132900	133200	133100
21	119500	117500	116100	115700	128300	133200	134100	134100	131700	132800	133600	133600
22	119200	117400	116400	115700	128300	130200	133700	133300	131600	132900	133600	133700
23	119100	117500	116500	115800	128300	131500	133200	132700	131500	133100	133300	133000
24	119000	117500	116300	116400	128300	133800	133200	132600	131200	133100	132800	133100
25	118700	117000	116100	116100	129000	133700	132700	132900	131000	133400	132700	133300
26	118200	117000	116000	115900	129200	133000	132400	133200	130800	133600	133100	133700
27	117900	117000	115800	116000	128400	e133200	133200	134300	130400	133400	133300	133300
28	117500	117200	115700	116600	128400	e133300	133400	132800	130300	133200	133600	133100
29	117400	116700	115800	117100	---	e133400	133000	133900	130000	133100	133800	133100
30	117200	116300	115300	117800	---	132800	132300	132300	130100	133100	133900	133100
31	116800	---	115100	119200	---	131100	---	132500	---	132800	133400	---
MEAN	120700	116700	115700	115400	124900	131000	132900	133200	132300	132800	133100	132900
MAX	124400	118100	116600	119200	129200	133800	134100	134300	133900	134000	133900	133700
MIN	116800	115100	114500	114400	119300	128400	131500	132300	130000	130800	132200	132000
(+)	690.37	690.29	690.15	690.71	691.93	692.27	692.43	692.45	692.15	692.49	692.57	692.52
(@)	-7900	-500	-1200	+4100	+9200	+2700	+1200	+200	-2400	+2700	+600	-300

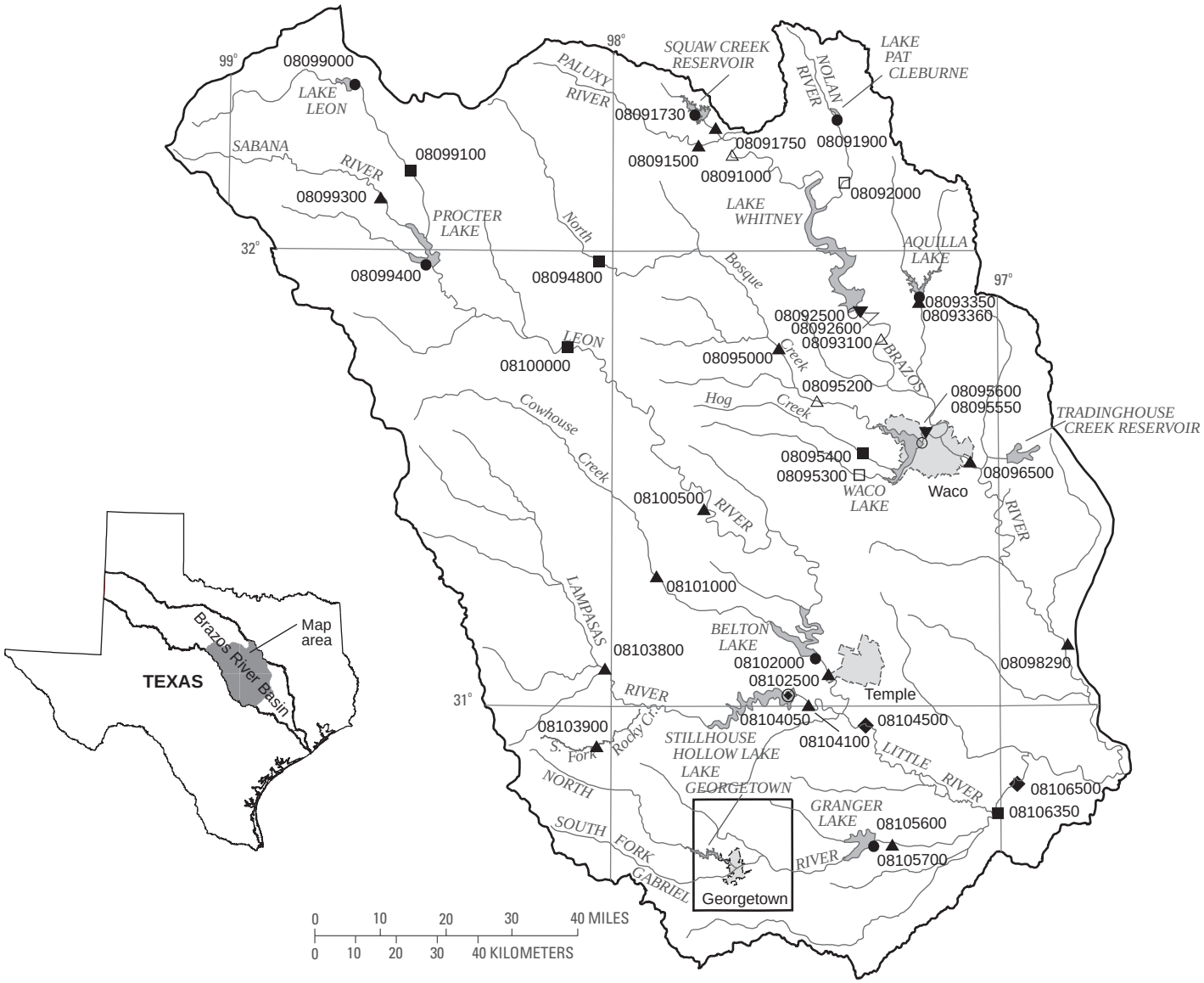
CAL YR 2001 MAX 135000 MIN 114500 (@) -16600
WTR YR 2002 MAX 134300 MIN 114400 (@) +8400

e Estimated

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

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**
08106500	◆	**SW continuous/precipitation station and number**
08054500	◉	**Reservoir/precipitation station and number**

Figure 7.--Map showing location of gaging stations in the third section of the Brazos River Basin

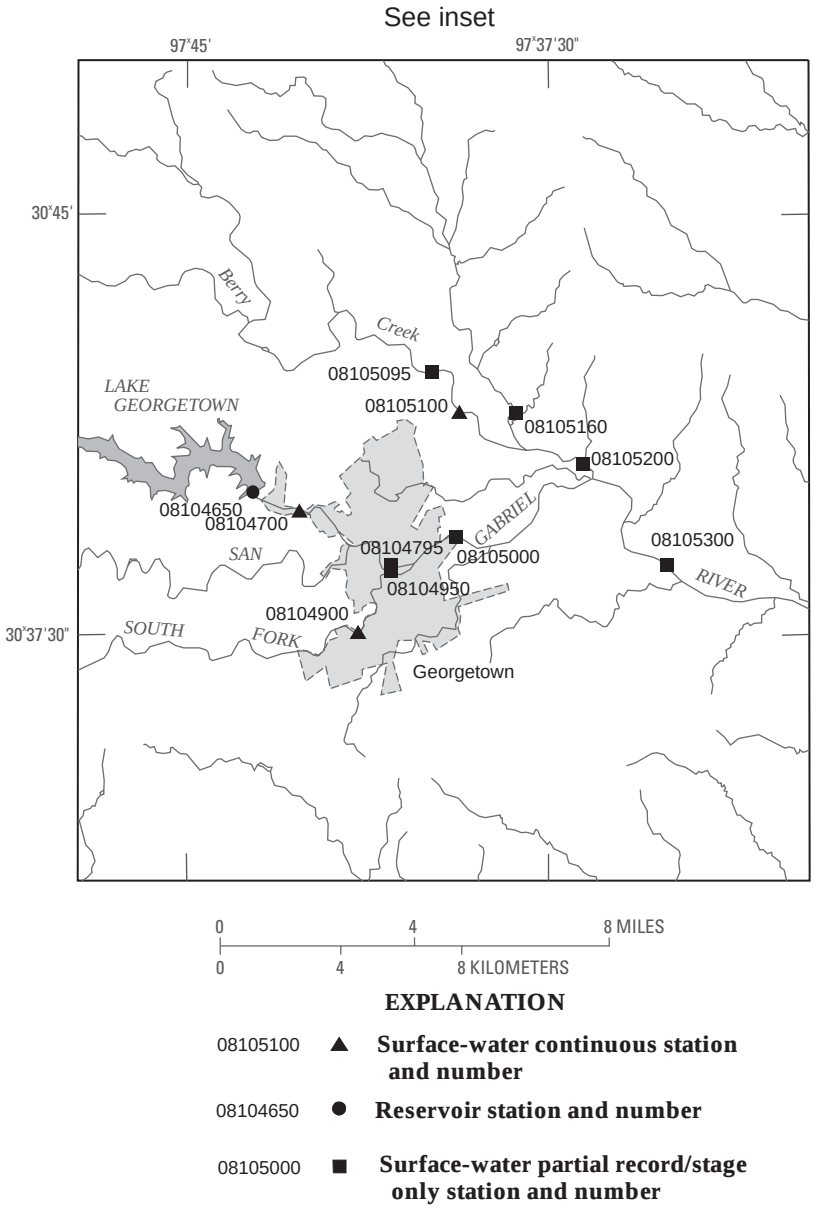


Figure 8.--Map showing location of gaging stations in the Georgetown inset of the Brazos River Basin

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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 Georgés Creek, 2.0 mi upstream from Paluxy River, 4.0 mi northeast of Glen Rose.

DRAINAGE AREA.--25,818 mi^2, of which 9,566 mi^2 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.

GAGE.--Water-stage recorder. Elevation of gage is 565 ft above NGVD of 1929 (from topgraphic map). Prior to May 7, 1931, nonrecording gage at site 2.5 mi downstream at same elevation. May 7, 1931, to Sept. 30, 1957, water-stage recorder at site 2.4 mi downstream at same elevation, used as supplementary gage Oct. 1, 1957, to Apr. 1, 1959. Apr. 27, 1950, to Sept. 30, 1957, water-stage recorder at site 2.0 mi upstream, used as supplementary gage. Oct. 1, 1957 to Apr. 12, 2002, water-stage recorder at site 2.0 mi upstream at same elevation. Satellite telemeter at station.

REMARKS.--Records poor. 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^3/s (1,145,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1924-40)--Maximum discharge, 97,600 ft^3/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.

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.

DISCHARGE FROM DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	9.3	14	e24	e89	e27	e738	371	188	69	15	308
2	29	8.0	17	e24	e83	e26	e638	100	116	102	12	423
3	21	6.6	15	e23	e88	e21	e520	895	90	111	9.3	240
4	22	5.0	15	e21	e89	e18	e403	751	75	85	11	75
5	29	3.9	20	e20	e151	e23	e353	1160	67	81	11	38
6	27	3.0	22	e20	e149	e23	e2990	1850	66	91	17	23
7	29	2.3	18	e21	e130	e21	e3260	562	61	64	16	15
8	29	2.0	12	e21	e96	e21	e2800	877	57	50	99	19
9	21	1.6	13	e21	e80	e21	e1580	983	53	39	550	23
10	16	1.5	e15	e21	e71	e23	e705	1750	50	31	308	23
11	34	6.8	e16	e21	e62	e23	e554	2050	45	298	109	19
12	49	27	e16	e20	e51	e29	e520	796	40	582	59	218
13	77	19	e17	e19	e40	e21	799	159	38	1550	39	215
14	61	14	e13	e20	e36	e21	1530	305	36	5290	32	74
15	49	21	e13	e20	e32	e20	1580	655	245	2150	25	39
16	32	36	e32	e19	e30	e19	1540	641	113	913	20	24
17	27	50	e62	e19	e23	e34	1130	412	293	1720	15	16
18	26	50	e72	e19	e21	e49	867	111	84	1360	14	10
19	28	35	e72	e19	e26	e1590	790	70	47	634	13	19
20	29	19	e37	e20	e24	e6260	571	59	35	362	11	411
21	29	12	e32	e19	e27	e4850	158	74	30	133	7.8	380
22	30	7.3	e27	e19	e23	e2720	340	453	25	71	25	82
23	32	5.5	e28	e18	e21	e1450	685	467	22	49	345	426
24	30	3.9	e28	e27	e24	e3010	631	352	18	36	373	420
25	24	2.7	e22	e21	e21	e2230	642	106	15	29	332	89
26	18	3.8	e19	e17	e19	e531	658	279	15	25	122	44
27	13	2.8	e20	e18	e19	e2430	358	612	17	21	54	75
28	10	4.3	e27	e20	e19	e3940	240	5040	16	17	30	380
29	11	5.8	e26	e18	---	e2990	664	1550	16	16	19	101
30	10	10	e27	e25	---	e554	659	2600	37	17	13	45
31	9.6	---	e27	e227	---	e856	---	812	---	16	12	---
TOTAL	890.6	379.1	794	841	1544	33851	28903	26902	2010	16012	2718.1	4274
MEAN	28.73	12.64	25.61	27.13	55.14	1092	963.4	867.8	67.00	516.5	87.68	142.5
MAX	77	50	72	227	151	6260	3260	5040	293	5290	550	426
MIN	9.6	1.5	12	17	19	18	158	59	15	16	7.8	10
AC-FT	1770	752	1570	1670	3060	67140	57330	53360	3990	31760	5390	8480

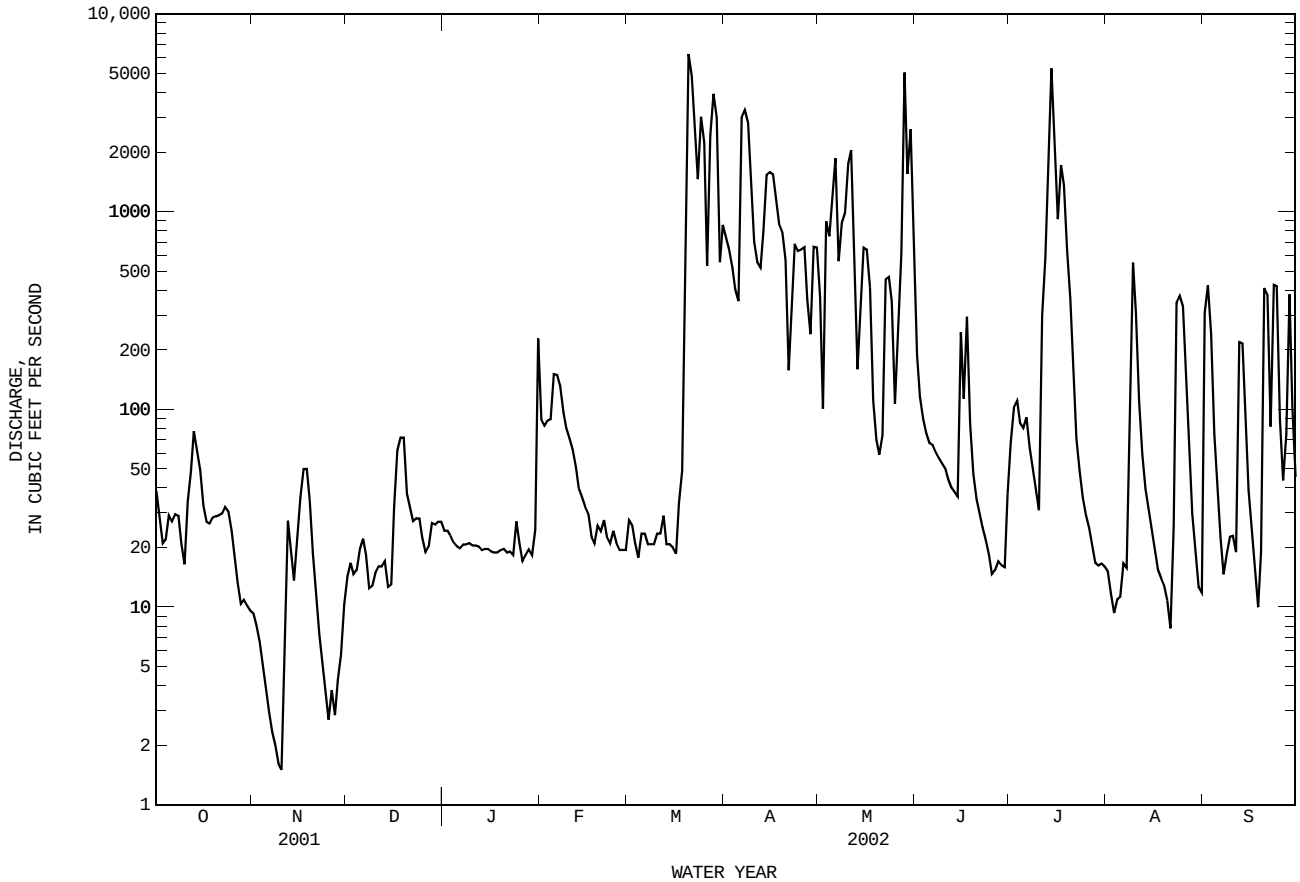
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002z, BY WATER YEAR (WY)

MEAN	1717	791.2	739.5	562.4	1001	1084	1316	3157	2219	991.4	772.9	1053
MAX	17860	6209	14960	3180	11290	6684	14360	44800	13660	4873	6621	9994
(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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1941 - 2002z	
ANNUAL TOTAL	388450.7		119118.8			
ANNUAL MEAN	1064		326.4		1285	
HIGHEST ANNUAL MEAN					5494	1957
LOWEST ANNUAL MEAN					115	1988
HIGHEST DAILY MEAN	22800	Feb 17	6260	Mar 20	85100	May 1 1957
LOWEST DAILY MEAN	1.5	Nov 10	1.5	Nov 10	0.10	Oct 30 1952
ANNUAL SEVEN-DAY MINIMUM	2.8	Nov 4	2.8	Nov 4	0.36	Oct 27 1952
MAXIMUM PEAK FLOW			unknown	May 28	89600	Dec 21 1991
MAXIMUM PEAK STAGE			unknown	May 28	35.76	Apr 28 1990
ANNUAL RUNOFF (AC-FT)	770500		236300		931100	
10 PERCENT EXCEEDS	2900		830		2410	
50 PERCENT EXCEEDS	84		32		330	
90 PERCENT EXCEEDS	16		13		33	

e Estimated
z Period of regulated streamflow.



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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
FEB													
28...	1040	E36	1530	8.2	8.0	11.5	98	<2.0	300	180	85.1	20.8	181
MAY													
14...	1615	575	1650	8.4	25.0	9.7	120	2.3	300	180	87.2	21.0	238
JUN													
11...	1100	47	1340	8.1	27.5	7.9	103	2.8	280	140	78.8	19.2	161
AUG													
14...	1249	28	1720	8.2	30.8	7.5	103	<2.0	270	150	75.4	19.6	224

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
FEB													
28...	5	56	4.55	1	145	121	157	312	.3	.83	888	834	<10
MAY													
14...	6	62	5.40	2	153	129	161	358	.3	5.59	959	955	<10
JUN													
11...	4	55	4.62	2	167	140	122	251	.3	5.57	755	726	<10
AUG													
14...	6	64	6.37	E1	E141	117	150	380	.3	6.09	946	932	<10

Date	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)
FEB													
28...	<.008	.05	E.02	.32	.004	<.02	4.6	2	<.05	<2	100	<.06	<.04
MAY													
14...	<.008	.06	<.04	.39	.007	<.02	6.5	3	.14	E1	117	<.06	E.03
JUN													
11...	<.008	E.04	<.04	.27	E.003	<.02	6.6	2	.16	E1	109	<.06	<.04
AUG													
14...	<.008	<.05	<.04	.28	.005	<.02	5.6	4	.16	3	118	<.06	<.04

Date	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
FEB													
28...	<.8	.27	1.3	<10	.11	5.0	<.01	1.5	.54	<2	<1	5	1.87
MAY													
14...	<.8	.29	1.8	<10	<.08	6.6	<.01	1.7	2.17	<2	<1	2	1.43
JUN													
11...	<.8	.18	1.8	<10	.08	1.3	--	1.7	.15	<2	<1	1	1.48
AUG													
14...	<.8	.25	1.3	<10	<.08	2.6	<.01	1.8	1.34	<2	<1	7	1.12

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

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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^2.

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.--Records good except those for estimated daily discharges, which are fair. 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^2. No known diversions. No flow at times.

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1924-25).--Maximum stage recorded, 7.10 ft, Apr. 25, 1924 (discharge not determined); no flow for several periods.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1877, 27.2 ft Apr. 17, 1908, present site and datum (discharge, 59,000 ft^3/s). Flood of May 21, 1922, reached a stage of 26.0 ft, present site and datum (discharge, 53,000 ft^3/s). Flood in Nov. 1918 reached about the same stage as flood of May 21, 1922, from information by local residents.

DISCHARGE FROM DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.8	8.4	e10	35	20	314	55	110	44	9.8	3.0
2	1.4	1.6	8.4	e10	24	21	202	50	89	49	7.8	2.6
3	1.3	1.9	8.4	10	21	19	146	717	74	58	7.7	2.5
4	1.3	1.9	8.4	10	19	19	117	396	64	41	7.7	2.2
5	1.2	2.0	8.4	10	91	19	102	256	62	35	6.7	2.0
6	1.3	1.8	10	10	96	19	183	190	66	80	6.4	1.9
7	1.2	1.6	8.8	10	64	19	429	142	61	60	6.2	1.9
8	1.3	1.9	8.0	10	48	19	500	108	56	47	5.8	3.5
9	1.5	2.0	7.7	10	38	18	329	172	49	38	5.8	7.9
10	1.6	2.2	7.7	10	30	17	231	195	44	31	23	11
11	4.2	12	8.1	10	27	17	191	171	39	28	13	7.9
12	3.8	16	9.2	10	26	18	161	118	36	25	13	6.1
13	11	7.9	11	10	24	17	166	99	33	33	13	4.9
14	7.2	6.4	10	10	24	17	193	85	31	28	13	4.2
15	4.1	85	10	10	23	17	167	77	29	23	19	3.8
16	2.7	112	50	10	22	17	141	70	36	24	51	3.7
17	2.1	63	33	10	22	16	121	63	34	32	35	3.4
18	2.0	28	42	10	21	21	110	56	31	33	21	3.2
19	1.9	18	26	10	22	918	102	51	28	23	14	7.7
20	1.9	14	19	10	21	1890	95	48	26	20	10	6.0
21	1.9	11	16	10	22	471	89	43	24	17	7.8	8.1
22	1.9	9.9	15	10	22	284	84	41	24	16	6.5	5.7
23	2.0	9.2	13	10	22	202	80	38	23	15	5.4	4.3
24	1.7	8.8	12	12	21	150	76	37	22	14	4.5	3.6
25	1.5	8.4	12	14	20	117	102	37	20	13	3.9	3.1
26	1.2	8.4	12	12	19	92	103	433	19	12	3.4	3.1
27	1.1	8.4	12	12	18	80	86	473	18	10	3.0	3.4
28	1.1	10	12	11	19	74	76	1000	17	9.5	2.7	3.2
29	1.3	8.4	11	11	---	68	67	300	19	9.0	2.7	2.8
30	1.4	8.4	11	11	---	388	60	199	30	9.2	2.7	2.5
31	1.5	---	10	182	---	544	---	142	---	10	2.7	---
TOTAL	71.2	471.9	438.5	495	861	5608	4823	5862	1214	886.7	334.2	129.2
MEAN	2.297	15.73	14.15	15.97	30.75	180.9	160.8	189.1	40.47	28.60	10.78	4.307
MAX	11	112	50	182	96	1890	500	1000	110	80	51	11
MIN	1.1	1.6	7.7	10	18	16	60	37	17	9.0	2.7	1.9
AC-FT	141	936	870	982	1710	11120	9570	11630	2410	1760	663	256

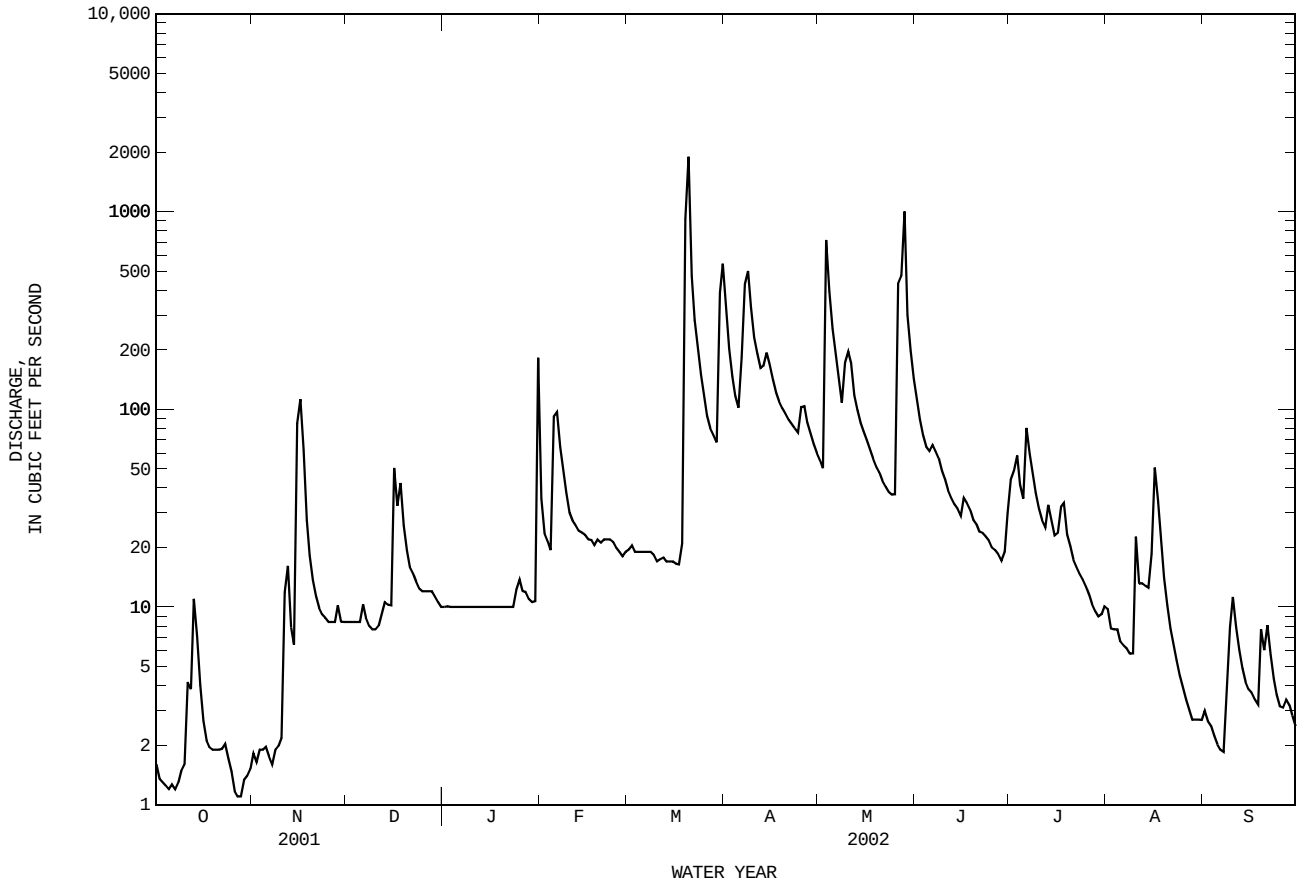
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2002z, BY WATER YEAR (WY)

MEAN	61.05	33.09	54.63	45.97	87.62	105.9	123.2	237.2	102.0	33.10	27.79	29.93
MAX	724	211	1382	380	933	654	828	1191	890	245	721	335
(WY)	1960	1992	1992	1992	1992	1998	1990	1949	1989	1995	1995	1955
MIN	0.000	1.05	3.47	4.70	5.49	5.84	6.46	3.34	1.48	0.000	0.000	0.000
(WY)	2000	1984	1989	1984	1984	1956	1986	1988	1974	1978	1978	1984

08091500 Paluxy River at Glen Rose, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1947 - 2002z	
ANNUAL TOTAL	35302.70		21194.7			
ANNUAL MEAN	96.72		58.07		78.62	
HIGHEST ANNUAL MEAN					361	1992
LOWEST ANNUAL MEAN					6.24	1984
HIGHEST DAILY MEAN	2500	Feb 16	1890	Mar 20	26600	May 17 1949
LOWEST DAILY MEAN	0.00	Aug 4	1.1	Oct 27	0.00	Sep 5 1951
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 4	1.3	Oct 2	0.00	Aug 25 1952
MAXIMUM PEAK FLOW			4870	Mar 19	50000	Oct 4 1959
MAXIMUM PEAK STAGE			8.69	Mar 19	25.40	Oct 4 1959
ANNUAL RUNOFF (AC-FT)	70020		42040		56960	
10 PERCENT EXCEEDS	210		141		114	
50 PERCENT EXCEEDS	15		17		15	
90 PERCENT EXCEEDS	1.1		2.1		1.5	

e Estimated
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^2.

PERIOD OF RECORD.--Feb. 1977 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 except those for estimated daily contents, which are fair. 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, conservation pool storage 136,823 acre-ft) into this reservoir. Conservation pool storage is 151,030 acre-ft. 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 (normal operating level)(top of conservation pool)	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

COOPERATION.--Capacity Table 1-C was provided by Texas Utilities Services, Inc.

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 contents, 156,500 acre-ft, Aug. 14, elevation, 776.68 ft; minimum contents, 148,300 acre-ft, Mar. 11, 12, 14, elevation, 774.19 ft.

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

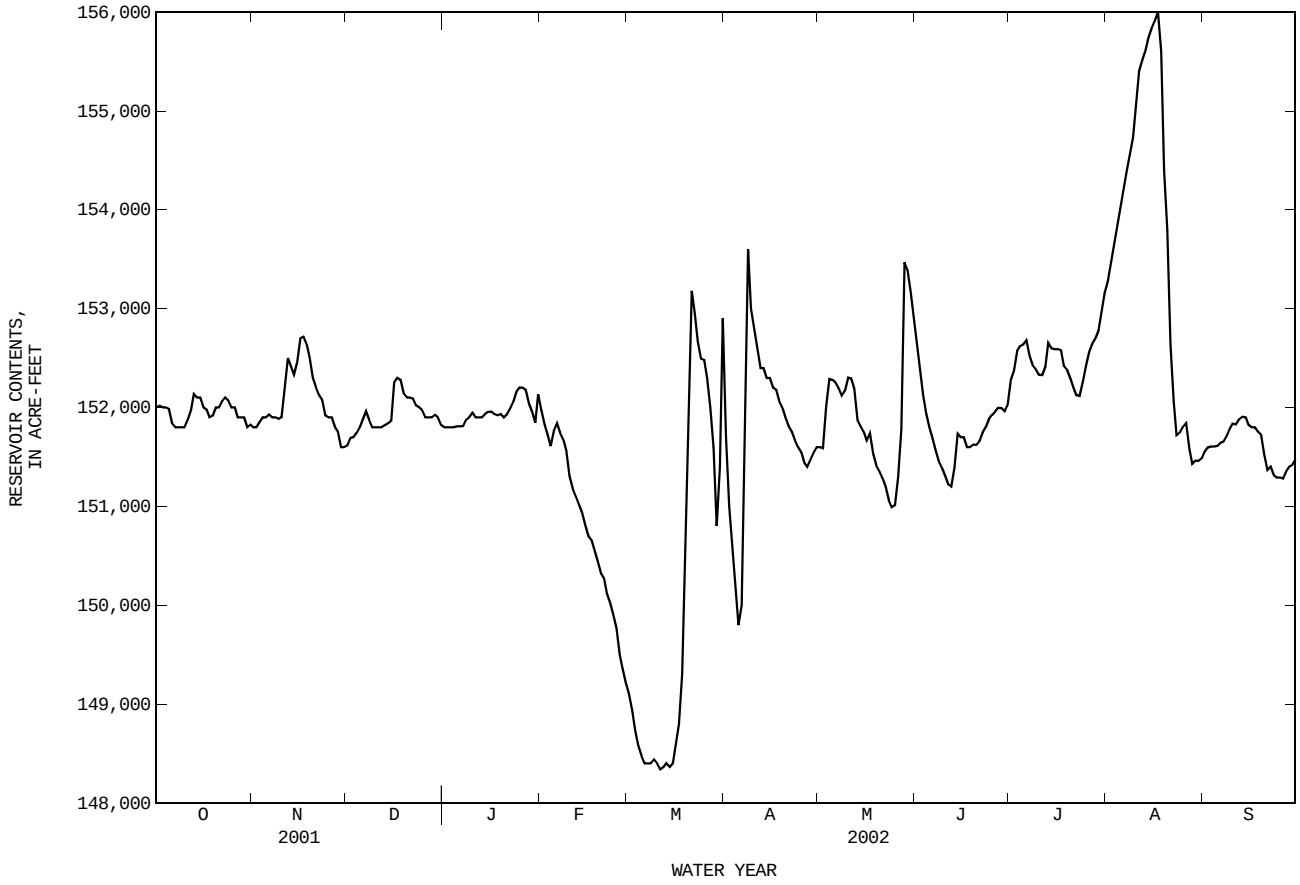
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152000	151800	151600	151800	152000	149100	e151700	151600	152600	152300	153300	151600
2	152000	151800	151700	151800	151800	148900	e151000	151600	152400	152400	153500	151600
3	152000	151900	151700	151800	151700	148700	e150600	152000	152100	152600	153600	151600
4	152000	151900	151700	151800	151600	148600	e150200	152300	151900	152600	153800	151600
5	152000	151900	151800	151800	151800	148500	e149800	152300	151800	152600	154000	151600
6	151800	151900	151900	151800	151800	148400	e150000	152300	151700	152700	154200	151600
7	151800	151900	152000	151800	151700	148400	e152500	152200	151600	152500	154400	151700
8	151800	151900	151900	151900	151700	148400	e153600	152100	151500	152400	154600	151700
9	151800	151900	151800	151900	151600	148400	e153000	152200	151400	152400	154700	151800
10	151800	151900	151800	151900	151300	148400	e152800	152300	151300	152300	155000	151800
11	151900	152200	151800	151900	151200	148300	e152600	152300	151200	152300	155400	151800
12	152000	152500	151800	151900	151100	148400	e152400	152200	151200	152400	155500	151900
13	152100	152400	151800	151900	151000	148400	e152400	151900	151400	152700	155600	151900
14	152100	152300	151800	151900	150900	148400	e152300	151800	151700	152600	155700	151900
15	152100	152500	151900	152000	150800	e148400	e152300	151800	151700	152600	155800	151800
16	152000	152700	152200	152000	150700	e148600	e152200	151700	e151700	152600	155900	151800
17	152000	152700	152300	151900	150700	e148800	152200	151700	e151600	152600	e156000	151800
18	151900	152600	152300	151900	150600	e149300	152100	151500	e151600	152400	e155600	151800
19	151900	152500	152100	151900	150400	e150800	152000	151400	151600	152400	e154400	151700
20	152000	152300	152100	151900	150300	e152100	151900	151400	151600	152300	e153800	151500
21	152000	152200	152100	151900	150300	153200	151800	151300	151700	152200	152600	151400
22	152100	152100	152100	152000	150100	153000	151800	151200	151700	152100	152100	151400
23	152100	152100	152000	152100	150000	152700	151700	151100	151800	152100	151700	151300
24	152100	151900	152000	152200	149900	152500	151600	151000	151900	152300	151700	151300
25	e152000	151900	152000	152200	149800	152500	151600	151000	151900	152400	151800	151300
26	e152000	151900	151900	152200	149500	e152300	151400	151300	152000	152600	151800	151300
27	e151900	151800	151900	152200	149400	e152000	151400	151800	152000	152600	151600	151400
28	e151900	151800	151900	152000	149200	e151600	151500	153500	152000	152700	151400	151400
29	e151900	151600	151900	152000	---	e150800	151500	153400	152000	152800	151500	151400
30	e151800	151600	151900	151800	---	e151400	151600	153200	152000	153000	151500	151500
31	151800	---	151800	152100	---	e152900	---	152900	---	153200	151500	---
MEAN	152000	152100	151900	151900	150800	150100	151800	151900	151800	152500	153700	151600
MAX	152100	152700	152300	152200	152000	153200	153600	153500	152600	153200	156000	151900
MIN	151800	151600	151600	151800	149200	148300	149800	151000	151200	152100	151400	151300
(+)	775.27	775.19	775.27	775.36	774.46	e775.59	775.19	775.59	775.33	775.66	775.17	775.16
(@)	-200	-200	+200	+300	-2900	+3700	-1300	+1300	-900	+1200	-1700	0

CAL YR 2001 MAX 153600 MIN 149800 (@) -400
WTR YR 2002 MAX 156000 MIN 148300 (@) -500

e Estimated

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

08091730 Squaw Creek Reservoir near Glen Rose, TX--Continued



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^2.

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^3/s (6,090 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1974-77).--Maximum discharge 9,030 ft^3/s Apr. 8, 1975 (gage height, 11.90 ft), from rating curve extended above 1,000 ft^3/s on basis of area-velocity study; minimum, 0.02 ft^3/s, Aug. 28 and 29, 1974.

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).

DISCHARGE FROM DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	16	14	17	27	5.1	70	4.4	72	35	13	16
2	20	16	16	17	18	6.6	64	6.4	62	43	15	19
3	18	19	17	14	14	5.1	51	40	48	51	17	22
4	18	20	19	12	10	4.8	37	36	35	52	17	22
5	26	23	21	17	21	4.7	28	37	25	52	17	24
6	23	24	29	20	22	4.8	30	34	18	53	18	26
7	16	22	31	16	15	4.7	65	31	13	44	19	27
8	14	23	33	16	11	4.7	85	30	10	37	17	32
9	13	24	22	18	12	4.8	75	37	7.0	31	20	40
10	16	21	20	23	15	4.7	68	45	4.8	26	27	44
11	30	37	20	22	5.4	4.9	60	37	2.8	28	42	46
12	26	57	24	23	5.1	4.7	53	34	2.0	34	39	46
13	45	52	32	20	5.0	4.7	52	32	4.4	51	35	44
14	36	49	27	21	4.8	4.7	54	24	5.7	49	34	43
15	34	57	25	20	5.7	4.7	48	17	5.2	46	29	44
16	29	68	53	20	4.8	4.8	44	15	11	43	24	42
17	29	69	54	23	4.7	5.0	40	16	9.0	42	19	42
18	22	68	46	22	4.7	5.3	33	11	8.7	42	19	40
19	22	65	45	26	5.4	150	26	6.6	8.2	39	13	45
20	26	53	38	20	5.0	93	20	5.5	7.5	36	8.9	37
21	27	48	36	20	4.7	84	16	4.6	7.6	31	8.7	24
22	29	45	36	21	4.7	75	12	3.9	8.7	27	12	25
23	34	43	32	25	4.7	62	8.7	3.6	10	28	12	21
24	36	42	29	37	4.6	51	7.4	3.5	12	28	12	20
25	32	28	28	36	4.8	47	7.1	3.8	14	27	14	20
26	30	29	27	34	5.1	32	4.7	9.5	15	24	15	20
27	29	28	22	33	5.0	20	4.1	55	16	19	15	19
28	24	31	24	26	5.1	15	3.9	112	14	15	13	20
29	21	24	25	20	---	12	4.1	108	13	12	13	21
30	20	14	20	20	---	40	4.3	95	19	13	14	22
31	18	---	18	59	---	76	---	83	---	14	14	---
TOTAL	782	1115	883	718	254.3	845.8	1075.3	980.8	488.6	1072	585.6	913
MEAN	25.23	37.17	28.48	23.16	9.082	27.28	35.84	31.64	16.29	34.58	18.89	30.43
MAX	45	69	54	59	27	150	85	112	72	53	42	46
MIN	13	14	14	12	4.6	4.7	3.9	3.5	2.0	12	8.7	16
AC-FT	1550	2210	1750	1420	504	1680	2130	1950	969	2130	1160	1810

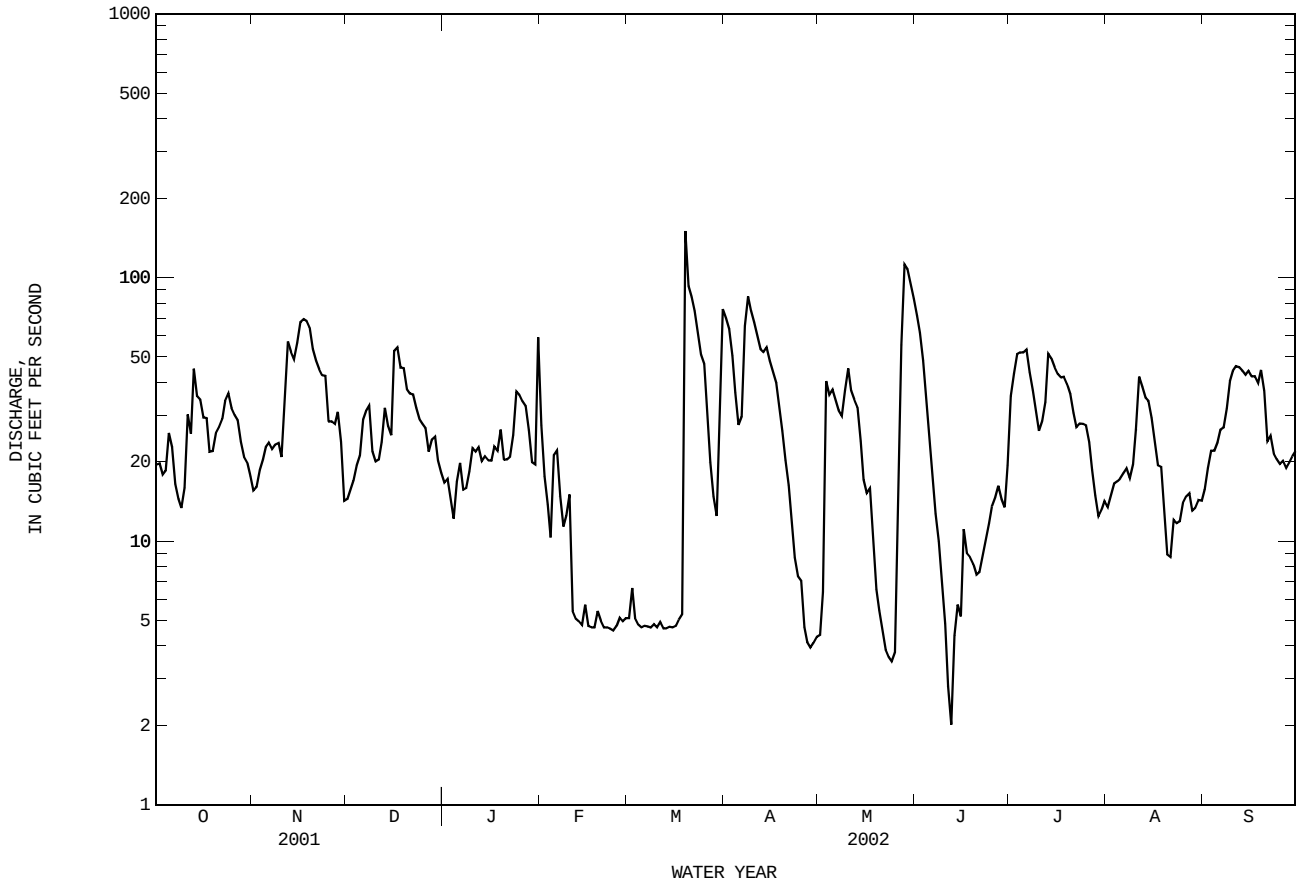
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2002z, BY WATER YEAR (WY)

MEAN	10.16	10.11	22.32	9.572	18.45	28.68	20.53	46.62	42.68	8.566	11.64	8.455
MAX	110	81.5	416	66.0	162	132	169	336	362	36.0	143	37.8
(WY)	1992	1992	1992	1992	1992	1992	1990	1989	1989	1995	1995	2001
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1978 - 2002z	
ANNUAL TOTAL	10535.2		9713.4			
ANNUAL MEAN	28.86		26.61		19.82	
HIGHEST ANNUAL MEAN					89.9	1992
LOWEST ANNUAL MEAN					2.18	1978
HIGHEST DAILY MEAN	122	Mar 9	150	Mar 19	4380	Dec 20 1991
LOWEST DAILY MEAN	5.1	Jun 1	2.0	Jun 12	0.54	Aug 5 1996
ANNUAL SEVEN-DAY MINIMUM	5.5	May 23	4.5	May 19	0.70	Oct 22 1992
MAXIMUM PEAK FLOW			1730	Mar 19	8940	Jun 13 1989
MAXIMUM PEAK STAGE			7.02	Mar 19	11.85	Jun 13 1989
ANNUAL RUNOFF (AC-FT)	20900		19270		14360	
10 PERCENT EXCEEDS	57		52		32	
50 PERCENT EXCEEDS	24		22		4.3	
90 PERCENT EXCEEDS	6.6		4.9		2.3	

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^2.

PERIOD OF RECORD.--Apr. 1965 to Sept. 1985, June 1998 to current year.

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

REMARKS.--No estimated daily contents. Records good. The lake is formed by a 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. Conservation pool storage is 25,730 acre-ft. 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 (top of conservation pool)	733.5
Lowest gated outlet (invert)	690.0

COOPERATION.--Capacity table provided by Texas Water Development Board, designed Capacity Table No. 2, and used for the 2002 WY.

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 contents, 34,180 acre-ft, Mar. 20, elevation, 738.52 ft; minimum contents, 19,880 acre-ft, Dec. 10, elevation, 729.58 ft.

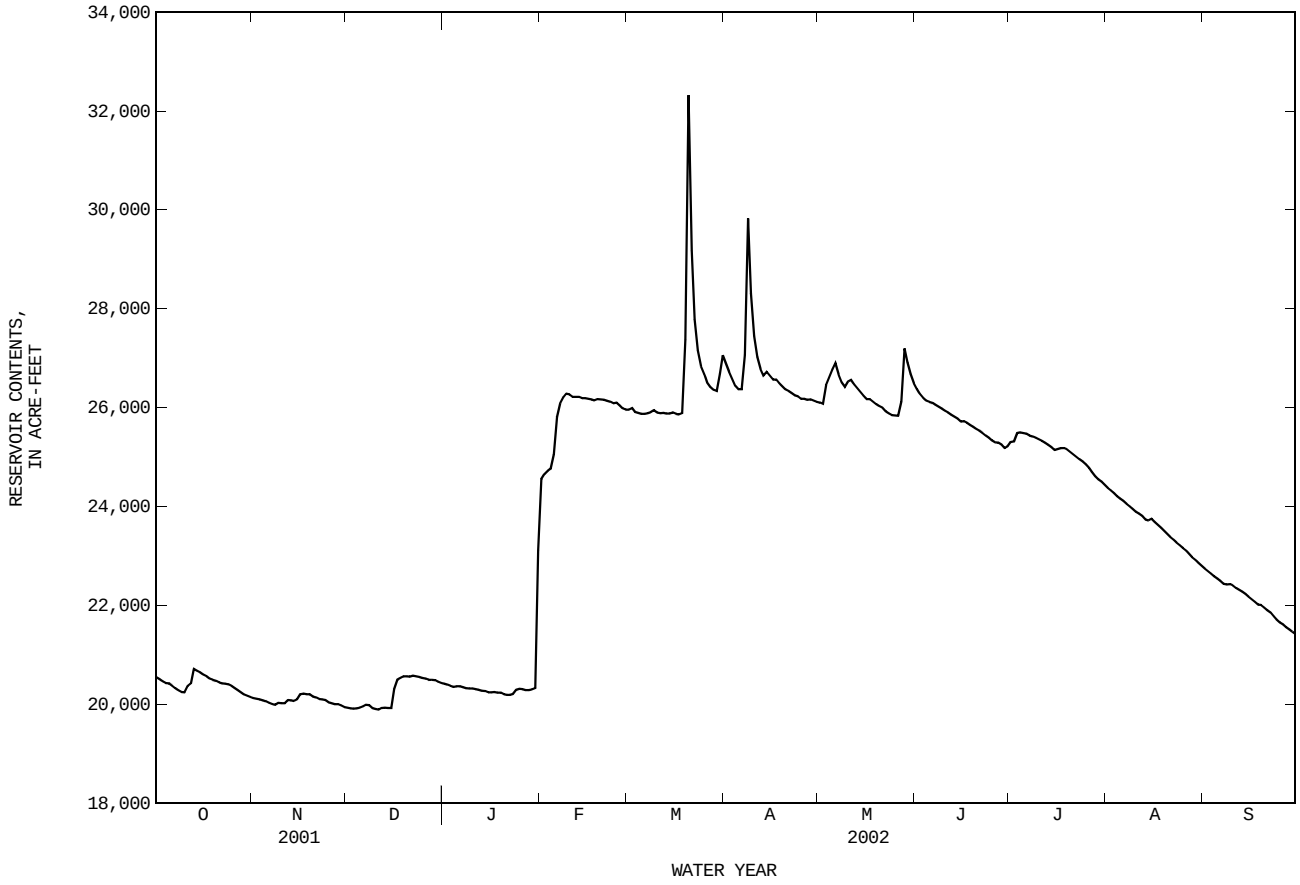
RESERVOIR STORAGE FROM DCP, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20540	20120	19930	20410	24550	25950	26890	26100	26370	25300	24380	22750
2	20500	20110	19910	20390	24660	25990	26720	26070	26270	25310	24320	22700
3	20460	20100	19910	20370	24720	25910	26570	26460	26190	25480	24270	22640
4	20430	20080	19910	20350	24760	25890	26440	26610	26140	25490	24200	22580
5	20420	20050	19930	20360	25050	25870	26370	26770	26110	25480	24160	22540
6	20370	20030	19950	20360	25810	25870	26370	26890	26090	25470	24110	22490
7	20320	20000	19980	20340	26080	25880	27070	26670	26050	25430	24050	22430
8	20280	19990	19980	20320	26210	25910	29820	26510	26010	25410	24000	22420
9	20250	20020	19920	20320	26280	25940	28300	26410	25980	25390	23950	22430
10	20240	20020	19900	20320	26270	25890	27450	26520	25930	25350	23890	22400
11	20370	20020	19890	20310	26220	25880	27020	26560	25900	25320	23850	22350
12	20420	20080	19920	20290	26210	25890	26780	26460	25850	25290	23800	22310
13	20710	20080	19930	20270	26220	25880	26650	26390	25810	25250	23740	22270
14	20670	20070	19920	20260	26190	25880	26720	26300	25770	25200	23720	22220
15	20640	20100	19920	20240	26190	25900	26640	26230	25710	25140	23750	22170
16	20590	20200	20310	20240	26180	25870	26560	26170	25730	25160	23690	22120
17	20560	20210	20490	20240	26160	25860	26570	26170	25690	25180	23630	22070
18	20520	20200	20530	20230	26140	25890	26490	26120	25650	25180	23570	22010
19	20490	20200	20560	20230	26170	27370	26430	26070	25610	25150	23510	22010
20	20470	20160	20560	20200	26160	32320	26370	26030	25560	25100	23450	21960
21	20440	20130	20560	20190	26160	29170	26330	25990	25530	25050	23380	21900
22	20420	20100	20580	20180	26140	27780	26290	25920	25480	25010	23320	21850
23	20410	20090	20560	20210	26120	27150	26250	25880	25430	24950	23270	21780
24	20400	20080	20550	20290	26080	26840	26230	25850	25380	24910	23220	21710
25	20370	20030	20530	20310	26100	26680	26180	25840	25330	24850	23160	21650
26	20330	20010	20510	20300	26040	26510	26180	25840	25300	24770	23110	21610
27	20280	20000	20490	20290	25980	26410	26150	26120	25290	24690	23030	21550
28	20240	20000	20490	20280	25960	26360	26160	27190	25250	24610	22970	21510
29	20190	19970	20480	20300	---	26330	26140	26910	25180	24550	22920	21460
30	20170	19940	20450	20320	---	26680	26110	26670	25210	24500	22850	21420
31	20140	---	20430	23110	---	27060	---	26500	---	24440	22800	---
MEAN	20410	20070	20230	20380	25890	26540	26680	26330	25730	25110	23620	22110
MAX	20710	20210	20580	23110	26280	32320	29820	27190	26370	25490	24380	22750
MIN	20140	19940	19890	20180	24550	25860	26110	25840	25180	24440	22800	21420
(+)	729.77	729.63	729.98	731.79	733.64	734.34	733.74	733.98	733.17	732.67	731.59	730.66
(@)	-440	-200	+490	+2680	+2850	+1100	-950	+390	-1290	-770	-1640	-1380

CAL YR 2001 MAX 29320 MIN 19890 (@) -2450
WTR YR 2002 MAX 32320 MIN 19890 (@) +840

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

08091900 Lake Pat Cleburne near Cleburne, TX--Continued



08092000 Nolan River at Blum, TX
(Flood-hydrograph partial-record station)

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^2.

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 Jul. 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 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^3/s (47,890 acre-ft/yr).

AVERAGE DISCHARGE FOR REGULATED PERIOD.--21 years (water years 1965-85), 81.2 ft^3/s (58,830 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1925, 1949-64).--Maximum discharge prior to regulation by Lake Pat Cleburne, 25,000 ft^3/s May 17, 1949 (gage height, 24.0 ft, from floodmark).

EXTREMES FOR REGULATED PERIOD.--Maximum discharge, 79,600 ft^3/s May 17, 1989 (gage height, 33.44 ft), from rating curve extended above 22,200 ft^3/s on basis of contracted-opening measurement of peak flow; no flow at times.

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 CURRENT YEAR.--Peak discharges greater than base discharge of 1,220 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 13	0300	1,940	5.90	Mar 20	0315	*9,990	*13.33
Dec 16	0745	7,250	10.92	Apr 8	0245	5,520	9.38
Jan 31	0900	5,640	9.49	May 3	1230	1,930	5.89
Feb 5	1845	1,400	5.25	May 27	2330	1,950	5.91

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
FEB													
28...	1512	36	506	8.7	12.0	14.3	134	<2.0	200	34	68.6	6.20	27.6
MAY													
14...	1100	E18	416	8.4	21.0	9.7	111	2.2	170	11	59.4	4.88	19.9
JUN													
19...	0945	55	794	8.5	26.0	11.4	143	2.9	260	100	91.5	7.94	58.4
AUG													
15...	0925	E46	1280	7.9	27.0	6.9	88	<2.0	330	180	117	8.90	101

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
FEB													
28...	.9	23	6.93	3	192	163	47.3	25.1	.3	.41	292	289	<10
MAY													
14...	.7	20	5.74	2	187	157	30.6	17.2	.3	3.55	254	241	12
JUN													
19...	2	31	16.1	3	187	159	137	58.3	.3	2.81	498	471	<10
AUG													
15...	2	40	5.50	1	184	153	279	119	.5	6.80	811	736	<10

Date	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)
FEB													
28...	2.07	.013	2.08	<.04	.33	.030	.02	.055	4.1	<1	<.05	<2	46
MAY													
14...	1.21	.008	1.22	<.04	.48	.108	.08	.251	6.2	2	.17	2	52
JUN													
19...	.64	.023	.67	<.04	.53	.040	.02	.074	6.3	<1	.45	3	80
AUG													
15...	1.05	.016	1.07	<.04	.66	.38	.36	1.09	8.4	1	.73	5	101

Date	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)
FEB													
28...	<.06	E.04	1.0	.30	1.1	<10	.15	2.4	<.01	13.9	.99	<2	<1
MAY													
14...	<.06	.04	<.8	.36	1.4	E6	E.07	4.6	<.01	14.0	2.03	<2	<1
JUN													
19...	<.06	.31	E.5	.85	1.8	<10	.13	2.4	--	132	1.94	<2	<1
AUG													
15...	<.06	.57	<.8	1.57	2.3	<10	.16	17.0	<.01	262	5.58	<2	<1

08092000 Nolan River at Blum, TX--Continued

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

Date	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
FEB		
28...	7	.85
MAY		
14...	4	.54
JUN		
19...	8	.64
AUG		
15...	8	.41

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

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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^2, approximately, of which 9,566 mi^2 probably is noncontributing.

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Dec. 1951 to Sept. 2000 (U.S. Army Corps of Engineers furnished contents), Oct. 2000 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.--No estimated daily contents. 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^3/s. The capacity table is based on a survey made in Apr. and May 1959. Conservation pool storage is 627,302 acre-ft. 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

COOPERATION.--Capacity tables furnished by the U.S. Army Corps of Engineers.

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 contents, 651,700 acre-ft, Apr. 11, May 29, elevation, 534.03 ft; minimum contents, 444,800 acre-ft, Dec. 14, elevation, 524.05 ft.

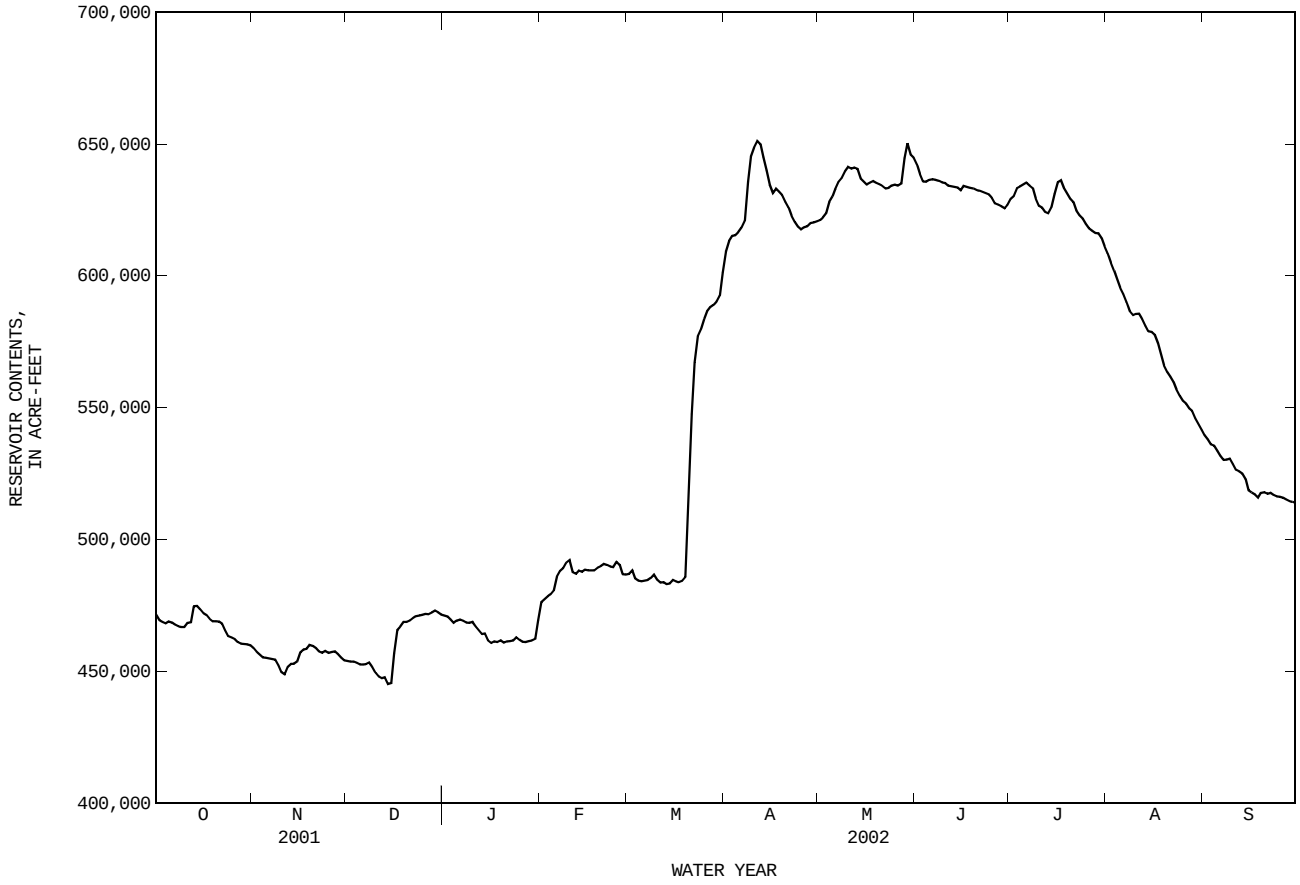
RESERVOIR STORAGE FROM DCP, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	471300	458900	453800	471100	476200	486900	609200	621000	642100	629200	608400	539400
2	469200	457400	453600	470700	477300	488200	613200	622100	638700	630300	604900	537900
3	468500	456300	453700	469600	478400	485200	615100	623700	635700	633200	601800	536000
4	468100	455200	453100	468300	479100	484300	615300	628000	635600	633800	598400	535400
5	468900	455100	452500	469200	480600	484100	616600	630000	636300	634500	595400	533500
6	468400	454800	452600	469500	485900	484400	618200	633000	636600	635300	593000	531700
7	467500	454600	452600	469000	488100	484600	620800	635600	636300	634200	590000	530100
8	467000	454400	453200	468400	489200	485300	635600	637100	635900	633200	586500	530200
9	466700	452100	451600	468300	491200	486600	645200	639500	635400	629300	584900	530700
10	466800	449600	449400	468700	492100	484700	648700	641200	635100	626600	585500	528700
11	468300	448800	447900	466900	487500	483700	651100	640600	634100	625800	585600	526300
12	468600	451700	447300	465500	486900	483700	649800	641000	633900	624100	583500	525700
13	474600	452800	447700	464100	488100	483000	644800	640400	633700	623600	581000	524900
14	474700	452700	445200	464300	487600	483200	639900	636800	633400	625900	578900	522800
15	473400	453600	445500	461700	488500	484600	634400	635700	632300	631000	578600	518600
16	471900	457100	456800	460600	488200	484000	631200	634500	634000	635300	577600	517700
17	471200	458200	465600	461200	488200	483700	633000	635300	633700	636100	574400	517000
18	469800	458500	467000	461000	488200	484200	631800	635800	633300	633300	570000	515800
19	468900	460000	468700	461700	489200	485600	630600	635100	633000	631200	565900	517600
20	468900	459600	468700	460800	489800	515400	628000	634600	632500	629200	563400	517800
21	468800	458700	469100	461300	490700	547500	625800	634000	632200	627800	561700	517200
22	467900	457400	470200	461400	490300	567200	622800	633100	631800	624700	559600	517600
23	465500	456900	470900	461700	489700	576900	620400	633300	631300	622800	556800	516700
24	463200	457700	471100	462800	489400	579600	618600	634100	630700	621700	554500	516300
25	462800	456900	471300	461800	491400	583500	617500	634500	629600	619600	552500	516100
26	462200	457200	471700	461100	490300	586500	618400	634200	627400	617900	551400	515800
27	461000	457500	471600	461100	486800	588000	618700	634900	626900	617000	549600	515000
28	460500	456500	472200	461400	486600	588900	619900	644600	626300	616200	548700	514400
29	460300	455300	472900	461700	---	590200	620200	650200	625500	616100	545800	514300
30	460200	454100	472300	462300	---	592500	620500	646000	626800	614200	543700	513800
31	459800	---	471500	469200	---	601300	---	644700	---	611200	541500	---
MEAN	467300	455700	460400	464700	487000	520200	627200	635600	633000	626600	573300	523200
MAX	474700	460000	472900	471100	492100	601300	651100	650200	642100	636100	608400	539400
MIN	459800	448800	445200	460600	476200	483000	609200	621000	625500	611200	541500	513800
(+)	524.93	524.60	525.59	525.47	526.42	531.88	532.72	533.74	532.99	532.32	529.18	527.83
(@)	-12100	-5700	+17400	-2300	+17400	+114700	+19200	+24200	-17900	-15600	-69700	-27700

CAL YR 2001 MAX 734900 MIN 445200 (@) -16100
WTR YR 2002 MAX 651100 MIN 445200 (@) +41900

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

08092500 Lake Whitney near Whitney, TX--Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Mar. 1960 to Aug. 1987, Jan. 1999 to current year.
BIOCHEMICAL DATA: Sept. 1970 to Aug. 1987, Jan. 1999 to current year.
PESTICIDE DATA: Aug. 1999 to current year.

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

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

315203097222601 -- Lk Whitney Site AC

Date	Time	SAM-PLING DEPTH (FEET) (00003)	RESER-VOIR STORAGE (AC-FT) (00054)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
MAR													
01...	1523	1.00	487000	1330	8.3	10.0	10.3	93	E3k	E1k	250	130	70.9
01...	1528	10.0	--	1340	8.3	10.0	10.2	92	--	--	--	--	--
01...	1533	20.0	--	1340	8.2	10.0	10.1	91	--	--	--	--	--
01...	1539	30.0	--	1340	8.2	10.0	10.1	91	--	--	--	--	--
01...	1544	40.0	--	1340	8.2	10.0	10.2	92	--	--	--	--	--
01...	1549	50.0	--	1340	8.2	10.0	10.1	91	--	--	--	--	--
01...	1555	60.0	--	1340	8.2	10.0	10.2	92	--	--	--	--	--
01...	1600	70.0	--	1340	8.2	10.0	10.3	93	--	--	--	--	--
01...	1605	80.0	--	1340	8.2	10.0	10.2	92	--	--	--	--	--
01...	1610	93.0	--	1340	8.2	10.0	10.1	91	--	--	250	130	71.1
MAY													
13...	1600	1.00	640000	1290	8.3	22.5	7.6	88	E2k	E4k	250	140	73.4
13...	1602	10.0	--	1290	8.3	22.5	7.5	87	--	--	--	--	--
13...	1604	20.0	--	1290	8.2	22.5	7.5	87	--	--	--	--	--
13...	1606	30.0	--	1290	8.2	22.5	7.4	86	--	--	--	--	--
13...	1608	40.0	--	1290	8.2	22.5	7.2	84	--	--	--	--	--
13...	1610	50.0	--	1290	8.2	22.5	7.2	84	--	--	--	--	--
13...	1612	55.0	--	1290	8.2	22.5	7.4	86	--	--	--	--	--
13...	1613	57.0	--	1290	8.2	22.5	7.4	86	--	--	--	--	--
13...	1614	60.0	--	1300	7.4	18.0	1.0	11	--	--	--	--	--
13...	1616	70.0	--	1300	7.4	16.5	.8	8	--	--	--	--	--
13...	1618	80.0	--	1300	7.4	16.0	1.1	11	--	--	--	--	--
13...	1620	90.0	--	1300	7.4	15.5	1.1	11	--	--	--	--	--
13...	1622	98.0	--	1300	7.4	15.5	.6	6	--	--	260	150	75.2
AUG													
13...	1152	1.00	582000	1280	7.5	28.6	3.9	51	E1k	E1k	240	120	69.4
13...	1154	10.0	--	1280	7.3	28.0	2.1	27	--	--	--	--	--
13...	1156	15.0	--	1270	7.3	28.0	1.4	18	--	--	--	--	--
13...	1158	20.0	--	1280	7.2	27.9	.6	7	--	--	--	--	--
13...	1200	25.0	--	1280	7.2	27.6	.0	0	--	--	--	--	--
13...	1202	30.0	--	1270	7.2	27.4	.0	0	--	--	--	--	--
13...	1204	40.0	--	1280	7.2	25.8	.0	0	--	--	--	--	--
13...	1206	50.0	--	1290	7.1	23.2	.0	0	--	--	--	--	--
13...	1208	60.0	--	1300	7.1	22.2	.0	0	--	--	--	--	--
13...	1210	70.0	--	1300	7.1	20.6	.0	0	--	--	--	--	--
13...	1212	80.0	--	1300	7.1	19.5	.0	0	--	--	--	--	--
13...	1214	90.0	--	1310	7.1	18.6	.0	0	--	--	--	--	--
13...	1216	95.0	--	1310	7.0	18.4	.0	0	--	--	260	100	77.4

08092500 Lake Whitney near Whitney, TX--Continued

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

315203097222601 -- Lk Whitney Site AC

Date	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
MAR													
01...	16.9	165	5	59	5.48	112	135	272	.3	7.9	741	--	E.005
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	16.9	164	5	58	5.54	115	133	271	.3	8.0	740	--	E.005
MAY													
13...	16.3	152	4	56	5.33	107	125	246	.3	6.5	689	--	E.006
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	.23	.013
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	16.6	154	4	56	5.17	106	125	252	.3	8.6	701	.26	.017
AUG													
13...	16.5	157	4	58	5.14	116	119	249	.3	6.9	693	--	<.008
13...	--	--	--	--	--	--	--	--	--	--	--	--	<.008
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	<.008
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	16.7	158	4	56	5.48	160	107	249	.3	12.0	726	--	<.008

08092500 Lake Whitney near Whitney, TX--Continued

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

315203097222601 -- Lk Whitney Site AC

Date	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	BENZENE TOTAL (UG/L) (34030)	ETHYL-BENZENE TOTAL (UG/L) (34371)	META/PARA-XYLENE WATER UNFLTRD REC (UG/L) (85795)	O-XYLENE WATER WHOLE TOTAL (UG/L) (77135)
MAR													
01...	.19	E.03	--	.30	.005	<.02	--	<10	E.9n	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	.19	E.03	--	.34	.006	<.02	--	<10	5.9	--	--	--	--
MAY													
13...	E.04	<.04	--	.34	.007	<.02	--	<10	<2.0	<.2	<.2	<.2	<.2
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	.25	.05	.36	.40	.006	<.02	--	<10	4.1	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	.28	.12	.35	.47	.021	E.01	--	E10	500	--	--	--	--
AUG													
13...	<.05	<.04	--	.26	E.004	<.02	--	<10	E1.5n	<.2	<.2	<.2	<.2
13...	<.05	<.04	--	.26	E.004	<.02	--	<10	E.9	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	<.05	<.04	--	.28	.004	<.02	--	<10	3.7	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	<.05	1.83	.37	2.2	.37	.36	1.11	55	1270	--	--	--	--

08092500 Lake Whitney near Whitney, TX--Continued

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

315203097222601 -- Lk Whitney Site AC

Date	METHYL TERT-BUTYL ETHER WAT UNF REC (UG/L) (78032)	TOLUENE TOTAL (UG/L) (34010)	XYLENE WATER UNFLTRD REC (UG/L) (81551)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)
MAR													
01...	--	--	--	<.006	<.006	<.004	<.005	.194	<.050	<.010	<.002	<.041	<.020
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MAY													
13...	<.2	<.2	<.2	<.006	.012	.015	<.005	.256	<.050	<.010	<.002	<.041	<.020
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AUG													
13...	E.1	<.2	<.2	<.006	<.006	<.004	<.005	.213	<.050	<.010	<.002	<.041	<.020
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08092500 Lake Whitney near Whitney, TX--Continued

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

315203097222601 -- Lk Whitney Site AC

Date	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)
MAR													
01...	<.005	<.006	<.018	<.003	E.017	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004
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01...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
13...	<.005	<.006	<.018	<.003	E.021	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004
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AUG													
13...	<.005	<.006	<.018	<.003	E.018	E.002n	<.005	<.02	<.002	<.009	<.005	<.003	<.004
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08092500 Lake Whitney near Whitney, TX--Continued

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

315203097222601 -- Lk Whitney Site AC

Date	LINURON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALATHION, DISSOLVED (UG/L) (39532)	METOLACHLOR WATER DISSOLV (UG/L) (39415)	METRIBUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOLINATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROPAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P’ DDE DISSOLV (UG/L) (34653)	PARATHION, DISSOLVED (UG/L) (39542)	METHYL PARATHION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEBULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDIMETHALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PROMETON, WATER, DISS, REC (UG/L) (04037)
MAR													
01...	<.035	<.027	E.008n	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
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01...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
13...	<.035	<.027	.018	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01
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AUG													
13...	<.035	<.027	E.011n	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	Mn
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
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08092500 Lake Whitney near Whitney, TX--Continued

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

315203097222601 -- Lk Whitney Site AC

Date	PROPACHLOR, WATER, DISS, REC (UG/L) (04024)	PROPANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PROPARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRONAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SIMAZINE, WATER, DISS, REC (UG/L) (04035)	TEBUTHIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TERBACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TERBUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIOBENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIALLATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRIFLURALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
MAR											
01...	<.010	<.011	<.02	<.004	.056	<.02	<.034	<.02	<.005	<.002	<.009
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
MAY											
13...	<.010	<.011	<.02	<.004	.101	<.02	<.034	<.02	<.005	<.002	<.009
13...	--	--	--	--	--	--	--	--	--	--	--
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13...	--	--	--	--	--	--	--	--	--	--	--
AUG											
13...	<.010	<.011	<.02	<.004	.100	E.01n	<.034	<.02	<.005	<.002	<.009
13...	--	--	--	--	--	--	--	--	--	--	--
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315214097222001 -- Lk Whitney Site AL

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
MAR							
01...	1615	1.00	1340	8.3	10.5	10.3	95
01...	1618	10.0	1340	8.3	10.0	10.3	94
01...	1620	20.0	1340	8.3	10.0	10.3	94
01...	1622	30.0	1330	8.3	10.0	10.3	94
01...	1624	44.0	1340	8.2	10.0	10.1	92
MAY							
13...	1710	1.00	1290	8.3	22.5	7.7	90
13...	1712	10.0	1290	8.3	22.5	7.6	88
13...	1714	20.0	1290	8.2	22.5	7.5	87
13...	1716	30.0	1290	8.2	22.5	7.4	86
13...	1718	40.0	1290	8.2	22.5	7.3	85
13...	1720	50.0	1290	8.2	22.5	7.2	84
13...	1722	55.0	1290	8.2	22.5	7.1	83
AUG							
13...	1250	1.00	1270	7.6	28.6	4.1	54
13...	1252	10.0	1270	7.6	28.4	3.9	51
13...	1254	20.0	1270	7.3	27.9	1.2	16
13...	1256	30.0	1270	7.2	27.4	.0	0
13...	1258	40.0	1280	7.2	25.9	.0	0
13...	1300	54.0	1290	7.1	23.6	.0	0

08092500 Lake Whitney near Whitney, TX--Continued

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

315432097234601 -- Lk Whitney Site CC

Date	Time	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
MAR							
01...	1028	1.00	1320	8.2	10.0	10.4	94
01...	1030	10.0	1320	8.2	10.0	10.3	93
01...	1033	20.0	1320	8.2	10.0	10.3	93
01...	1035	30.0	1320	8.2	10.0	10.3	93
01...	1038	40.0	1320	8.2	10.0	10.2	92
01...	1040	50.0	1320	8.2	10.0	10.3	93
01...	1045	60.0	1330	8.2	10.0	10.2	92
01...	1050	70.0	1320	8.2	10.0	10.1	91
01...	1055	83.0	1320	8.2	10.0	9.8	89
MAY							
13...	1206	1.00	1290	8.4	23.0	7.8	91
13...	1208	10.0	1290	8.4	22.5	7.7	89
13...	1210	20.0	1290	8.3	22.5	7.5	87
13...	1212	30.0	1290	8.3	22.5	7.4	86
13...	1214	40.0	1290	8.2	22.0	6.6	76
13...	1216	50.0	1300	7.6	19.5	2.2	24
13...	1218	60.0	1300	7.6	18.5	1.5	16
13...	1220	70.0	1300	7.5	17.0	.7	7
13...	1222	80.0	1300	7.5	16.5	.4	4
13...	1224	87.0	1300	7.5	16.0	.6	6
AUG							
13...	0828	1.00	1280	7.8	28.9	5.9	78
13...	0830	10.0	1280	7.9	29.0	6.1	80
13...	0832	20.0	1280	7.8	28.7	5.4	70
13...	0834	30.0	1280	7.2	28.2	.1	1
13...	0836	40.0	1280	7.2	27.3	.0	0
13...	0838	50.0	1300	7.1	24.6	.0	0
13...	0840	60.0	1300	7.1	23.4	.0	0
13...	0842	70.0	1310	7.0	21.4	.0	0
13...	0844	84.0	1320	6.9	19.8	.0	0

315722097240201 -- Lk Whitney Site DC

Date	Time	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
MAR													
01...	1116	1.00	1240	8.3	10.5	10.3	94	E1k	1k	240	120	70.8	16.1
01...	1120	10.0	1250	8.3	10.0	10.0	90	--	--	--	--	--	--
01...	1124	20.0	1260	8.3	10.0	10.0	90	--	--	--	--	--	--
01...	1128	30.0	1280	8.3	10.0	10.1	91	--	--	--	--	--	--
01...	1132	40.0	1280	8.3	10.0	10.1	91	--	--	--	--	--	--
01...	1136	50.0	1300	8.3	10.0	10.2	92	--	--	--	--	--	--
01...	1140	60.0	1300	8.3	10.0	10.1	91	--	--	--	--	--	--
01...	1144	73.0	1300	8.2	10.0	10.1	91	--	--	250	130	71.7	16.6
MAY													
13...	1244	1.00	1300	8.3	23.5	7.2	85	<1k	<1k	260	140	75.5	16.5
13...	1246	10.0	1290	8.3	23.5	7.1	84	--	--	--	--	--	--
13...	1248	20.0	1300	8.3	23.5	7.0	83	--	--	--	--	--	--
13...	1250	30.0	1290	8.2	23.0	6.3	74	--	--	--	--	--	--
13...	1252	40.0	1300	7.8	20.5	3.3	37	--	--	--	--	--	--
13...	1254	50.0	1300	7.5	18.0	.6	6	--	--	--	--	--	--
13...	1256	60.0	1300	7.5	17.5	.1	1	--	--	--	--	--	--
13...	1258	70.0	1300	7.5	17.0	.1	1	--	--	--	--	--	--
13...	1300	77.0	1310	7.5	17.0	.1	1	--	--	260	140	75.3	16.4
AUG													
13...	0904	1.00	1280	7.9	29.5	6.3	84	E1k	E1k	240	130	67.0	16.6
13...	0906	10.0	1280	7.9	29.5	6.2	83	--	--	--	--	--	--
13...	0908	20.0	1280	7.9	29.5	6.1	81	--	--	--	--	--	--
13...	0910	30.0	1280	7.7	29.2	4.9	65	--	--	--	--	--	--
13...	0912	35.0	1290	7.2	28.5	.2	2	--	--	--	--	--	--
13...	0914	40.0	1290	7.2	27.6	.0	0	--	--	--	--	--	--
13...	0916	50.0	1300	7.1	24.0	.0	0	--	--	--	--	--	--
13...	0918	60.0	1310	7.0	22.4	.0	0	--	--	--	--	--	--
13...	0920	74.0	1310	7.0	22.0	.0	0	--	--	260	97	75.4	16.6

315722097240201 -- Lk Whitney Site DC

Date	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
MAR													
01...	148	4	56	5.30	124	124	246	.3	7.1	693	--	E.006	.24
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	159	4	58	5.37	120	130	259	.3	7.7	723	--	<.008	.21
MAY													
13...	155	4	56	5.19	114	124	248	.3	6.2	699	--	<.008	<.05
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	.11	.010	.12
13...	--	--	--	--	--	--	--	--	--	--	.21	.013	.23
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	153	4	56	5.16	113	126	254	.3	7.8	706	.25	.014	.26
AUG													
13...	158	4	59	5.36	110	119	251	.3	7.0	689	--	<.008	<.05
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	<.008	<.05
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	155	4	56	5.35	160	109	247	.3	9.8	717	--	<.008	<.05

315722097240201 -- Lk Whitney Site DC

Date	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
MAR								
01...	E.03	--	.31	.005	<.02	--	<10	<2.0
01...	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--
01...	E.03	--	.30	.005	<.02	--	<10	5.0
MAY								
13...	<.04	--	.34	.006	<.02	--	<10	E.8n
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	E.04	--	.38	.006	<.02	--	<10	E1.9b
13...	E.04	--	.33	.006	<.02	--	<10	62.0
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	.05	.35	.40	.007	<.02	--	<10	202
AUG								
13...	<.04	--	.28	.005	<.02	--	<10	E.9n
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	<.04	--	.28	.006	<.02	--	<10	8.2
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	1.43	.36	1.8	.186	.17	.515	118	870

08092500 Lake Whitney near Whitney, TX--Continued

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

320122097260901 -- Lk Whitney Site FC

Date	Time	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
MAR													
01...	1304	1.00	1150	8.5	10.5	11.0	101	<.008	.24	<.04	--	.29	.006
01...	1307	10.0	1150	8.5	10.0	10.5	95	--	--	--	--	--	--
01...	1310	20.0	1150	8.4	10.0	10.3	93	--	--	--	--	--	--
01...	1314	30.0	1140	8.3	9.5	9.7	87	--	--	--	--	--	--
01...	1318	45.0	1130	8.3	9.0	9.1	80	<.008	.26	E.03	--	.33	.006
MAY													
13...	1406	1.00	1300	8.1	24.0	6.8	81	E.004	E.03	.08	.40	.48	.009
13...	1408	10.0	1300	8.1	24.0	6.8	81	--	--	--	--	--	--
13...	1410	20.0	1300	8.1	24.0	6.7	80	--	--	--	--	--	--
13...	1412	30.0	1290	8.1	23.5	6.5	77	--	--	--	--	--	--
13...	1414	40.0	1300	8.0	23.5	5.9	70	--	--	--	--	--	--
13...	1416	50.0	1290	8.0	23.5	6.4	76	E.005	E.03	.11	.37	.48	.012
AUG													
13...	1016	1.00	1280	8.0	29.6	6.6	88	<.008	<.05	<.04	--	.29	.005
13...	1018	10.0	1280	8.0	29.5	6.1	81	--	--	--	--	--	--
13...	1020	20.0	1290	7.5	29.3	3.5	47	--	--	--	--	--	--
13...	1022	30.0	1290	7.6	29.2	3.8	50	--	--	--	--	--	--
13...	1024	40.0	1290	7.3	28.9	1.7	22	--	--	--	--	--	--
13...	1026	48.0	1310	7.0	25.9	.0	0	<.008	<.05	1.37	.39	1.8	.21

320122097260901 -- Lk Whitney Site FC

Date	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
MAR				
01...	<.02	--	<10	<2.0
01...	--	--	--	--
01...	--	--	--	--
01...	--	--	--	--
01...	<.02	--	<10	E2.9b
MAY				
13...	<.02	--	<10	E2.7b
13...	--	--	--	--
13...	--	--	--	--
13...	--	--	--	--
13...	--	--	--	--
13...	<.02	--	<10	76.3
AUG				
13...	<.02	--	<10	3.7
13...	--	--	--	--
13...	--	--	--	--
13...	--	--	--	--
13...	--	--	--	--
13...	.19	.586	265	1640

315907097222801 -- Lk Whitney Site P07

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)
MAR													
01...	1203	1.00	1250	8.3	11.0	10.3	95	--	E.006	.25	E.03	--	.30
01...	1208	10.0	1250	8.3	11.0	10.3	95	--	--	--	--	--	--
01...	1213	20.0	1250	8.3	11.0	10.1	93	--	--	--	--	--	--
01...	1218	30.0	1240	8.2	10.5	9.6	88	--	--	--	--	--	--
01...	1222	41.0	1240	8.2	10.5	9.0	82	--	<.008	.26	E.03	--	.33
MAY													
13...	1330	1.00	1290	8.3	24.5	7.4	89	--	<.008	<.05	<.04	--	.38
13...	1332	10.0	1290	8.3	24.0	6.9	83	--	--	--	--	--	--
13...	1334	20.0	1290	8.2	24.0	6.5	78	--	--	--	--	--	--
13...	1336	30.0	1300	8.1	22.5	5.6	65	--	--	--	--	--	--
13...	1338	40.0	1300	7.8	21.0	3.4	38	--	--	--	--	--	--
13...	1340	51.0	1310	7.5	18.0	.2	2	.20	.019	.22	.09	.36	.46
AUG													
13...	0944	1.00	1280	8.1	30.0	7.5	100	--	<.008	<.05	<.04	--	.28
13...	0946	10.0	1280	8.1	30.0	7.3	98	--	--	--	--	--	--
13...	0948	20.0	1280	8.1	29.8	7.0	93	--	--	--	--	--	--
13...	0950	30.0	1280	7.3	28.8	1.0	13	--	--	--	--	--	--
13...	0952	40.0	1280	7.2	27.4	.0	0	--	--	--	--	--	--
13...	0954	47.0	1290	7.1	25.9	.0	0	--	<.008	<.05	.63	.31	.94

315907097222801 -- Lk Whitney Site P07

Date	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	ORTHO-PHOSPHATE, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
MAR					
01...	.006	<.02	--	<10	E1.3n
01...	--	--	--	--	--
01...	--	--	--	--	--
01...	--	--	--	--	--
01...	.005	<.02	--	<10	8.9
MAY					
13...	.007	<.02	--	<10	E1.2n
13...	--	--	--	--	--
13...	--	--	--	--	--
13...	--	--	--	--	--
13...	--	--	--	--	--
13...	.009	<.02	--	<10	334
AUG					
13...	.005	<.02	--	<10	E3.0
13...	--	--	--	--	--
13...	--	--	--	--	--
13...	--	--	--	--	--
13...	--	--	--	--	--
13...	.052	.04	.132	226	981

320401097291301 -- Lk Whitney Site P11

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)
MAR													
01...	1357	1.00	792	8.4	10.5	10.8	99	12k	12k	210	56	65.1	11.3
01...	1404	10.0	808	8.2	10.5	9.3	85	--	--	--	--	--	--
01...	1410	19.0	770	8.2	10.0	9.0	81	--	--	210	58	65.9	11.1
MAY													
13...	1444	1.00	1140	7.8	24.5	5.2	63	E3k	E2k	240	110	71.3	14.6
13...	1446	10.0	1140	7.8	24.5	5.2	63	--	--	--	--	--	--
13...	1448	20.0	1220	7.9	24.0	5.4	65	--	--	--	--	--	--
13...	1450	25.0	1220	7.8	24.0	5.2	62	--	--	260	130	77.2	15.7
AUG													
13...	1046	1.00	1330	7.8	30.3	5.9	79	E1k	E1k	230	120	64.8	17.3
13...	1048	10.0	1330	7.7	30.1	5.0	67	--	--	--	--	--	--
13...	1050	15.0	1340	7.4	29.9	2.8	38	--	--	--	--	--	--
13...	1052	22.0	1350	7.1	29.5	.0	0	--	--	240	120	67.1	17.3

08092500 Lake Whitney near Whitney, TX--Continued

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

320401097291301 -- Lk Whitney Site P11

Date	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
MAR													
01...	73.8	2	43	4.69	153	72.9	115	.3	4.9	442	--	E.005	.63
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	70.0	2	41	4.70	153	69.7	106	.3	4.6	427	.64	.017	.65
MAY													
13...	125	4	53	5.24	126	100	201	.3	5.3	599	.10	.012	.11
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	140	4	54	5.28	126	103	214	.3	5.3	637	.06	.008	.07
AUG													
13...	167	5	60	5.63	110	117	267	.3	8.3	714	--	<.008	<.05
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	<.008	<.05
13...	172	5	60	5.59	121	114	269	.3	9.4	728	--	<.008	<.05

320401097291301 -- Lk Whitney Site P11

Date	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
MAR								
01...	<.04	--	.34	.010	<.02	--	<10	E1.2n
01...	--	--	--	--	--	--	--	--
01...	.05	.31	.36	.008	<.02	--	<10	10.2
MAY								
13...	.22	.37	.59	.026	<.02	--	E9	11.9
13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
13...	.21	.43	.64	.024	<.02	--	<10	36.8
AUG								
13...	<.04	--	.32	.008	<.02	--	<10	E2.1b
13...	--	--	--	--	--	--	--	--
13...	<.04	--	.32	.009	<.02	--	<10	111
13...	.25	.35	.61	.044	.03	.098	229	445

315500097204001 -- Lk Whitney Site P15

Date	Time	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
MAR													
01...	1007	1.00	1340	8.3	10.5	10.6	97	--	<.008	.19	E.03	--	.31
01...	1011	10.0	1340	8.3	10.5	10.5	96	--	--	--	--	--	--
01...	1015	21.0	1340	8.2	10.5	10.5	96	--	E.004	.19	E.02	--	.32
MAY													
13...	1136	1.00	1290	8.4	22.5	7.7	89	--	<.008	<.05	<.04	--	.31
13...	1138	10.0	1290	8.4	22.5	7.6	88	--	--	--	--	--	--
13...	1140	20.0	1290	8.4	22.5	7.4	86	--	--	--	--	--	--
13...	1142	30.0	1290	8.0	22.0	6.0	69	.06	.009	.07	.06	.35	.41
AUG													
13...	0810	1.00	1290	8.0	29.8	7.1	94	--	<.008	<.05	<.04	--	.30
13...	0812	10.0	1280	8.0	29.7	6.9	92	--	--	--	--	--	--
13...	0814	20.0	1290	7.9	29.4	6.4	85	--	--	--	--	--	--
13...	0816	27.0	1290	7.5	28.9	4.3	57	--	<.008	<.05	<.04	--	.30

08092500 Lake Whitney near Whitney, TX--Continued

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

315500097204001 -- Lk Whitney Site P15

Date	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
MAR				
01...	.005	<.02	<10	E2.0b
01...	--	--	--	--
01...	.005	<.02	<10	E2.3b
MAY				
13...	.006	<.02	<10	<2.0
13...	--	--	--	--
13...	--	--	--	--
13...	.007	<.02	<10	17.1
AUG				
13...	.004	<.02	<10	<2.0
13...	--	--	--	--
13...	--	--	--	--
13...	.005	<.02	<10	24.7

Remark codes used in this report:
  < -- Less than
  E -- Estimated value
  M -- Presence verified, not quantified

Value qualifier codes used in this report:
  b -- Value was extrapolated below
  k -- Counts outside acceptable range
  n -- Below the NDV

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08092600 Brazos River at Whitney Dam near Whitney, TX

LOCATION.--Lat 31°52′00", long 97°22′00", Hill Country, 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^2, of which 9,566 mi^2 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 C July 3, 1973; minimum daily, 0.0 C on Jan. 28, 29, 1948.

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

Date	Time	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	SODIUM PERCENT (00932)
MAY													
14...	1230	1290	8.5	23.0	9.3	111	250	130	72.1	17.0	166	5	58
JUN													
12...	1030	1320	8.3	24.0	8.6	104	260	130	75.5	16.3	154	4	56

Date	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CARBONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
MAY													
14...	5.38	2	139	118	126	251	.3	6.80	725	715	<10	<.008	.05
JUN													
12...	5.25	2	145	121	123	249	.2	7.05	744	704	<10	<.008	<.05

Date	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	ORTHOPHOSPHATE, DISSOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ANTIMONY, DISSOLVED (UG/L AS SB) (01095)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)
MAY													
14...	<.04	.40	.006	<.02	17.8	2	.18	<2	104	<.06	E.03	<.8	.21
JUN													
12...	<.04	.30	.005	<.02	5.2	1	.20	2	103	<.06	<.04	<.8	.16

Date	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY DISSOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DISSOLVED (UG/L AS U) (22703)
MAY											
14...	1.3	<10	<.08	2.3	<.01	4.6	1.93	<2	<1	2	1.26
JUN											
12...	2.5	<10	E.05	64.7	--	4.2	.29	<2	<1	2	1.27

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

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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^2, of which 9,566 mi^2, probably is noncontributing.

WATER-DISCHARGE RECORDS

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.--Records good except those for estimated daily discharges, which are fair. Since water year 1940, 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.

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEAR, 1939).--Maximum discharge, 39,800 ft^3/s, June 19, 1939, gage height, 19.16 ft.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252	883	248	432	486	354	53	313	2360	127	1730	662
2	990	581	58	272	52	992	42	313	2520	135	1910	1350
3	69	1200	89	785	30	384	69	323	1200	149	1860	950
4	30	193	310	388	85	166	45	252	121	134	1780	1040
5	28	28	550	51	1660	29	32	49	116	147	1320	823
6	25	24	241	37	452	29	34	36	121	626	1230	1140
7	24	24	64	263	665	29	46	36	120	670	2010	511
8	24	559	400	370	199	29	507	37	121	1470	1400	47
9	27	1470	382	54	64	499	2360	39	121	2230	406	1030
10	27	1670	1250	118	946	69	703	e1730	120	1020	41	1450
11	169	216	707	1090	1970	716	841	2530	528	857	804	817
12	66	175	615	850	439	89	2530	1660	123	816	957	254
13	315	385	205	284	47	28	4420	1920	125	1020	1180	628
14	111	93	1150	260	484	27	4500	1690	125	1910	702	2100
15	1490	407	78	1490	61	26	4510	734	e122	1060	41	1980
16	201	588	1160	309	444	292	2560	1010	e138	123	787	142
17	34	89	324	35	169	51	1750	765	162	1680	1720	194
18	902	62	139	70	301	33	1380	141	155	3270	2720	201
19	245	68	102	31	75	38	2620	117	122	1970	2080	231
20	34	54	83	28	37	74	2580	115	121	1370	673	199
21	28	537	75	27	34	35	2270	114	123	874	898	198
22	866	661	72	28	431	844	2170	112	122	2160	1130	200
23	1600	153	61	29	195	99	1460	113	123	540	1630	201
24	1010	42	55	874	45	30	2370	e113	123	1060	1320	201
25	38	36	53	82	32	25	820	e743	904	848	1310	202
26	416	37	50	538	1660	26	215	550	768	306	886	204
27	361	552	48	43	730	24	218	e533	204	41	578	204
28	33	641	47	29	386	24	217	e824	91	32	983	205
29	28	120	49	28	---	25	218	5060	77	33	1520	208
30	26	380	279	117	---	868	237	5130	e84.0	1750	957	212
31	25	---	436	616	---	150	---	2280	---	991	1120	---
TOTAL	9494	11928	9380	9628	12179	6104	41777	29382	11260.0	29419	37683	17784
MEAN	306.3	397.6	302.6	310.6	435.0	196.9	1393	947.8	375.3	949.0	1216	592.8
MAX	1600	1670	1250	1490	1970	992	4510	5130	2520	3270	2720	2100
MIN	24	24	47	27	30	24	32	36	77	32	41	47
AC-FT	18830	23660	18610	19100	24160	12110	82860	58280	22330	58350	74740	35270

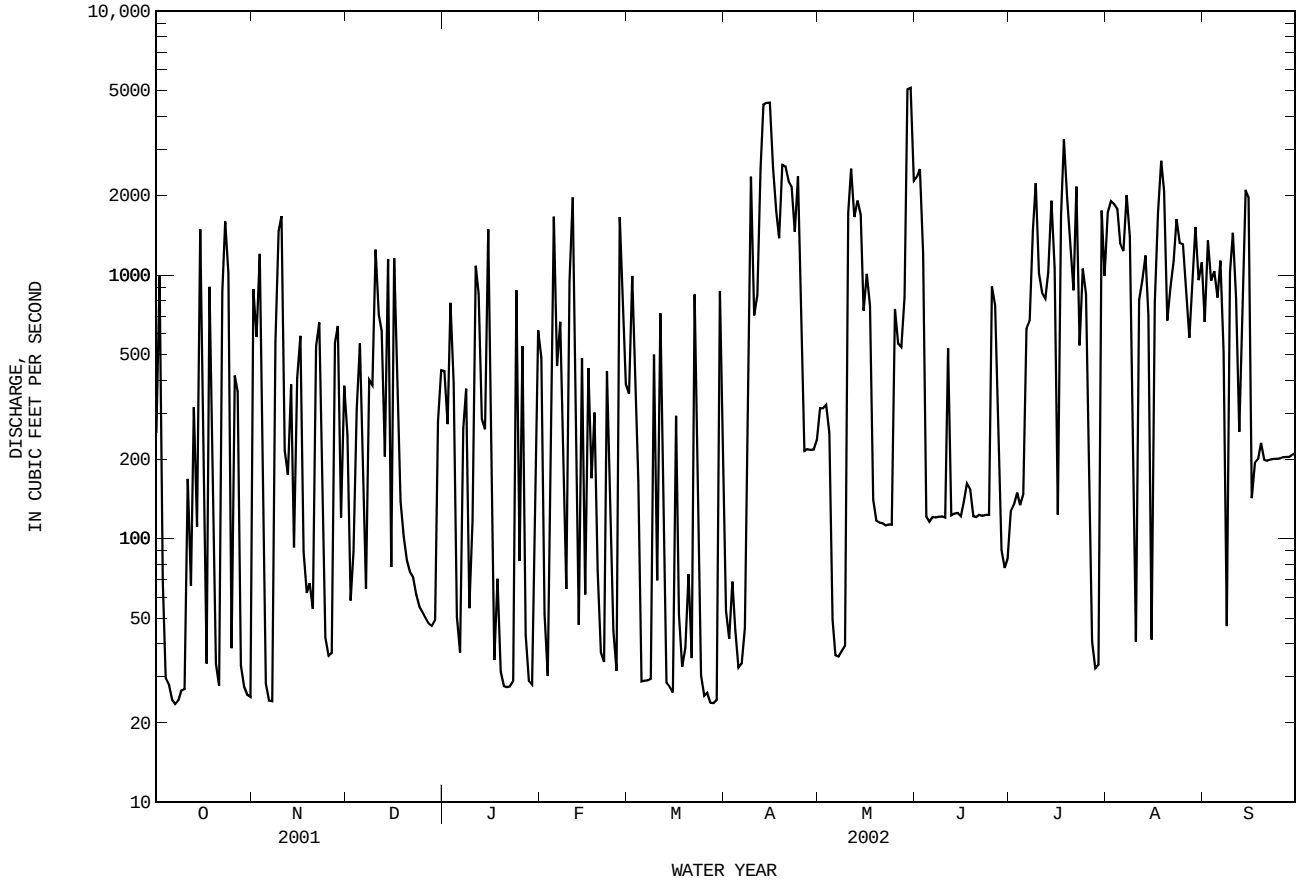
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2002z, BY WATER YEAR (WY)

MEAN	1544	1043	855.9	1067	1206	1590	1515	3456	3250	1348	1028	1020
MAX	12300	7201	7148	18010	11190	13700	14340	29670	35640	8110	5252	8249
(WY)	1982	1975	1992	1992	1992	1992	1942	1957	1957	1982	1995	1966
MIN	5.87	20.5	28.9	9.92	15.6	26.7	12.5	13.0	95.5	28.6	61.5	28.1
(WY)	1940	1984	2000	1953	1984	1953	1953	1988	1999	1978	1988	1999

08093100 Brazos River near Aquilla, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1940 - 2002z	
ANNUAL TOTAL	526972		226018.0			
ANNUAL MEAN	1444		619.2		1578	
HIGHEST ANNUAL MEAN					6566	1992
LOWEST ANNUAL MEAN					141	1953
HIGHEST DAILY MEAN	19200	Mar 14	5130	May 30	66100	May 18 1949
LOWEST DAILY MEAN	18	Jan 15	24	Oct 7	0.40	May 9 1953
ANNUAL SEVEN-DAY MINIMUM	26	Oct 4	26	Oct 4	0.80	May 4 1953
MAXIMUM PEAK FLOW			5600	Sep 15	g71800	May 18 1949
MAXIMUM PEAK STAGE			12.78	Sep 15	g31.03	May 18 1949
ANNUAL RUNOFF (AC-FT)	1045000		448300		1143000	
10 PERCENT EXCEEDS	4010		1720		3180	
50 PERCENT EXCEEDS	446		245		606	
90 PERCENT EXCEEDS	28		32		40	

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



08093100 Brazos River near Aquilla, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Mar. 2002 to Aug. 2002
BIOCHEMICAL DATA; Mar. 2002 to Aug. 2002

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

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
MAR													
01...	1015	41	1280	8.0	10.5	9.4	85	<2.0	250	130	74.5	16.5	148
AUG													
13...	1712	82	1280	8.3	30.0	10.8	146	<2.0	250	130	73.0	17.0	162

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
MAR													
01...	4	55	4.85	<1	148	123	125	246	.3	4.03	744	694	<10
AUG													
13...	4	58	5.45	1	143	120	119	251	.3	7.56	728	707	<10

Date	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)
MAR													
01...	<.008	.26	<.04	.28	E.004	<.02	4.0	1	<.05	<2	109	<.06	<.04
AUG													
13...	<.008	<.05	<.04	.30	.007	<.02	4.6	<1	.15	3	94	<.06	<.04

Date	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
MAR													
01...	<.8	.22	1.1	<10	.10	28.9	<.01	.9	.78	<2	<1	1	1.29
AUG													
13...	<.8	.16	1.1	<10	<.08	18.9	<.01	3.8	.38	<2	<1	2	1.05

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

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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^2.

PERIOD OF RECORD.--Oct. 1983 to Sept. 2000 (U.S. Army Corps of Engineers furnished contents), Oct. 2000 to current year.
Water-quality records.--Chemical data: Feb. 1984 to July 1992. Biochemical data: Feb. 1984 to July 1992.

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

REMARKS.--No estimated daily contents. Records good. The lake is formed by 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. Conservation pool storage is 45,962 acre-ft. 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
Top of conservation pool	537.5
Lowest gated outlet (invert)	503.0

COOPERATION.-- Capacity table, No. 2, provided by the Texas Water Development Board, was put into use beginning Oct. 1, 1995.

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 contents, 63,950 acre-ft, Dec. 19, elevation, 542.35 ft; minimum contents, 38,740 acre-ft, Oct. 10, elevation, 535.12 ft.

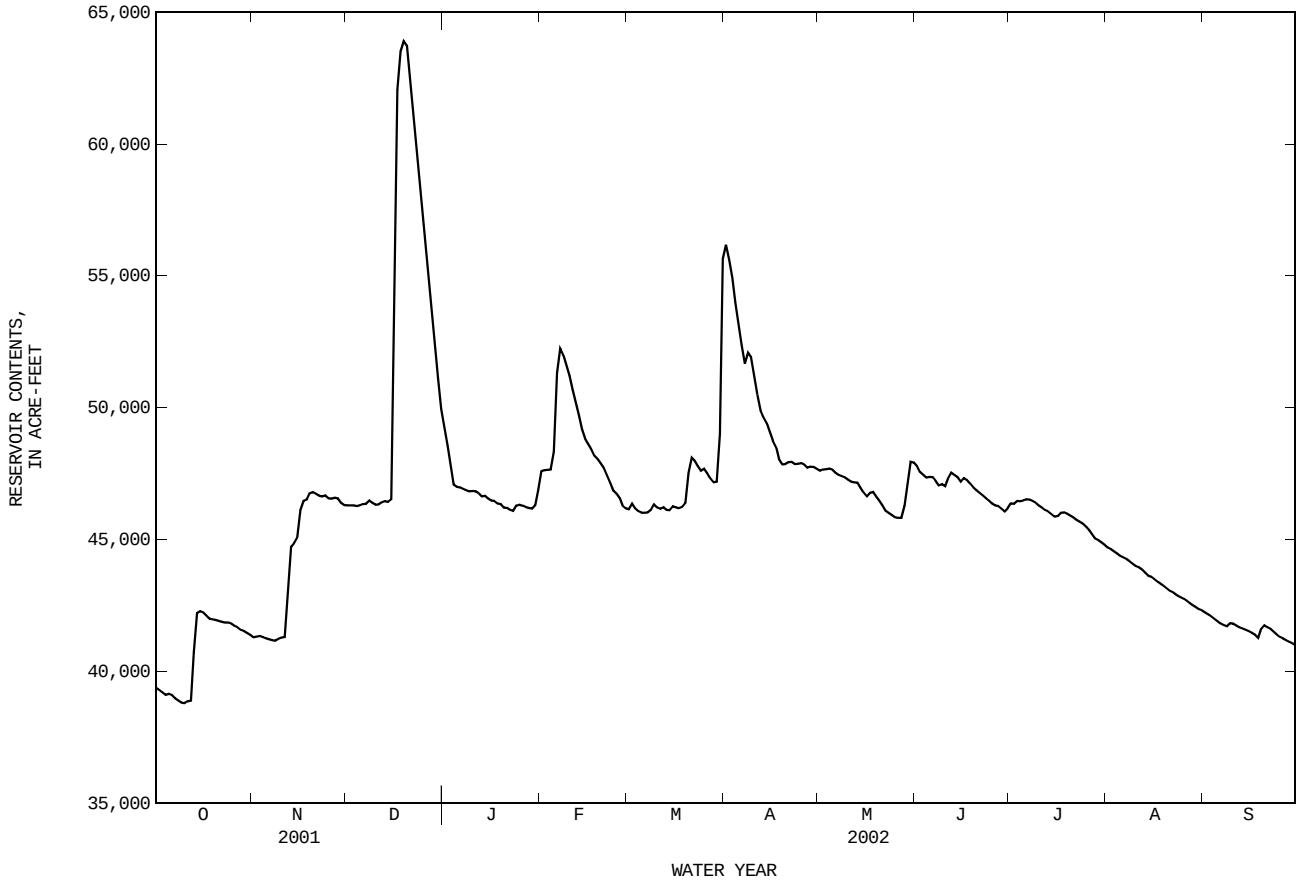
RESERVOIR STORAGE FROM DCP, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39360	41290	46290	49220	47590	46150	56170	47600	47780	46360	44680	42240
2	39280	41310	46290	48560	47620	46350	55590	47650	47570	46350	44620	42150
3	39190	41330	46290	47850	47640	46180	54910	47660	47460	46450	44540	42080
4	39100	41280	46260	47070	47650	46060	54000	47690	47340	46440	44450	41980
5	39140	41250	46290	46990	48330	46010	53140	47640	47360	46470	44380	41890
6	39080	41210	46340	46970	51310	46010	52350	47530	47360	46520	44300	41810
7	38970	41180	46350	46900	52250	46020	51670	47440	47220	46500	44250	41740
8	38890	41160	46470	46850	51980	46110	52070	47390	47040	46440	44160	41700
9	38810	41220	46390	46820	51600	46320	51930	47350	47080	46380	44070	41810
10	38790	41270	46310	46830	51200	46200	51200	47260	47020	46280	43980	41800
11	38850	41300	46320	46830	50650	46150	50480	47180	47300	46200	43940	41740
12	38880	42910	46400	46750	50160	46210	49900	47160	47520	46110	43840	41660
13	40730	44730	46450	46630	49720	46110	49630	47140	47440	46050	43730	41610
14	42200	44840	46420	46650	49180	46100	49420	46940	47360	45960	43620	41560
15	42270	45060	46520	46540	48820	46250	49080	46770	47180	45860	43570	41510
16	42220	46100	52840	46470	48600	46220	48730	46630	47320	45880	43480	41460
17	42100	46450	62050	46450	48400	46180	48490	46760	47240	46010	43390	41390
18	41990	46500	63510	46370	48170	46230	48030	46790	47110	46020	43300	41270
19	41960	46740	63890	46340	48050	46370	47840	46620	46970	45970	43230	41590
20	41940	46790	63720	46200	47870	47530	47860	46470	46860	45900	43130	41730
21	41900	46720	62520	46180	47690	48100	47920	46290	46780	45820	43030	41660
22	41870	46650	61370	46120	47440	47990	47940	46090	46670	45740	42970	41610
23	41840	46620	60210	46070	47160	47780	47850	45990	46570	45670	42890	41490
24	41850	46660	58980	46270	46840	47600	47860	45920	46470	45590	42820	41390
25	41790	46560	57680	46310	46740	47670	47890	45840	46360	45490	42760	41290
26	41710	46550	56410	46280	46560	47520	47820	45820	46290	45350	42690	41240
27	41670	46580	55080	46230	46280	47310	47710	45820	46260	45190	42590	41160
28	41560	46550	53790	46190	46170	47160	47750	46270	46160	45020	42520	41100
29	41510	46390	52520	46160	---	47190	47740	47010	46050	44960	42440	41050
30	41440	46300	51130	46300	---	49000	47670	47940	46160	44880	42360	40990
31	41370	---	49940	46850	---	55640	---	47910	---	44790	42300	---
MEAN	40720	44320	52290	46720	48630	47020	50020	46920	46980	45890	43480	41590
MAX	42270	46790	63890	49220	52250	55640	56170	47940	47780	46520	44680	42240
MIN	38790	41160	46260	46070	46170	46010	47670	45820	46050	44790	42300	40990
(+)	536.02	537.55	538.63	537.71	537.52	540.19	537.94	538.01	537.51	537.12	536.33	535.89
(@)	+1940	+4930	+3640	-3090	-680	+9470	-7970	+240	-1750	-1370	-2490	-1310

CAL YR 2001 MAX 63890 MIN 38790 (@) +3020
WTR YR 2002 MAX 63890 MIN 38790 (@) +1560

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

08093350 Aquilla Lake above Aquilla, TX--Continued



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^2.

PERIOD OF RECORD.--Sept. 1979 to Mar. 1982, 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 about 0.2 mi to right of current location at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records 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^3/s, 29,920 acre-ft/yr.

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1980-82).--Maximum discharge, 7,100 ft^3/s June 16, 1981 (gage height, 26.98 ft); no flow for many days in 1980-86.

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).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.90	0.65	0.86	391	35	21	237	8.1	11	0.30	0.10	0.08
2	0.87	0.66	0.87	391	35	0.74	424	8.0	11	0.25	0.11	0.08
3	0.87	0.66	0.84	390	35	0.65	422	8.1	11	0.36	0.12	0.07
4	0.84	0.94	0.84	185	35	0.64	421	8.2	11	0.21	0.13	3.2
5	0.84	1.1	0.84	35	36	0.63	421	8.2	9.5	0.21	0.11	0.39
6	0.79	1.0	0.89	35	37	0.62	420	8.2	9.9	0.20	0.11	0.39
7	0.77	1.0	0.91	35	220	0.74	419	20	10	0.18	0.10	0.37
8	0.75	1.1	0.93	35	357	2.5	420	21	10	0.16	0.09	0.69
9	0.72	1.5	0.95	35	357	3.7	418	21	10	0.15	0.12	0.73
10	0.69	1.1	0.86	35	357	4.3	418	21	7.2	0.15	0.13	0.68
11	0.71	1.4	0.68	35	356	4.9	418	21	8.1	0.15	0.18	0.68
12	0.70	3.1	0.66	35	355	3.3	328	21	11	0.15	0.11	1.7
13	1.3	1.3	0.69	35	354	0.65	260	20	11	0.15	0.09	2.5
14	1.5	1.5	0.64	35	354	0.64	261	20	11	0.16	0.08	0.56
15	0.73	2.1	0.94	35	252	0.63	261	20	11	0.15	0.08	0.47
16	0.56	1.5	1.6	35	193	0.61	261	13	11	0.20	0.08	0.49
17	0.55	0.76	0.71	35	192	0.67	261	9.9	11	0.18	0.08	0.38
18	0.83	0.79	0.69	35	193	0.71	146	10	10	0.15	0.08	0.36
19	1.00	0.82	0.70	35	194	0.80	8.2	10	9.9	0.14	0.07	0.58
20	1.1	0.75	319	35	192	0.55	8.1	9.8	9.9	0.14	0.07	0.43
21	1.2	0.82	610	35	191	55	8.0	11	11	0.14	0.07	0.44
22	1.3	0.88	605	35	191	101	8.0	11	11	0.14	0.07	0.41
23	1.2	0.91	597	35	192	101	8.0	11	10	0.14	0.07	0.74
24	0.68	0.91	594	35	191	101	8.0	10	10	0.13	0.07	0.77
25	0.63	0.98	592	35	192	101	7.9	10	9.6	0.13	0.07	0.76
26	0.68	1.0	587	35	134	100	8.0	9.9	4.2	0.12	0.08	0.85
27	0.65	1.0	586	35	35	101	8.1	10	0.25	0.11	0.11	0.84
28	0.65	0.99	583	35	35	52	8.0	11	0.21	0.11	0.11	0.70
29	0.64	0.81	578	35	---	8.2	8.0	11	0.23	0.11	0.09	0.66
30	0.65	0.78	575	35	---	8.9	8.2	11	0.44	0.11	0.07	0.66
31	0.65	---	495	35	---	8.4	---	11	---	0.11	0.07	---
TOTAL	25.95	32.81	6737.10	2302	5300	786.48	6312.5	403.4	261.43	5.09	2.92	21.66
MEAN	0.837	1.094	217.3	74.26	189.3	25.37	210.4	13.01	8.714	0.164	0.094	0.722
MAX	1.5	3.1	610	391	357	101	424	21	11	0.36	0.18	3.2
MIN	0.55	0.65	0.64	35	35	0.55	7.9	8.0	0.21	0.11	0.07	0.07
AC-FT	51	65	13360	4570	10510	1560	12520	800	519	10	5.8	43

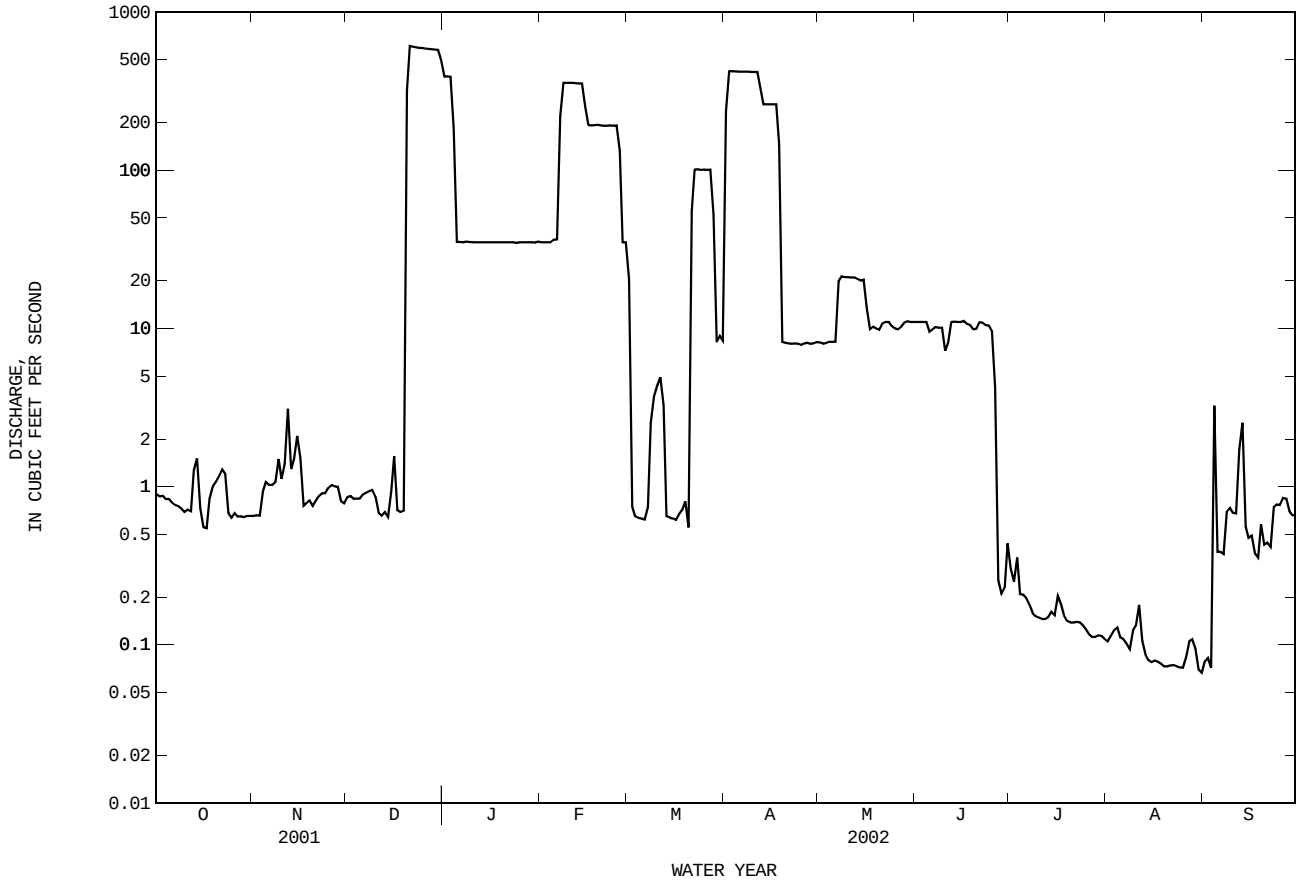
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002z, BY WATER YEAR (WY)

MEAN	1.052	1.094	217.3	74.26	189.3	25.37	210.4	13.01	5.004	1.332	1.000	0.984
MAX	1.05	1.09	217	74.3	189	25.4	210	13.0	8.71	2.50	1.91	1.36
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001	2001	2001
MIN	1.05	1.09	217	74.3	189	25.4	210	13.0	1.29	0.16	0.094	0.61
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2001	2002	2002	2002

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 2001 - 2002z	
ANNUAL TOTAL	22191.34			
ANNUAL MEAN	60.80		60.81	
HIGHEST ANNUAL MEAN			60.8	2002
LOWEST ANNUAL MEAN			60.8	2002
HIGHEST DAILY MEAN	610	Dec 21	610	Dec 21 2001
LOWEST DAILY MEAN	0.07	Aug 19	0.07	Aug 19 2002
ANNUAL SEVEN-DAY MINIMUM	0.07	Aug 19	0.07	Aug 19 2002
MAXIMUM PEAK FLOW	624	Dec 20	624	Dec 20 2001
MAXIMUM PEAK STAGE	9.70	Dec 20	14.53	Mar 11 1991
ANNUAL RUNOFF (AC-FT)	44020		44050	
10 PERCENT EXCEEDS	261		261	
50 PERCENT EXCEEDS	1.5		1.5	
90 PERCENT EXCEEDS	0.12		0.12	

z Period of regulated streamflow.

08093360 Aquilla Creek above Aquilla, TX--Continued



08094800 North Bosque River at Hico, TX
(Flood-hydrograph partial-record station)

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^2.

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 fair. Since installation of gage in Jan. 1962, at least 10% of contributing drainage area has been affected at times by discharge from the flood-detention pools of 40 floodwater-retarding structures. These structures control runoff from 202 mi^2 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^3/s (49,710 acre-ft/year).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft^3/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^3/s, by contracted-opening measurement).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
No peak greater than base discharge.				Mar. 30	1900	*1,670	*9.94

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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, near 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^2.

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 and crest-stage gage. 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, and Mar. 27, 1958, to Sept. 30, 1959, water-stage recorder; and Oct. 1, 1959, to Jan. 1, 1961, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since installation of gage in Oct. 1923, at least 10% contributing drainage area has been regulated. These structures control runoff from 202 mi^2 in the North Bosque River and Green Creek drainage basins. 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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 9, 1922, reached a stage of about 32 ft, from information by local residents.

DISCHARGE from DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	4.0	18	39	1200	94	897	113	80	39	19	3.0
2	4.8	4.1	18	38	480	97	443	102	70	221	16	2.9
3	4.6	4.0	18	39	325	93	313	116	64	485	14	2.7
4	4.7	4.3	19	42	261	88	246	717	e58	237	13	2.5
5	4.6	4.6	20	44	1260	85	204	447	52	213	12	2.4
6	4.4	4.8	20	44	2240	80	204	289	49	518	12	2.2
7	4.3	5.2	20	42	887	80	860	210	61	346	11	2.0
8	3.9	6.9	19	41	505	82	2090	154	97	189	9.8	2.8
9	4.0	9.3	19	41	376	84	1040	127	72	150	8.6	3.8
10	4.0	9.2	19	40	301	77	545	523	59	125	8.4	4.1
11	4.5	14	19	39	248	72	390	434	51	97	8.5	5.1
12	19	40	20	37	223	70	333	280	45	79	7.4	6.2
13	71	33	20	36	200	67	296	199	42	67	11	6.6
14	38	22	20	36	182	66	336	152	37	59	9.4	5.9
15	18	125	e23	35	173	67	335	140	29	54	8.4	5.3
16	12	1070	e2830	34	162	66	290	120	35	54	21	5.0
17	8.1	191	e1130	34	154	64	335	104	37	155	28	4.7
18	5.3	100	e289	33	150	64	269	90	37	171	17	4.1
19	5.5	61	146	34	157	276	226	80	37	122	11	10
20	8.0	e45	108	32	148	8050	207	72	40	77	8.7	8.0
21	7.3	e38	90	32	138	1540	192	70	34	59	7.1	5.0
22	5.3	e31	81	32	129	676	182	66	25	50	6.2	4.2
23	3.3	26	70	33	121	398	171	63	22	43	5.3	4.3
24	5.5	23	60	53	115	315	157	62	21	39	4.8	4.1
25	5.0	e22	56	144	111	261	141	60	22	34	4.3	3.4
26	4.3	e19	53	103	100	217	134	61	20	32	4.3	3.2
27	3.9	17	49	72	93	190	137	85	19	30	3.7	3.0
28	3.8	17	45	59	92	175	137	129	17	26	3.2	3.0
29	3.8	17	44	54	---	171	131	103	15	26	2.5	2.9
30	3.8	17	41	51	---	247	123	97	24	25	3.1	3.5
31	3.9	---	39	5920	---	2140	---	94	---	24	3.0	---
TOTAL	283.6	1984.4	5423	7313	10531	16052	11364	5359	1271	3846	301.7	125.9
MEAN	9.148	66.15	174.9	235.9	376.1	517.8	378.8	172.9	42.37	124.1	9.732	4.197
MAX	71	1070	2830	5920	2240	8050	2090	717	97	518	28	10
MIN	3.3	4.0	18	32	92	64	123	60	15	24	2.5	2.0
AC-FT	563	3940	10760	14510	20890	31840	22540	10630	2520	7630	598	250

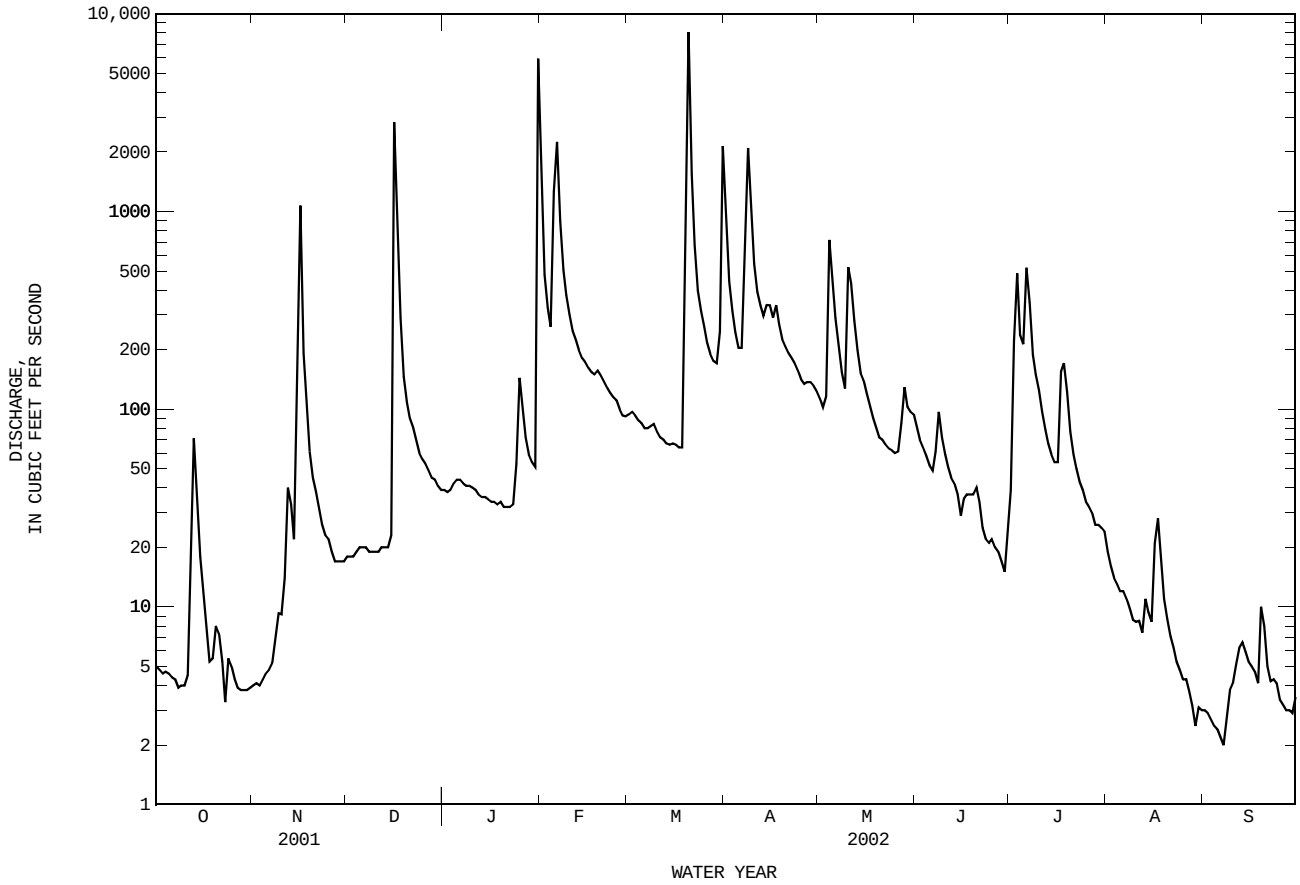
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2002, BY WATER YEAR (WY)

MEAN	139.3	75.62	191.4	161.0	298.9	287.1	373.6	526.8	260.5	80.85	56.39	102.9
MAX	1438	845	7330	1442	3738	2681	3739	2626	1529	995	1238	1484
(WY)	1960	1941	1992	1938	1992	1998	1957	1957	1942	1945	1995	1936
MIN	0.000	0.027	0.052	0.25	1.16	0.66	1.26	1.40	0.44	0.000	0.000	0.000
(WY)	1952	1956	1956	1957	1952	1956	1925	1984	1984	1954	1929	1952

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1924 - 2002	
ANNUAL TOTAL	81965.30		63854.6			
ANNUAL MEAN	224.6		174.9		212.3	
HIGHEST ANNUAL MEAN					1366	1992
LOWEST ANNUAL MEAN					11.7	1984
HIGHEST DAILY MEAN	7920	Mar 12	8050	Mar 20	96800	Dec 21 1991
LOWEST DAILY MEAN	0.84	Aug 16	2.0	Sep 7	0.00	Jun 25 1925
ANNUAL SEVEN-DAY MINIMUM	1.0	Aug 10	2.5	Sep 2	0.00	Jul 13 1925
MAXIMUM PEAK FLOW			19100	Mar 20	200000	Dec 20 1991
MAXIMUM PEAK STAGE			17.46	Mar 20	38.30	Dec 20 1991
ANNUAL RUNOFF (AC-FT)	162600		126700		153800	
10 PERCENT EXCEEDS	415		314		338	
50 PERCENT EXCEEDS	38		44		23	
90 PERCENT EXCEEDS	3.9		4.3		1.4	

e Estimated

08095000 North Bosque River near Clifton, TX--Continued
(Hydrologic index station)



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^2.

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.--Records good except those for estimated daily discharges, which are fair. Since Aug. 1959, at least 10% of contributing drainage area has been regulated. Flow is affected at times by discharge from the flood-detention pools of 42 floodwater-retarding structures with a combined detention capacity of 66,800 acre-ft. These structures control runoff from 207 mi^2. 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 FROM DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	6.7	41	107	1690	159	1170	169	91	60	e32	13
2	11	6.8	41	110	628	162	603	161	84	122	e30	13
3	11	6.7	42	110	420	154	405	164	77	776	e26	13
4	11	6.6	43	113	344	146	305	577	72	370	e23	13
5	14	6.4	44	117	1060	141	243	497	68	183	e21	12
6	12	6.4	43	116	3070	136	238	300	66	468	e22	12
7	11	6.3	44	112	1290	135	814	236	67	399	e19	12
8	11	e6.2	48	110	778	135	2300	194	91	192	e20	15
9	11	e6.1	44	104	583	135	1330	172	84	140	e20	16
10	11	e7.0	42	108	459	125	756	386	74	125	e20	16
11	13	e12	44	103	380	119	544	477	66	107	e20	14
12	16	e56	48	98	347	120	432	277	61	93	e18	14
13	497	e47	49	95	314	115	367	191	58	115	e16	15
14	76	e31	50	95	286	113	388	149	56	91	e17	15
15	23	e151	56	92	269	111	404	137	51	89	e15	15
16	13	e2980	3350	92	257	112	347	127	57	83	e17	15
17	9.6	e903	1060	94	244	109	374	118	53	112	e48	14
18	7.5	e233	461	95	235	108	326	109	54	185	e36	14
19	6.4	143	315	92	245	117	279	100	53	e134	e28	19
20	6.7	105	258	91	239	7680	258	93	55	e103	e23	22
21	8.1	79	219	87	221	2120	244	88	54	e81	e18	17
22	7.9	70	199	85	205	972	233	86	49	e65	e13	15
23	7.1	64	176	83	196	639	224	82	44	e57	e11	14
24	5.1	55	159	90	191	510	211	81	41	e52	e12	13
25	6.5	49	147	184	182	439	200	80	41	e49	e12	13
26	6.5	47	138	173	171	377	192	81	41	e49	12	13
27	6.3	43	135	136	161	335	192	87	39	e48	13	12
28	6.0	46	127	117	158	314	189	115	39	e45	13	11
29	5.9	45	125	105	---	305	184	116	37	e41	12	9.1
30	6.3	43	118	105	---	367	178	100	47	e33	12	8.9
31	6.6	---	111	5500	---	2280	---	103	---	e34	12	---
TOTAL	855.5	5267.2	7777	8719	14623	18790	13930	5653	1770	4501	611	418.0
MEAN	27.60	175.6	250.9	281.3	522.2	606.1	464.3	182.4	59.00	145.2	19.71	13.93
MAX	497	2980	3350	5500	3070	7680	2300	577	91	776	48	22
MIN	5.1	6.1	41	83	158	108	178	80	37	33	11	8.9
AC-FT	1700	10450	15430	17290	29000	37270	27630	11210	3510	8930	1210	829

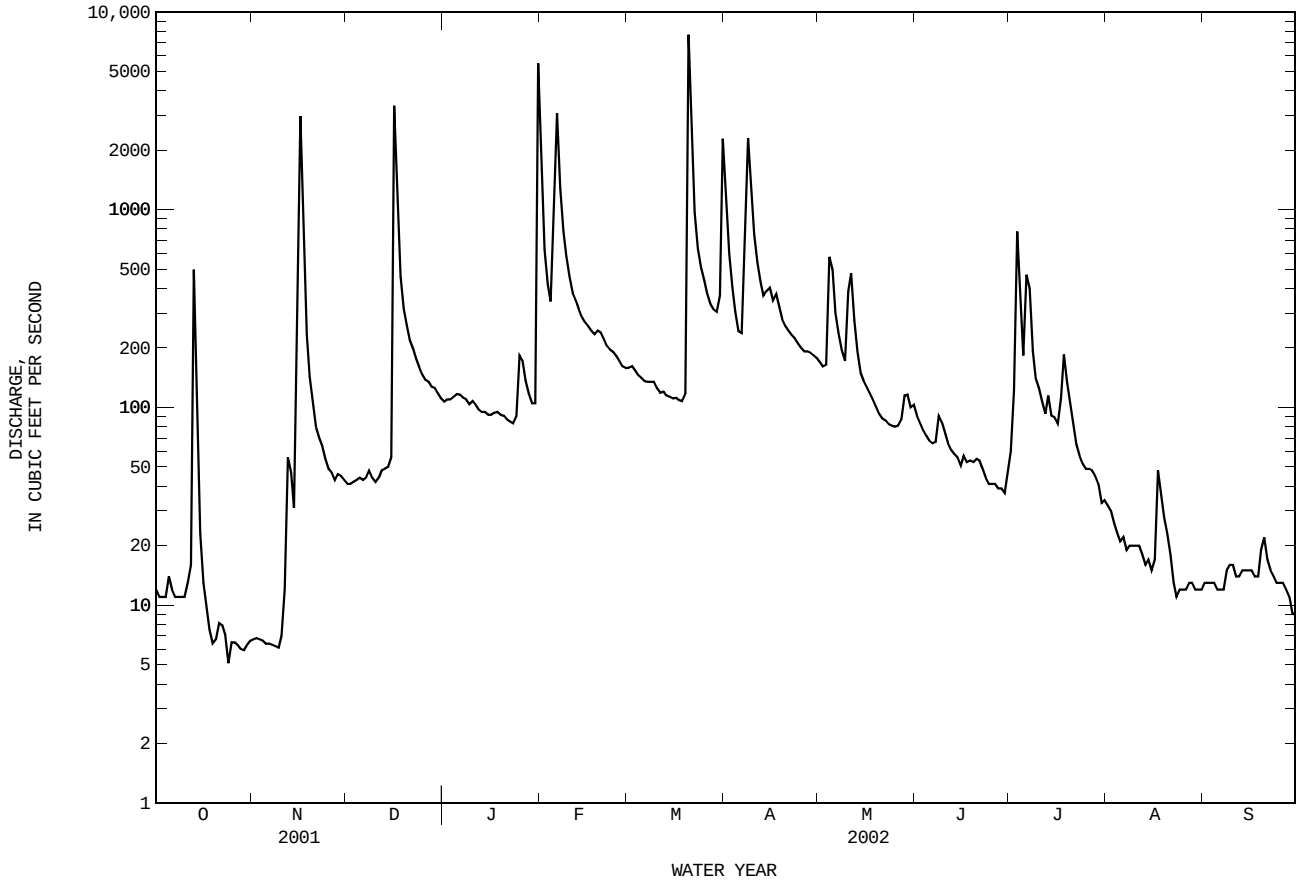
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2002, BY WATER YEAR (WY)

MEAN	210.4	105.4	295.7	234.1	464.2	466.3	416.5	617.3	368.1	92.33	88.56	85.99
MAX	2834	549	7469	1833	5156	2865	2392	3247	1609	712	1625	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	0.000
(WY)	1979	1984	1979	1984	2000	2000	1984	1984	1984	1984	2000	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1959 - 2002	
ANNUAL TOTAL	119937.4		82914.7			
ANNUAL MEAN	328.6		227.2		286.4	
HIGHEST ANNUAL MEAN					1664	1992
LOWEST ANNUAL MEAN					14.6	1984
HIGHEST DAILY MEAN	9470	Mar 12	7680	Mar 20	123000	Dec 21 1991
LOWEST DAILY MEAN	5.1	Oct 24	5.1	Oct 24	0.00	Oct 5 1963
ANNUAL SEVEN-DAY MINIMUM	6.1	Oct 24	6.1	Oct 24	0.00	Oct 5 1963
MAXIMUM PEAK FLOW			15800	Mar 20	220000	Dec 21 1991
MAXIMUM PEAK STAGE			23.28	Mar 20	44.60	Dec 21 1991
ANNUAL RUNOFF (AC-FT)	237900		164500		207500	
10 PERCENT EXCEEDS	790		411		472	
50 PERCENT EXCEEDS	49		90		43	
90 PERCENT EXCEEDS	8.1		12		6.3	

e Estimated

08095200 North Bosque River at Valley Mills, TX--Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Mar. 1960 to Aug. 1987, Jan. 1999 to current year.
BIOCHEMICAL DATA: Sept. 1970 to Aug. 1987, Jan. 1999 to current year.

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

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
FEB													
27...	1650	1.6	477	8.0	10.0	5.0	12.5	111	<2.0	220	31	79.7	5.50
MAY													
13...	1536	1.8	385	8.2	24.5	26	8.3	100	3.9	170	26	58.1	5.49
JUN													
25...	1417	41	449	7.8	30.8	12	7.5	102	<2.0	190	17	61.2	7.94
AUG													
12...	1646	17	425	7.8	31.4	6.2	9.1	125	<2.0e	180	16	61.9	6.34

Date	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
FEB													
27...	13.0	.4	11	1.94	191	30.7	14.4	.3	4.53	286	268	<10	--
MAY													
13...	10.7	.4	12	3.47	141	18.1	12.5	.2	8.21	237	203	28	--
JUN													
25...	19.6	.6	18	3.04	169	25.8	20.0	.2	10.6	264	253	13	.78
AUG													
12...	17.8	.6	17	2.27	165	22.1	14.5	.3	15.4	234	243	<10	.84

Date	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)
FEB													
27...	<.008	.71	<.04	.18	E.003	<.02	--	2.8	<1	.36	<2	50	<.06
MAY													
13...	E.007	.41	<.04	.30	.030	.02	.061	6.6	2	.12	2	53	<.06
JUN													
25...	.011	.80	<.04	.23	<.06	<.02	--	4.0	--	--	--	--	--
AUG													
12...	.014	.85	<.04	.24	.005	<.02	--	4.1	<1	.09	3	53	<.06

Date	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
FEB													
27...	<.04	<.8	.22	.6	<10	.20	3.5	<.01	1.6	.25	<2	<1	<1
MAY													
13...	<.04	<.8	.30	.9	<10	E.05	2.9	<.01	1.3	1.56	<2	<1	2
JUN													
25...	--	--	--	--	<10	--	7.1	--	--	--	--	--	--
AUG													
12...	<.04	<.8	.21	.6	E6	E.04	12.0	<.01	1.5	.46	E1	<1	<1

08095200 North Bosque River at Valley Mills, TX--Continued

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

Date	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
FEB	
27...	1.41
MAY	
13...	.80
JUN	
25...	--
AUG	
12...	.90

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

Value qualifier codes used in this report:
e -- See field comment

08095300 Middle Bosque River near McGregor, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 31°30′33", long 97°21′56", McLennan County, Hydrologic Unit 12060203, at 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^2.

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^3/s (56,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,300 ft^3/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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 15	2245	*11,100	*14.07	No other peak greater than base discharge.			

08095300 Middle Bosque River near McGregor, TX--Continued
(Flood-hydrograph partial-record station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1997 to current year.
BIOCHEMICAL DATA: Oct. 1997 to current year.

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

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
FEB													
27...	1400	62	404	8.2	11.6	5.1	11.4	105	<2.0	190	39	71.9	2.25
MAY													
13...	1230	15	393	8.0	23.2	9.5	7.4	86	<2.0	170	30	65.5	2.48
JUN													
25...	1119	.63	357	7.7	29.1	4.5	5.6	74	2.1	140	18	52.5	2.73
AUG													
12...	1406	2.5	322	7.8	30.1	4.5	7.5	101	<2.0e	140	--	51.7	2.29

Date	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
FEB													
27...	9.23	.3	10	.75	150	19.4	10.5	.3	4.83	240	227	<10	--
MAY													
13...	10.8	.4	12	1.16	144	19.5	11.0	.2	9.67	237	213	<10	1.43
JUN													
25...	15.5	.6	19	1.51	125	26.4	11.9	.3	16.8	226	208	<10	1.19
AUG													
12...	11.1	.4	15	1.16	E119	18.2	9.58	.3	13.6	192	--	<10	1.34

Date	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)
FEB													
27...	<.008	4.06	<.04	--	.15	<.004	<.02	1.6	<1	.27	<2	37	<.06
MAY													
13...	.010	1.44	<.04	--	.17	<.004	<.02	1.9	<1	.10	2	44	<.06
JUN													
25...	.034	1.23	E.04	--	.45	<.06	<.02	4.2	--	--	--	--	--
AUG													
12...	.027	1.37	.07	.25	.32	.005	<.02	3.2	1	.10	3	39	<.06

Date	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
FEB													
27...	<.04	<.8	.16	.4	<10	<.08	1.4	<.01	.5	<.06	<2	<1	<1
MAY													
13...	<.04	<.8	.22	.5	<10	<.08	4.0	<.01	.4	1.74	<2	<1	<1
JUN													
25...	--	--	--	--	<10	--	20.0	--	--	--	--	--	--
AUG													
12...	<.04	<.8	.16	.5	<10	<.08	5.8	<.01	.7	.42	<2	<1	3

08095300 Middle Bosque River near McGregor, TX--Continued
(Flood-hydrograph partial-record station)

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

Date	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
FEB	
27...	.83
MAY	
13...	.69
JUN	
25...	--
AUG	
12...	.47

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

Value qualifier codes used in this report:
e -- See field comment

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08095400 Hog Creek near Crawford, TX
(Flood-hydrograph partial-record station)

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^2.

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 fair. Since water year 1980, at least 10% of the contributing drainage area has been regulated. These structures control runoff from 42.0 mi^2 in the Hog Creek drainage basin.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--20 years (water years 1960-1979), 37.7 ft^3/s (27,310 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1959-1979).--Maximum discharge, 15,400 ft^3/s Oct. 4, 1959 (gage height, 14.31 ft); no flow at times.

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 CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 13	0645	1,190	4.95	Dec 16	0945	1,400	5.18
Nov 16	0000	*1,540	*5.32	Mar 30	1600	1,270	5.03

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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^2.

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Feb. 1965 to Sept. 2000 (contents furnished by U.S. Army Corps of Engineers), Oct. 2000 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. Flow is affected at times by discharge from the flood-detention pools of 44 floodwater-retarding structures with a combined detention capacity of 76,460 acre-ft. These structures control runoff from 248 mi^2 in the Bosque River and Hog Creek drainage basins. 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. Conservation pool storage is 144,830 acre-ft. 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	455.0
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.--Maximum contents, 521,100 acre-ft, Dec. 24, 1991, elevation, 488.48 ft; minimum since normal operating level was reached, 86,360 acre-ft, Oct. 8, 1984, elevation, 445.10 ft.

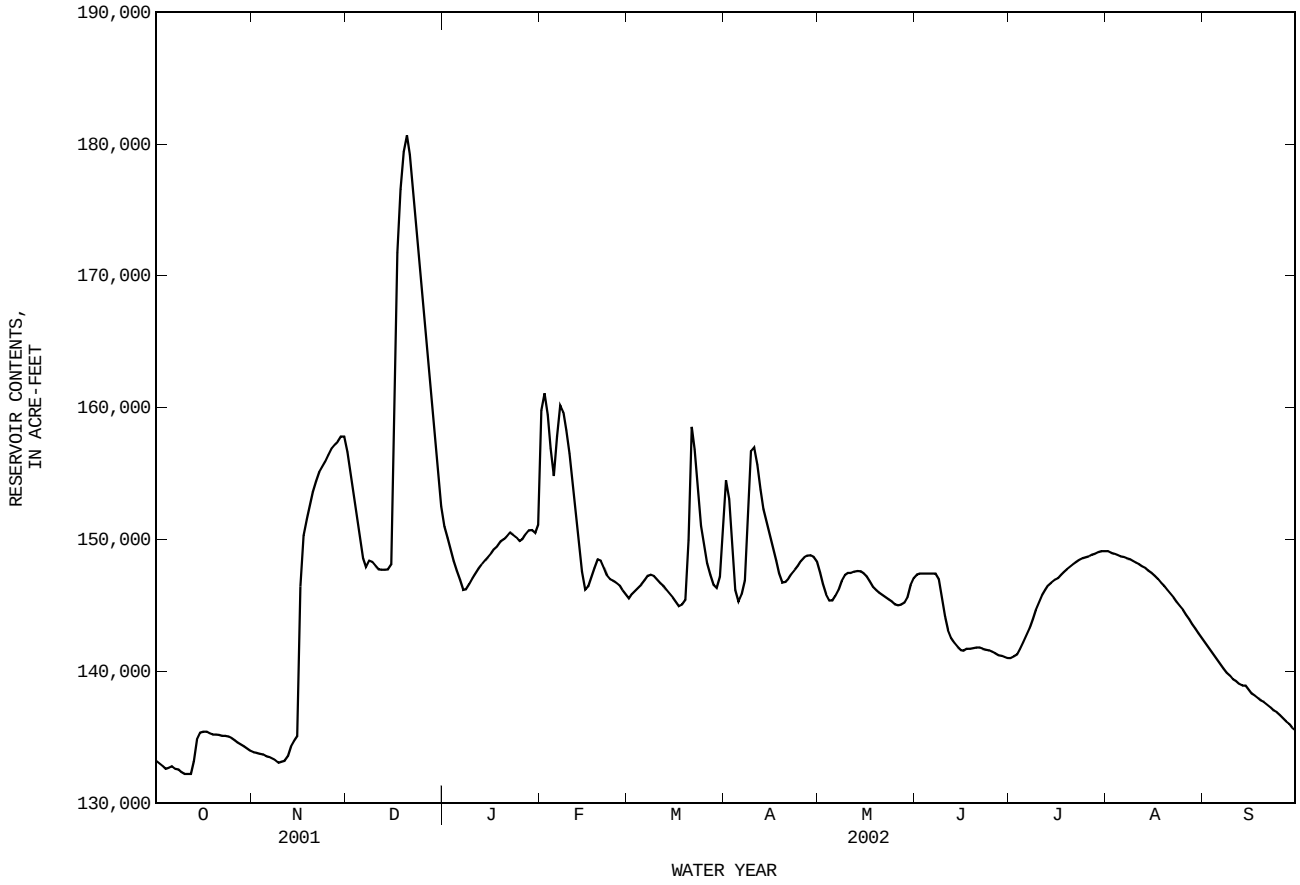
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133200	133900	156600	151000	159800	145500	154500	147500	147300	141000	149100	142200
2	133000	133800	154900	150100	161100	145900	153100	146600	147400	141100	149000	141900
3	132800	133700	153300	149300	159400	146100	149600	145800	147400	141300	148900	141500
4	132600	133700	151700	148400	156900	146300	146100	145400	147400	141700	148800	141200
5	132700	133600	150100	147600	154800	146600	145300	145400	e147400	142200	148700	140800
6	132800	133500	148500	146900	157800	146900	145800	145700	e147400	142700	148700	140500
7	132600	133400	147900	146200	160200	147200	146900	146200	e147400	143300	148600	140200
8	132500	133300	148400	146200	159600	147300	151500	146900	e147000	143900	148500	139900
9	132400	133100	148300	146600	158300	147200	156700	147300	e145600	144600	148300	139600
10	132200	133100	148000	147000	156500	146900	157000	147400	e144100	145200	148200	139400
11	132200	133200	147700	147400	154400	146700	155700	147400	e143100	145700	148100	139200
12	132200	133500	147700	147800	152100	146400	153800	147600	142500	146200	147900	139000
13	133200	134300	147700	148100	149900	146200	152300	147600	142100	146500	147800	138900
14	134800	134700	147700	148400	147600	145900	151200	147600	141800	146700	147600	e138900
15	135300	135000	148100	148700	146200	145600	150300	147400	141600	146900	147400	e138600
16	135400	e146400	156400	148900	146400	145200	149300	147200	141500	147000	147200	138300
17	135400	e150300	171700	149300	147200	144900	148400	146800	141700	147300	147000	138100
18	135300	e151500	176600	149500	147800	145000	147400	146400	141700	147500	146700	138000
19	135200	e152500	179400	149800	148500	145400	146700	146100	141700	147800	146500	137800
20	135200	e153600	180600	150000	148400	149900	146800	145900	141800	147900	146200	137600
21	135200	e154400	179200	150300	147800	158500	147000	145800	141800	148100	145900	137400
22	135100	e155100	177000	150500	147200	156800	147400	145600	141700	148300	145600	137200
23	135100	e155500	174600	150300	147000	153700	147700	145400	141600	148400	145300	137000
24	135000	e155900	172100	150200	146900	151000	148000	145300	141600	148600	145000	136900
25	134900	e156400	169400	149900	146700	149500	148400	145100	141500	148700	144600	136700
26	134800	e156900	166600	150000	146500	148200	148600	145000	141300	148700	144300	136400
27	134600	e157200	163800	150400	146100	147300	148800	145100	141200	148800	143900	136200
28	134400	e157400	161000	150700	145800	146500	148800	145200	141200	148900	143600	136000
29	134300	e157800	158200	150700	---	146300	148700	145600	141100	149000	143200	135700
30	134100	e157800	155300	150500	---	147200	148300	146500	141000	149100	142900	135500
31	133900	---	152500	151100	---	151100	---	147100	---	149100	142500	---
TOTAL	4152400	4324500	4941000	4621800	4246900	4583200	4490100	4535900	4301900	4532200	4546000	4156600
MEAN	133900	144200	159400	149100	151700	147800	149700	146300	143400	146200	146600	138600
MAX	135400	157800	180600	151100	161100	158500	157000	147600	147400	149100	149100	142200
MIN	132200	133100	147700	146200	145800	144900	145300	145000	141000	141000	142500	135500
(+)	451.47	456.84	456.11	455.91	455.15	455.91	455.51	455.33	454.46	455.46	454.68	453.68
(@)	+500	+23900	-5300	-1400	-5300	+5300	-2800	-1200	-6100	+8100	-6600	-7000

CAL YR 2001 MAX 196600 MIN 127900 (@) -2100
WTR YR 2002 MAX 180000 MIN 132200 (@) +2100

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

08095550 Waco Lake near Waco, TX--Continued



PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1969 to Sept. 1982, Feb. 1998 to current year.
BIOCHEMICAL DATA: Oct. 1969 to Sept. 1982, Feb. 1998 to current year.
PESTICIDE DATA: Aug. 1999 to current year.

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

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

313430097113801 -- Waco Lk Site AC

Date	Time	SAMPLING DEPTH (FEET) (00003)	RESERVOIR STORAGE (AC-FT) (00054)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
FEB													
28...	1026	1.00	146000	357	8.4	10.5	10.4	93	E3k	E12k	150	13	55.4
28...	1028	10.0	--	357	8.2	10.5	10.4	93	--	--	--	--	--
28...	1030	20.0	--	357	8.3	10.5	10.3	92	--	--	--	--	--
28...	1032	30.0	--	355	8.3	10.5	10.3	92	--	--	--	--	--
28...	1034	40.0	--	356	8.3	10.5	10.3	92	--	--	--	--	--
28...	1036	50.0	--	355	8.3	10.5	10.0	89	--	--	--	--	--
28...	1038	60.0	--	356	8.3	10.5	10.0	89	--	--	--	--	--
28...	1040	71.0	--	358	8.3	10.5	10.0	89	--	--	160	16	56.4
MAY													
14...	0844	1.00	148000	376	8.2	24.0	7.8	93	E1k	E1k	170	21	60.0
14...	0846	10.0	--	378	8.2	24.0	7.8	93	--	--	--	--	--
14...	0848	20.0	--	379	8.2	24.0	7.8	93	--	--	--	--	--
14...	0850	30.0	--	379	8.2	24.0	7.7	92	--	--	--	--	--
14...	0852	40.0	--	380	8.2	24.0	7.7	92	--	--	--	--	--
14...	0854	50.0	--	379	8.2	24.0	7.7	92	--	--	--	--	--
14...	0856	60.0	--	379	8.2	24.0	7.6	91	--	--	--	--	--
14...	0858	68.0	--	380	8.2	24.0	7.7	92	--	--	170	16	58.8
AUG													
12...	1212	1.00	148000	304	7.7	29.6	5.7	76	E1k	E1k	120	30	39.4
12...	1214	10.0	--	303	7.6	29.2	5.5	72	--	--	--	--	--
12...	1216	20.0	--	303	7.5	29.1	5.0	66	--	--	--	--	--
12...	1218	30.0	--	307	7.3	29.0	1.5	19	--	--	--	--	--
12...	1220	35.0	--	314	7.1	28.9	.1	1	--	--	--	--	--
12...	1222	40.0	--	316	7.1	28.8	.0	0	--	--	--	--	--
12...	1224	50.0	--	319	7.1	28.8	.0	0	--	--	--	--	--
12...	1226	60.0	--	318	7.1	28.8	.0	0	--	--	--	--	--
12...	1228	67.0	--	326	7.0	28.6	.0	0	--	--	130	6	42.8

313430097113801 -- Waco Lk Site AC

Date	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	SODIUM PERCENT (00932)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)
FEB													
28...	3.91	11.4	.4	14	2.77	141	23.6	10.9	.3	8.1	206	1.18	.015
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	3.96	11.6	.4	14	2.87	141	23.7	10.6	.3	8.3	208	1.19	.015
MAY													
14...	4.57	12.1	.4	13	3.03	148	24.5	11.5	.2	4.6	212	.67	.025
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	4.58	12.2	.4	14	2.94	150	24.5	12.4	.3	4.8	213	.64	.024
AUG													
12...	4.73	13.5	.5	19	3.10	88	21.5	13.3	.3	7.3	156	--	<.008
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	<.008
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	4.74	13.6	.5	19	3.24	120	18.6	13.3	.3	8.8	180	--	<.008

08095550 Waco Lake near Waco, TX--Continued

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

313430097113801 -- Waco Lk Site AC

Date	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	BENZENE TOTAL (UG/L) (34030)	ETHYL-BENZENE TOTAL (UG/L) (34371)	META/PARA-XYLENE WATER UNFLTRD REC (UG/L) (85795)	O-XYLENE WATER WHOLE TOTAL (UG/L) (77135)
FEB													
28...	1.20	E.02	--	.29	E.004	<.02	--	<10	E1.6n	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	1.20	E.04	--	.35	.006	<.02	--	<10	18.6	--	--	--	--
MAY													
14...	.69	<.04	--	.25	.005	<.02	--	<10	<2.0	<.2	<.2	<.2	<.2
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	.66	E.02	--	.32	.007	<.02	--	<10	23.0	--	--	--	--
AUG													
12...	<.05	<.04	--	.24	E.004	<.02	--	<10	E.9n	<.2	<.2	<.2	<.2
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	.07	.04	.22	.26	.005	<.02	--	<10	22.2	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	<.05	.47	.27	.74	.054	.04	.129	632	854	--	--	--	--

313430097113801 -- Waco Lk Site AC

Date	METHYL TERT-BUTYL ETHER WAT UNF REC (UG/L) (78032)	TOLUENE TOTAL (UG/L) (34010)	XYLENE WATER UNFLTRD REC (UG/L) (81551)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)
FEB													
28...	--	--	--	<.006	<.006	<.004	<.005	.673	<.050	<.010	<.002	<.041	<.020
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
14...	<.2	<.2	<.2	<.006	<.006	.030	<.005	.649	<.050	<.010	<.002	<.041	<.020
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
12...	<.2	<.2	<.2	<.006	<.006	<.007	<.005	.443	<.050	<.010	<.002	<.041	<.020
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--

08095550 Waco Lake near Waco, TX--Continued

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

313430097113801 -- Waco Lk Site AC

Date	CHLORPYRIFOS DISSOLVED (UG/L) (38933)	PERMETHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	CYANAZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRAZINE, WATER, DISS, REC (UG/L) (04040)	DIAZINON, DISSOLVED (UG/L) (39572)	DIELDRIN DISSOLVED (UG/L) (39381)	DISULFOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHALFLURALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHOPROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DISSOLVED (UG/L) (39341)
FEB													
28...	<.005	<.006	<.018	<.003	E.060	E.003n	<.005	<.02	<.002	<.009	<.005	<.003	<.004
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
14...	<.005	<.006	<.018	<.003	E.063	.009	<.005	<.02	<.002	<.009	<.005	<.003	<.004
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
12...	<.005	<.006	<.018	<.003	E.061	E.005n	<.005	<.02	<.002	<.009	<.005	<.003	<.004
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--

313430097113801 -- Waco Lk Site AC

Date	LINURON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALATHION, DISSOLVED (UG/L) (39532)	METOLACHLOR WATER DISSOLV (UG/L) (39415)	METRIBUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOLINATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROPAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P’ DDE DISSOLV (UG/L) (34653)	PARATHION, DISSOLVED (UG/L) (39542)	METHYL PARATHION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEBULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDIMETHALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PROMETON, WATER, DISS, REC (UG/L) (04037)
FEB													
28...	<.035	<.027	E.005n	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
14...	<.035	<.027	.057	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
12...	<.035	<.027	.023	<.006	<.002	<.007	<.003	<.010	<.006	<.004	<.022	<.011	<.01
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--

08095550 Waco Lake near Waco, TX--Continued

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

313430097113801 -- Waco Lk Site AC

Date	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
FEB											
28...	<.010	<.011	<.02	<.004	.019	<.02	<.034	<.02	<.005	<.002	<.009
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAY											
14...	<.010	<.011	<.02	<.004	.017	<.02	<.034	<.02	<.005	<.002	<.009
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
AUG											
12...	<.010	<.011	<.02	<.004	.012	<.02	<.034	<.02	<.005	<.002	<.009
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--

313511097122801 -- Waco Lk Site AL

Date	Time	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
FEB							
28...	1116	1.00	358	8.4	10.5	10.5	94
28...	1118	10.0	359	8.4	11.0	10.5	95
28...	1120	20.0	357	8.4	11.0	10.4	94
28...	1122	32.0	358	8.4	11.0	10.4	94
MAY							
14...	0914	1.00	377	8.2	24.0	8.0	95
14...	0916	10.0	376	8.2	24.0	7.9	94
14...	0918	20.0	377	8.2	24.0	7.8	93
14...	0920	30.0	377	8.2	24.0	7.7	92
AUG							
12...	1312	1.00	302	7.9	29.8	6.9	91
12...	1314	10.0	299	7.9	29.6	7.0	92
12...	1316	20.0	303	7.6	29.3	5.0	66
12...	1318	30.0	311	7.1	28.9	.6	8
12...	1320	39.0	314	7.1	28.8	.2	3

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

313338097130301 -- Waco Lk Site BC

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
FEB							
28...	1237	1.00	359	8.3	11.0	10.4	95
28...	1239	10.0	358	8.4	10.5	10.3	93
28...	1241	20.0	360	8.3	10.5	10.3	93
28...	1243	32.0	364	8.3	10.5	10.1	91
MAY							
14...	1030	1.00	376	8.3	24.0	8.2	98
14...	1032	10.0	377	8.2	24.0	7.8	93
14...	1034	20.0	378	8.2	24.0	7.7	92
14...	1036	31.0	380	8.2	24.0	7.6	91
AUG							
12...	1158	1.00	297	7.8	29.7	7.2	96
12...	1200	10.0	298	7.8	29.5	6.9	91
12...	1202	20.0	302	7.4	29.2	5.3	70
12...	1204	30.0	318	7.0	28.9	.1	2

313148097140601 -- Waco Lk Site CC

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)
FEB													
28...	1256	1.00	370	8.4	10.5	10.7	96	E8k	13k	160	15	58.4	3.78
28...	1258	10.0	373	8.4	10.0	10.6	94	--	--	--	--	--	--
28...	1300	23.0	373	8.4	10.0	10.7	95	--	--	160	15	58.9	3.69
MAY													
14...	1045	1.00	378	8.2	24.0	8.1	97	E1k	E5k	170	16	59.4	4.40
14...	1047	10.0	380	8.2	23.5	7.5	89	--	--	--	--	--	--
14...	1049	21.0	383	8.1	23.5	7.3	86	--	--	170	16	60.1	4.31
AUG													
12...	1438	1.00	301	8.0	31.2	7.6	104	E18k	E2k	120	12	38.9	4.57
12...	1440	10.0	304	7.5	29.5	4.9	65	--	--	--	--	--	--
12...	1442	22.0	311	7.2	29.1	1.3	17	--	--	120	11	41.8	4.65

313148097140601 -- Waco Lk Site CC

Date	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	SODIUM PERCENT (00932)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
FEB													
28...	11.9	.4	14	2.67	146	24.8	11.1	.3	7.7	215	1.61	.019	1.63
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	12.1	.4	14	2.59	147	25.1	10.7	.3	7.6	217	1.78	.020	1.80
MAY													
14...	12.1	.4	13	3.00	151	24.8	11.5	.2	5.1	214	.67	.030	.70
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	12.2	.4	13	2.95	152	25.4	11.4	.2	5.6	217	.69	.036	.73
AUG													
12...	13.6	.5	20	3.02	104	21.2	13.3	.3	7.7	165	--	<.008	E.02
12...	--	--	--	--	--	--	--	--	--	--	--	<.008	<.05
12...	13.6	.5	19	3.18	112	20.4	13.9	.3	8.0	173	--	E.005	<.05

08095550 Waco Lake near Waco, TX--Continued

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

313148097140601 -- Waco Lk Site CC

Date	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	ORTHO-PHOSPHATE, DISSOLVED (MG/L AS P) (00671)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
FEB							
28...	<.04	--	.27	E.003	<.02	<10	<2.0
28...	--	--	--	--	--	--	--
28...	<.04	--	.28	E.004	<.02	<10	<2.0
MAY							
14...	<.04	--	.25	.005	<.02	<10	<2.0
14...	--	--	--	--	--	--	--
14...	<.04	--	.29	.005	<.02	<10	E1.1n
AUG							
12...	<.04	--	.25	.005	<.02	<10	E1.2n
12...	<.04	--	.25	.006	<.02	<10	8.9
12...	.06	.25	.31	E.004	<.02	E10	298

313534097142401 -- Waco Lk Site DC

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)
FEB													
28...	1130	1.00	361	8.4	11.0	10.5	95	1.12	.014	1.13	<.04	--	.28
28...	1132	10.0	362	8.4	11.0	10.4	94	--	--	--	--	--	--
28...	1134	20.0	362	8.4	10.5	10.2	91	--	--	--	--	--	--
28...	1136	30.0	393	8.2	10.0	9.4	83	--	--	--	--	--	--
28...	1138	36.0	394	8.2	10.0	9.4	83	.79	.014	.81	E.03	--	.30
MAY													
14...	0928	1.00	374	8.3	24.0	8.0	95	.67	.024	.70	<.04	--	.28
14...	0930	10.0	375	8.2	24.0	7.7	92	--	--	--	--	--	--
14...	0932	20.0	375	8.2	24.0	7.6	91	--	--	--	--	--	--
14...	0934	30.0	376	8.2	24.0	7.3	87	--	--	--	--	--	--
14...	0936	36.0	375	8.2	24.0	7.4	88	.68	.027	.71	<.04	--	.28
AUG													
12...	1329	1.00	299	8.0	30.7	7.2	98	--	<.008	<.05	<.04	--	.24
12...	1331	10.0	301	7.9	30.3	6.8	91	--	--	--	--	--	--
12...	1333	20.0	302	7.7	30.0	5.7	75	--	--	--	--	--	--
12...	1335	34.0	325	7.0	29.2	.0	0	--	<.008	<.05	.32	.25	.57

313534097142401 -- Waco Lk Site DC

Date	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	ORTHO-PHOSPHATE, DISSOLVED (MG/L AS P) (00671)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
FEB				
28...	E.004	<.02	<10	<2.0
28...	--	--	--	--
28...	--	--	--	--
28...	--	--	--	--
28...	E.004	<.02	<10	7.0
MAY				
14...	.005	<.02	<10	<2.0
14...	--	--	--	--
14...	--	--	--	--
14...	--	--	--	--
14...	.005	<.02	<10	5.0
AUG				
12...	.005	<.02	<10	E.9
12...	--	--	--	--
12...	--	--	--	--
12...	.020	E.01	568	458

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

313608097164501 -- Waco Lk Site EC

Date	Time	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)
FEB													
28...	1156	1.00	459	8.2	11.0	10.4	95	E12k	2k	210	15	76.2	5.16
28...	1158	10.0	460	8.2	10.0	10.6	94	--	--	--	--	--	--
28...	1200	20.0	461	8.1	10.0	10.4	92	--	--	210	16	76.8	5.19
MAY													
14...	0952	1.00	356	8.1	24.0	7.8	93	110	80	160	10	56.1	5.08
14...	0954	10.0	354	8.0	23.5	7.6	90	--	--	--	--	--	--
14...	0956	22.0	356	8.0	23.5	7.5	89	--	--	160	10	56.3	5.06
AUG													
12...	1354	1.00	349	7.9	31.6	8.1	112	E96i	28	140	9	45.7	6.02
12...	1356	5.00	350	7.5	30.8	6.2	84	--	--	--	--	--	--
12...	1358	10.0	370	7.0	29.8	2.4	32	--	--	--	--	--	--
12...	1400	15.0	400	6.7	28.6	.0	0	--	--	--	--	--	--
12...	1402	22.0	443	6.6	26.9	.0	0	--	--	190	--	64.5	6.30

313608097164501 -- Waco Lk Site EC

Date	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	SODIUM PERCENT (00932)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
FEB													
28...	12.7	.4	11	1.86	197	29.0	12.5	.3	4.1	262	--	E.004	.52
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	13.0	.4	12	1.85	197	29.0	12.5	.3	4.0	263	--	E.004	.53
MAY													
14...	9.47	.3	11	3.61	151	15.8	9.96	.2	7.9	200	.35	.009	.36
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	9.59	.3	11	3.55	151	16.0	9.46	.2	7.8	200	.38	.008	.39
AUG													
12...	16.3	.6	20	2.85	130	18.8	15.7	.3	13.3	197	--	<.008	<.05
12...	--	--	--	--	--	--	--	--	--	--	--	<.008	<.05
12...	--	--	--	--	--	--	--	--	--	--	--	<.008	<.05
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	13.3	.4	13	3.43	198	4.3	13.4	.3	15.8	246	--	<.008	<.05

313608097164501 -- Waco Lk Site EC

Date	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	ORTHO-PHOSPHATE, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
FEB								
28...	<.04	--	.18	<.004	<.02	--	<10	4.0
28...	--	--	--	--	--	--	--	--
28...	E.03	--	.20	<.004	<.02	--	<10	8.4
MAY								
14...	<.04	--	.37	.011	<.02	--	<10	E2.4b
14...	--	--	--	--	--	--	--	--
14...	<.04	--	.36	.012	<.02	--	<10	7.3
AUG								
12...	<.04	--	.25	.008	<.02	--	<10	<2.0
12...	<.04	--	.25	.008	<.02	--	<10	3.6
12...	.10	.24	.34	.007	<.02	--	16	42.4
12...	--	--	--	--	--	--	--	--
12...	1.85	.30	2.2	.064	.05	.163	2460	1050

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

Value qualifier codes used in this report:
b -- Value was extrapolated below
i -- Result may be affected by interference
k -- Counts outside acceptable range
n -- Below the NDV

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08095600 Bosque River near Waco, TX

LOCATION.--Lat 31°36′04", long 97°11′36", McLennan County, Hydrologic Unit 12060203, on downstream side of bridge on Farm Road 1637, 1.8 mi downstream from Waco Lake Dam, 2.8 mi upstream from mouth, and 4.7 mi northwest of courthouse in Waco.

DRAINAGE AREA.--1,656 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Feb. 1998 to current year.
BIOCHEMICAL DATA: Feb. 1998 to current year.
Water-discharge records.--Aug. 1959 to Sept. 1981 (daily mean dicharge). Oct. 1981 to Sept. 1982 (daily mean discharge above 2,000 ft^3/s).

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

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
MAR													
01...	1345	--	370	8.1	11.3	12	10.8	100	<2.0	160	29	58.4	4.00
MAY													
14...	1145	405	386	8.3	24.5	63	8.2	98	2.2	170	18	59.1	4.59
AUG													
13...	0757	--	334	7.6	28.7	9.0	6.4	84	<2.0e	130	17	44.7	4.72

Date	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
MAR													
01...	11.8	.4	13	2.84	133	25.7	12.7	.3	7.69	224	209	<10	1.19
MAY													
14...	12.4	.4	14	2.90	148	24.9	11.6	.2	4.73	224	212	69	.62
AUG													
13...	14.2	.5	19	3.08	114	24.5	13.6	.3	8.34	185	182	<10	--

Date	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)
MAR													
01...	.014	1.20	E.03	.31	.005	<.02	4.3	<1	.36	E1	40	<.06	E.02
MAY													
14...	.023	.65	<.04	.22	.005	<.02	5.1	<1	.17	2	46	<.06	<.04
AUG													
13...	<.008	E.04	<.04	.28	.006	<.02	4.8	2	.15	6	71	<.06	<.04

Date	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
MAR													
01...	<.8	.15	1.1	<10	.10	1.1	<.01	1.4	.68	<2	<1	2	.83
MAY													
14...	<.8	.20	1.1	<10	<.08	.7	<.01	1.4	3.95	<2	<1	1	.93
AUG													
13...	<.8	.10	1.6	11	<.08	.2	<.01	1.6	.75	<2	<1	1	.75

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

Value qualifier codes used in this report:
e -- See field comment

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08096500 Brazos River at Waco, TX

LOCATION.--Lat 31°32′09", long 97°04′23", McLennan County, Hydrologic Unit 12060202, on left bank 2.2 mi downstream from bridge on LaSalle Avenue and at mile 400.7.

DRAINAGE AREA.--29,573 mi^2, approximately, of which 9,566 mi^2 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.

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 fair. 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. Flow is affected at times by discharge from the flood-detention pools of eleven floodwater-retarding structures with a combined detention capacity of 6,420 acre-ft. These structures control runoff from 20.4 mi^2 in the Aquilla and Hackberry Creeks drainage basins.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--42 years (water years 1899-1940), 2,560 ft^3/s (1,855,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1899-1940).--Maximum discharge since 1847, 246,000 ft^3/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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage for 1847-98, 34.63 ft May 28, 1885, from floodmark at site 3.9 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	28	1550	1700	431	412	1640	931	2280	196	1290	1050
2	412	1000	1410	2080	1600	796	3160	723	1920	212	1850	491
3	478	344	1320	2430	1870	1250	2980	628	2300	180	1350	1580
4	86	970	1430	3000	1860	173	2180	354	434	176	1700	355
5	68	180	1880	2440	3260	159	642	342	1460	213	1530	954
6	48	38	1470	1620	6270	128	720	141	1810	244	1130	837
7	19	32	1060	1240	2960	353	985	137	54	927	1170	1050
8	5.1	23	1410	837	2860	448	1630	138	23	256	1870	516
9	4.4	770	1290	859	2510	401	2820	128	651	1850	983	92
10	5.6	1160	1420	630	2390	1080	3880	349	178	1840	212	1040
11	24	1310	1920	738	4510	575	2670	2220	381	258	125	1470
12	26	4810	1410	1300	2880	1300	3540	2380	276	1240	818	226
13	3760	4330	1020	1290	2330	585	4900	1860	196	405	946	399
14	1340	1130	1600	950	2040	487	5380	2200	149	985	1230	673
15	712	1460	1380	784	1360	396	5470	993	128	2080	339	2560
16	1210	6510	15300	1570	358	383	5130	1430	464	803	120	762
17	212	1630	10300	943	710	504	2150	1200	127	460	1120	115
18	82	606	2640	356	382	231	3260	460	148	2460	1710	196
19	868	837	1810	276	879	409	1970	239	175	2000	2120	384
20	252	903	2400	257	996	1430	2190	210	138	1630	1400	205
21	38	469	3570	233	854	2540	2400	194	128	911	566	241
22	46	941	3440	256	857	3380	2290	192	119	1550	1010	234
23	1070	1140	3410	511	914	2890	1950	192	113	1360	1060	227
24	1710	396	3280	481	745	1870	1700	191	112	191	1390	227
25	250	349	3220	1150	630	1350	2070	191	112	1080	1340	231
26	52	331	3130	722	1330	1120	620	1170	881	856	881	234
27	573	197	3090	685	1630	803	771	493	676	148	938	233
28	85	1280	3080	357	695	729	768	446	135	95	332	234
29	52	406	3020	293	---	390	1010	3750	109	111	1140	236
30	37	662	2980	24	---	1180	1030	4420	147	397	1040	238
31	29	---	2920	14	---	2720	---	3000	---	1730	837	---
TOTAL	13625.1	34242	89160	30026	50111	30472	71906	31302	15824	26844	33547	17290
MEAN	439.5	1141	2876	968.6	1790	983.0	2397	1010	527.5	865.9	1082	576.3
MAX	3760	6510	15300	3000	6270	3380	5470	4420	2300	2460	2120	2560
MIN	4.4	23	1020	14	358	128	620	128	23	95	120	92
AC-FT	27030	67920	176800	59560	99400	60440	142600	62090	31390	53250	66540	34290

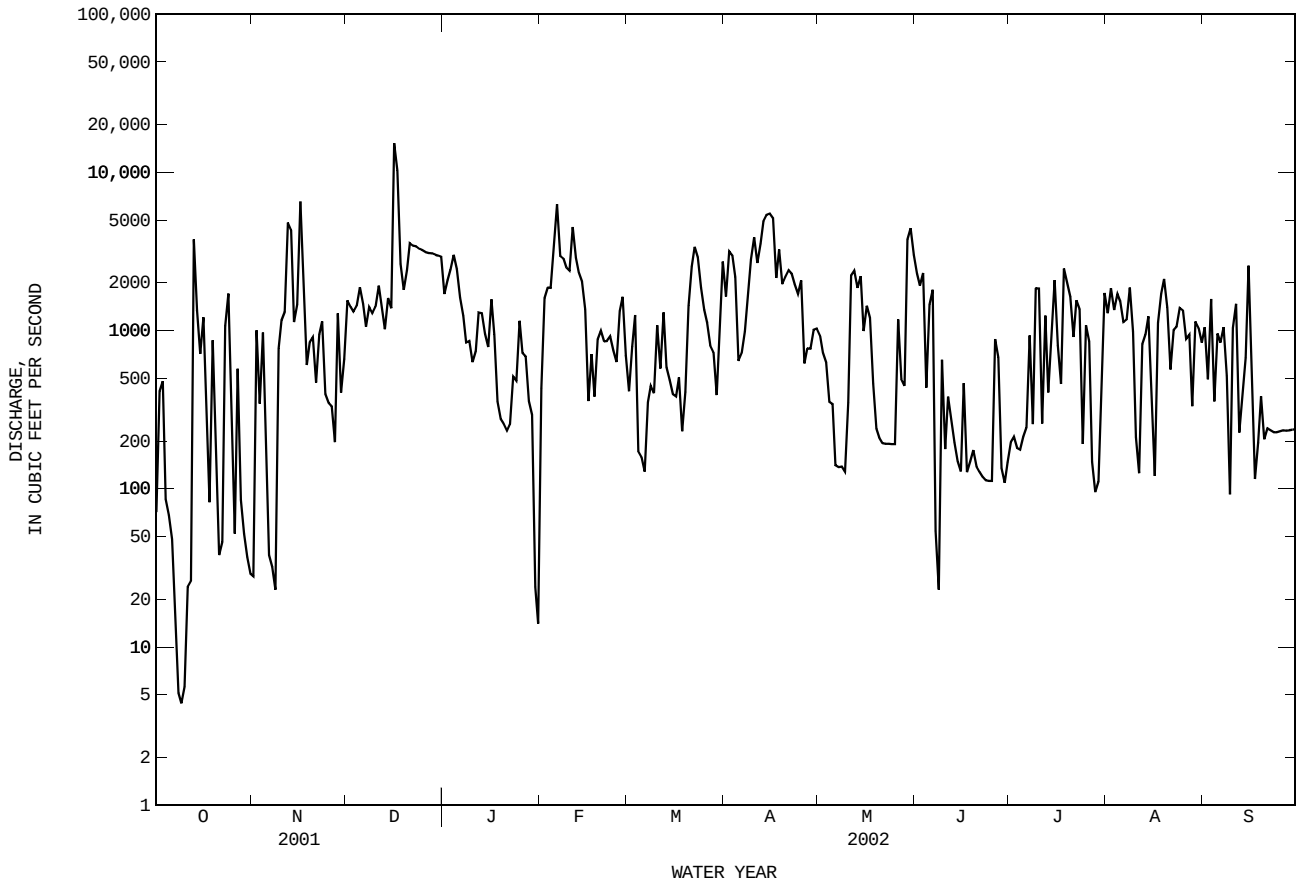
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002z, BY WATER YEAR (WY)

MEAN	1870	1432	1553	1851	2162	2710	2822	5270	4167	1646	1092	1198
MAX	13540	11150	15070	28140	16860	20260	22470	36340	37140	9427	7300	9492
(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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1941 - 2002z	
ANNUAL TOTAL	1044099.1		444349.1			
ANNUAL MEAN	2861		1217		2315	
HIGHEST ANNUAL MEAN					9611	1992
LOWEST ANNUAL MEAN					322	1984
HIGHEST DAILY MEAN	26600	Mar 14	15300	Dec 16	121000	Apr 22 1945
LOWEST DAILY MEAN	4.4	Oct 9	4.4	Oct 9	0.12	Aug 7 1988
ANNUAL SEVEN-DAY MINIMUM	19	Oct 6	19	Oct 6	4.4	May 13 1988
MAXIMUM PEAK FLOW			20400	Dec 17	144000	Apr 22 1945
MAXIMUM PEAK STAGE			16.40	Dec 17	36.70	Apr 22 1945
ANNUAL RUNOFF (AC-FT)	2071000		881400		1677000	
10 PERCENT EXCEEDS	8430		2880		4790	
50 PERCENT EXCEEDS	1370		859		836	
90 PERCENT EXCEEDS	86		123		127	

z Period of regulated streamflow.



08098290 Brazos River near Highbank, TX

LOCATION.--Lat 31°08′02", long 96°49′29", Falls County, Hydrologic Unit 12070101, near 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^2, of which 9,566 mi^2 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. 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. Flow is affected at times by discharge from the flood-detention pools of 76 floodwater-retarding structures with a total combined detention capacity of 83,290 acre-ft. These structures control runoff from 238 mi^2 in the Aquilla, Tehuacana, Castleman Creeks, and Cow Bayou. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	528	159	1750	3280	364	1060	3080	1290	3700	452	1550	1010
2	231	148	2100	2240	502	843	2430	1180	2710	e675	1390	1160
3	235	683	1890	2370	1940	978	3580	1040	2330	e490	1860	683
4	748	599	1760	2910	2290	1530	3410	928	2490	e426	1470	1570
5	345	1030	1740	3380	2450	595	2480	672	967	e400	1740	742
6	246	559	2080	2820	7280	492	1290	618	1470	366	1660	969
7	247	256	1630	2000	7850	450	1310	386	2020	355	1320	924
8	215	181	1310	1640	5400	448	3080	340	549	911	1270	1260
9	178	160	1970	1260	3980	730	3490	319	287	579	1910	821
10	149	568	2090	1120	3440	740	4840	309	537	1710	1190	522
11	198	1360	2180	964	3500	1170	4570	305	549	1950	549	878
12	238	1550	3190	906	5200	899	3380	2120	306	744	322	1490
13	1960	6670	3250	1470	3550	1450	4130	2380	485	1150	677	677
14	5980	5460	3040	1450	2990	834	5490	1990	342	662	921	421
15	3570	2240	3500	1180	2670	744	5810	2190	272	1140	1260	669
16	1730	9060	24200	951	1940	733	5870	1290	327	2160	625	2410
17	1730	8820	39700	1630	1010	658	5030	1460	591	1650	350	1120
18	866	4440	24300	1320	1130	777	3000	1350	339	1450	862	559
19	497	2310	10800	877	924	602	3430	744	260	2780	1850	306
20	919	1900	6410	676	1230	1160	2500	411	272	2260	2210	391
21	712	2030	4910	620	1470	2620	2780	346	258	1840	1740	372
22	319	1490	5250	586	1400	3760	2710	310	233	1200	861	309
23	227	1520	4860	584	1280	3990	2610	282	219	1550	1110	306
24	787	1630	4530	786	1360	3180	2310	272	212	1520	1270	290
25	1780	1010	4240	849	1180	2270	2110	270	216	608	1580	296
26	733	728	4030	1390	1030	1770	2310	323	257	1010	1480	301
27	303	655	3810	1180	1580	1560	1040	984	932	872	1160	311
28	402	823	3700	979	1910	1420	1050	757	874	507	1040	307
29	485	2080	3620	815	---	1270	1050	1160	524	245	712	309
30	221	2020	3520	646	---	1180	1230	4720	335	189	1070	297
31	183	---	3490	508	---	2330	---	5090	---	324	1270	---
TOTAL	26962	62139	184850	43387	70850	42243	91400	35836	24863	32175	38279	21680
MEAN	869.7	2071	5963	1400	2530	1363	3047	1156	828.8	1038	1235	722.7
MAX	5980	9060	39700	3380	7850	3990	5870	5090	3700	2780	2210	2410
MIN	149	148	1310	508	364	448	1040	270	212	189	322	290
AC-FT	53480	123300	366600	86060	140500	83790	181300	71080	49320	63820	75930	43000

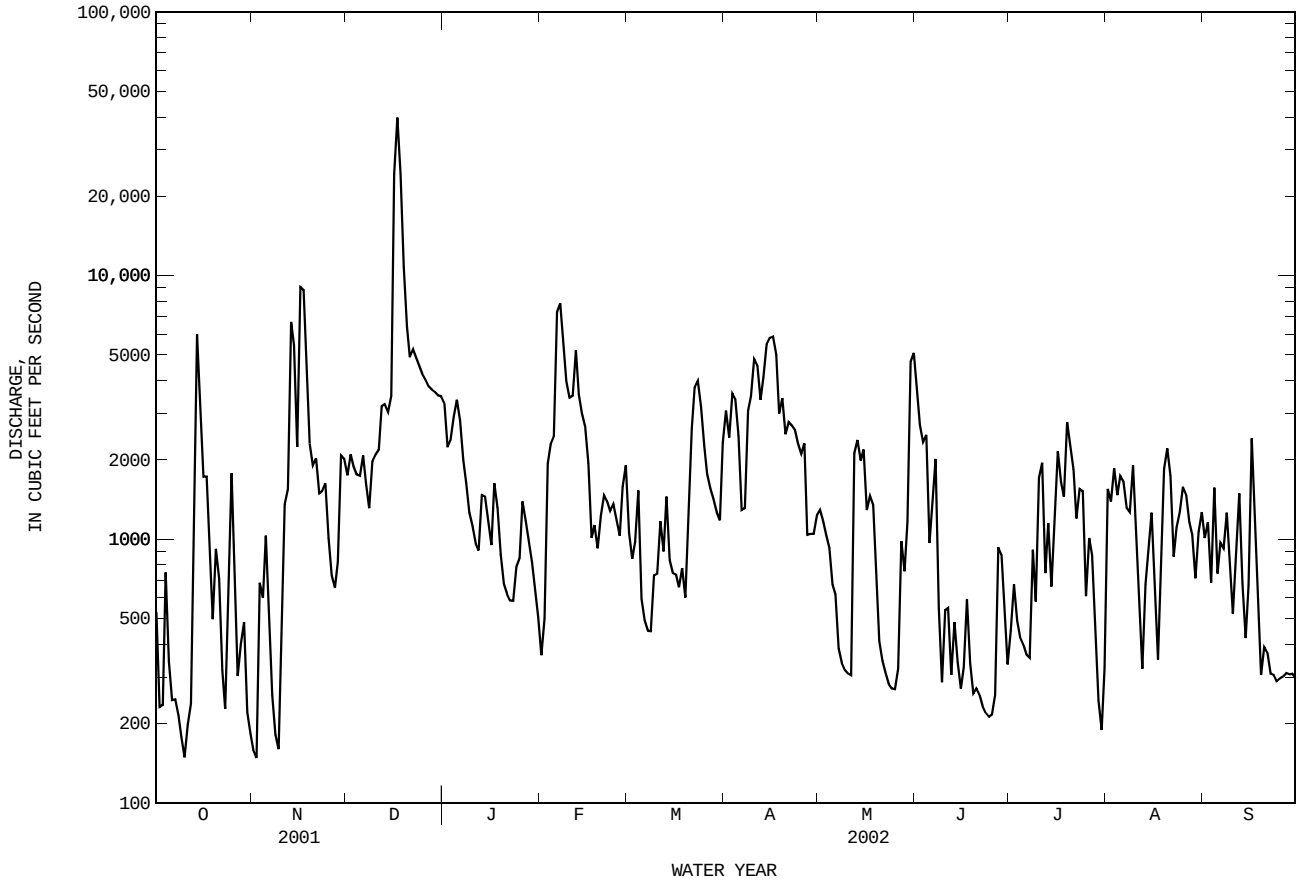
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2002, BY WATER YEAR (WY)

MEAN	1618	2035	2443	2659	3038	4165	3390	5580	4732	1708	1260	1213
MAX	13740	18050	16830	31930	21820	22730	15700	30140	17520	10050	8600	9865
(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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1966 - 2002	
ANNUAL TOTAL	1324534		674664			
ANNUAL MEAN	3629		1848		2818	
HIGHEST ANNUAL MEAN					11320	1992
LOWEST ANNUAL MEAN					329	1984
HIGHEST DAILY MEAN	39700	Dec 17	39700	Dec 17	70300	Dec 22 1991
LOWEST DAILY MEAN	147	Sep 29	148	Nov 2	23	Feb 24 1984
ANNUAL SEVEN-DAY MINIMUM	193	Sep 24	210	Oct 6	23	Sep 15 1984
MAXIMUM PEAK FLOW			40600	Dec 17	78700	Feb 4 1986
MAXIMUM PEAK STAGE			20.44	Dec 17	30.78	Dec 22 1991
ANNUAL RUNOFF (AC-FT)	2627000		1338000		2042000	
10 PERCENT EXCEEDS	9270		3650		6240	
50 PERCENT EXCEEDS	1640		1160		1030	
90 PERCENT EXCEEDS	285		302		213	

e Estimated

08098290 Brazos River near Highbank, TX--Continued



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^2.

PERIOD OF RECORD.--Jan. 1955 to Sept. 1983, Mar. 1999 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.--No estimated daily contents. Records fair. 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^3/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. Conservation pool storage is 26,420 acre-ft. 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	1,374.5
Lowest gated outlet (invert)	1,335.0

COOPERATION.--The capacity curve dated Sept. 23, 1952, was furnished by Eastland County Water Supply District and is based on a survey by Freese and Nichols, Consulting Engineers, Fort Worth, Texas.

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 contents, 27,940 acre-ft, July 9, elevation, 1,375.40 ft; minimum contents, 15,670 acre-ft, Mar. 18, elevation, 1,366.01 ft.

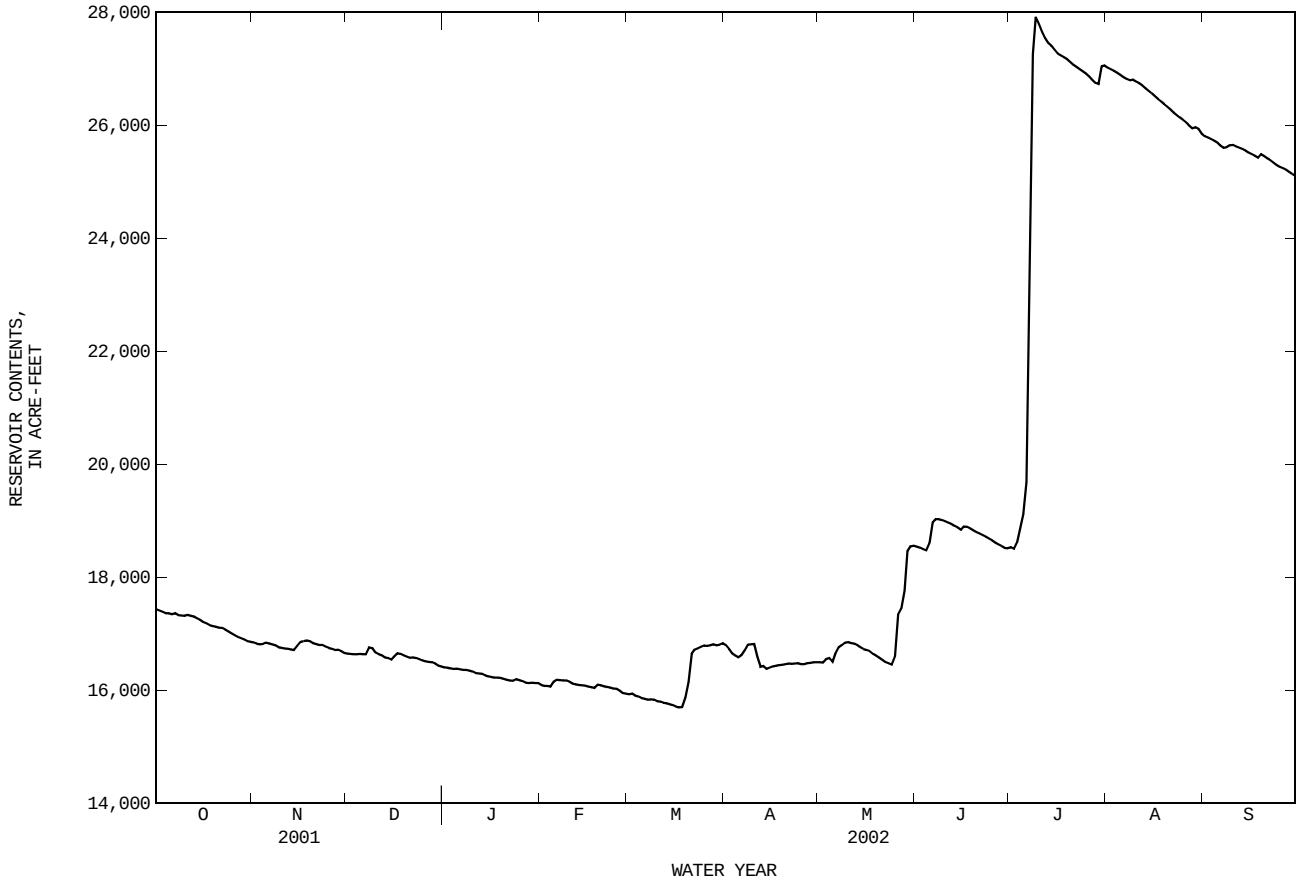
RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17430	16840	16640	16400	16090	15920	16790	16490	18540	18530	27020	25800
2	17410	16820	16640	16400	16070	15940	16720	16490	18520	18500	26990	25780
3	17380	16810	16630	16380	16070	15900	16650	16550	18490	18620	26950	25750
4	17360	16820	16630	16370	16060	15880	16610	16560	18470	18850	26920	25720
5	17360	16840	16640	16380	16150	15850	16580	16500	18600	19110	26890	25690
6	17340	16830	16630	16370	16180	15840	16620	16640	18970	19680	26850	25640
7	17360	16810	16630	16350	16170	15830	16700	16750	19030	22800	26810	25590
8	17320	16790	16750	16350	16170	15840	16800	16790	19020	27250	26790	25610
9	17320	16760	16740	16350	16170	15830	16810	16830	19010	27910	26810	25640
10	17310	16750	16660	16330	16150	15800	16810	16850	18980	27790	26770	25650
11	17330	16740	16640	16300	16110	15790	16590	16830	18960	27650	26740	25620
12	17310	16730	16610	16290	16100	15770	16410	16820	18940	27530	26700	25600
13	17300	16720	16580	16290	16090	15760	16420	16790	18900	27450	26650	25570
14	17270	16700	16570	16260	16080	15750	16370	16750	18870	27400	26610	25540
15	17240	16780	16530	16240	16080	15730	16400	16720	18840	27330	26560	25510
16	17200	16850	16590	16230	16060	15700	16420	16710	18890	27260	26510	25480
17	17180	16860	16650	16220	16050	15690	16430	16680	18880	27230	26460	25450
18	17150	16880	16640	16220	16040	15700	16440	16640	18860	27200	26420	25420
19	17130	16870	16610	16210	16090	15860	16450	16610	18820	27160	26370	25490
20	17120	16830	16590	16200	16080	16140	16460	16570	18790	27110	26330	25450
21	17110	16820	16570	16180	16070	16640	16470	16530	18770	27070	26280	25410
22	17100	16800	16570	16170	16050	16710	16460	16490	18740	27030	26220	25370
23	17070	16800	16560	16160	16040	16740	16470	16470	18710	26990	26180	25330
24	17030	16770	16540	16190	16030	16760	16480	16440	18680	26950	26130	25290
25	17000	16740	16530	16170	16020	16790	16450	16590	18650	26910	26090	25260
26	16970	16730	16510	16150	15990	16780	16460	17340	18610	26860	26050	25240
27	16940	16710	16500	16130	15950	16790	16470	17450	18580	26800	25990	25200
28	16920	16710	16490	16120	15930	16810	16480	17750	18550	26750	25940	25170
29	16900	16690	16470	16130	---	16790	16490	18450	18520	26720	25960	25130
30	16870	16660	16430	16120	---	16810	16490	18540	18510	27040	25930	25100
31	16850	---	16420	16120	---	16830	---	18550	---	27050	25850	---
MEAN	17180	16780	16590	16250	16080	16160	16540	16910	18760	25440	26480	25480
MAX	17430	16880	16750	16400	16180	16830	16810	18550	19030	27910	27020	25800
MIN	16850	16660	16420	16120	15930	15690	16370	16440	18470	18500	25850	25100
(+)	1367.10	1366.93	1366.70	1366.43	1366.26	1367.08	1366.77	1368.59	1368.55	1374.85	1374.07	1373.57
(@)	-610	-190	-240	-300	-190	+900	-340	+2060	-40	+8540	-1200	-750

CAL YR 2001 MAX 21670 MIN 14740 (@) +1610
WTR YR 2002 MAX 27910 MIN 15690 (@) +7640

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

08099000 Leon Reservoir near Ranger, TX--Continued



08099100 Leon River near DeLeon, TX
(Flood-hydrograph partial-record station)

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^2.

PERIOD OF RECORD.--Sept. 1960 to Sept. 1986, Oct. 1986 to Sept. 1995 (daily mean discharges greater than 600 ft^3/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 fair. 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^3/s (29,760 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft^3/s Apr. 26, 1990 (gage height, 19.00 ft, from floodmarks), from rating curve extended above 17,600 ft^3/s; prior to Apr. 26, 1990, maximum discharge, 7,540 ft^3/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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
No peak greater than base discharge.				May 3	0800	*265	*4.44

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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^2.

PERIOD OF RECORD.--Sept. 1960 to Sept. 1986, Oct. 1986 to Sept. 1995 (daily mean discharges greater than 250 ft^3/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^3/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.29	0.67	0.32	10	1.8	12	0.33	15	0.45
2	0.00	0.00	0.00	0.23	0.60	0.27	12	0.56	7.0	0.04	9.1	0.33
3	0.00	0.00	0.00	0.60	0.57	0.78	9.7	214	3.8	23	5.4	e0.26
4	0.00	0.00	0.02	0.69	0.60	0.73	4.9	140	2.9	149	4.4	0.43
5	0.00	0.00	0.00	0.78	3.8	0.92	3.3	1540	74	197	4.1	e0.26
6	0.00	0.00	0.00	0.61	3.5	1.0	5.5	1050	137	1210	3.8	e0.20
7	0.00	0.00	0.00	0.45	1.9	0.89	6.8	99	48	4720	3.5	e0.20
8	0.00	0.00	0.00	0.41	1.7	1.5	6.5	50	30	909	4.5	0.57
9	0.00	0.00	0.00	0.44	1.4	0.96	3.3	51	21	183	7.0	2.7
10	0.00	0.00	0.00	0.57	0.95	0.63	2.9	46	16	100	5.2	2.0
11	0.00	0.00	0.00	0.46	1.9	0.76	2.7	26	11	72	17	0.93
12	0.00	0.00	0.02	0.39	2.4	0.49	3.6	18	9.0	56	9.5	0.54
13	0.00	0.00	0.00	0.46	2.0	0.97	4.2	18	7.5	47	4.7	e0.26
14	0.00	0.00	0.00	0.40	2.1	0.59	4.2	14	5.6	43	3.7	e0.20
15	0.00	0.00	0.00	0.25	1.9	0.56	4.1	9.5	5.8	38	3.4	e0.26
16	0.00	0.08	17	0.34	1.8	0.33	4.8	6.7	20	33	1.8	e0.26
17	0.00	0.00	29	0.25	1.8	0.26	4.3	4.6	34	36	3.5	e0.49
18	0.00	0.00	7.4	0.29	1.8	1.5	4.9	3.3	22	26	3.5	e0.60
19	0.00	0.00	2.8	0.30	2.8	24	6.3	2.6	14	24	1.7	1.3
20	0.00	0.00	2.0	0.30	2.5	110	6.9	2.3	9.9	20	0.84	1.5
21	0.00	0.00	1.5	0.30	1.6	46	6.9	1.9	7.6	18	0.82	0.64
22	0.00	0.00	1.1	0.33	1.3	20	4.8	1.6	5.4	16	0.71	e0.26
23	0.00	0.00	0.72	0.30	1.2	11	1.1	1.6	1.9	14	0.71	e0.20
24	0.00	0.00	0.56	1.1	1.8	7.9	1.7	2.4	0.17	13	0.71	e0.20
25	0.00	0.00	0.55	0.58	1.6	5.3	2.2	254	0.01	12	0.60	e0.20
26	0.00	0.00	0.43	0.49	266	2.5	1.6	98	0.01	12	0.51	e0.20
27	0.00	0.00	0.44	0.46	e26	2.1	3.4	28	0.00	7.2	0.47	e0.20
28	0.00	0.00	0.43	0.53	e1.6	3.0	2.8	483	0.00	7.5	0.65	e0.15
29	0.00	0.00	0.29	0.59	---	3.7	1.5	178	0.00	8.6	0.66	e0.15
30	0.00	0.00	0.28	0.63	---	7.6	1.4	45	0.05	10	0.80	e0.15
31	0.00	---	0.27	0.61	---	11	---	22	---	24	0.67	---
TOTAL	0.00	0.08	64.81	14.43	337.79	267.56	138.3	4412.86	505.64	8028.67	118.95	16.09
MEAN	0.000	0.003	2.091	0.465	12.06	8.631	4.610	142.4	16.85	259.0	3.837	0.536
MAX	0.00	0.08	29	1.1	266	110	12	1540	137	4720	17	2.7
MIN	0.00	0.00	0.00	0.23	0.57	0.26	1.1	0.56	0.00	0.04	0.47	0.15
AC-FT	0.00	0.2	129	29	670	531	274	8750	1000	15920	236	32

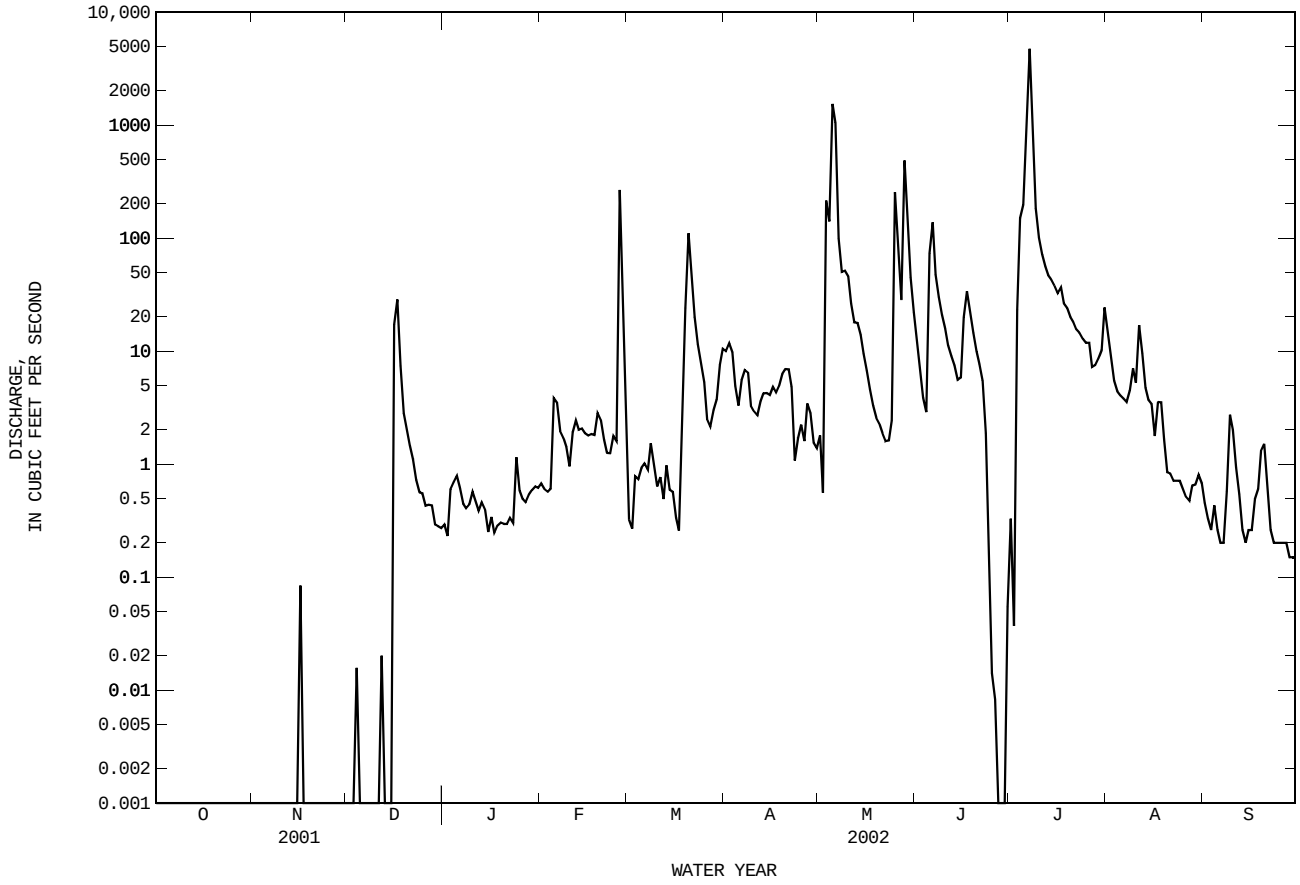
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2002h, BY WATER YEAR (WY)

MEAN	20.66	14.26	7.731	31.96	15.46	32.37	27.16	78.58	54.80	21.34	4.400	29.51
MAX	124	199	98.2	589	76.6	267	251	447	562	289	68.3	401
(WY)	1985	1965	1985	1968	2001	1968	1969	1963	1986	2002	1971	1962
MIN	0.000	0.000	0.000	0.063	0.057	0.014	0.15	0.000	0.000	0.000	0.000	0.000
(WY)	1978	1980	2000	1984	2000	2000	1981	2000	1978	1974	1970	1977

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1960 - 2002h	
ANNUAL TOTAL	7121.37		13905.18			
ANNUAL MEAN	19.51		38.10		28.33	
HIGHEST ANNUAL MEAN					105	1968
LOWEST ANNUAL MEAN					1.63	1978
HIGHEST DAILY MEAN	822	Feb 16	4720	Jul 7	7060	Jun 14 1989
LOWEST DAILY MEAN	0.00	Jun 14	0.00	Oct 1	0.00	May 11 1962
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 14	0.00	Oct 1	0.00	May 11 1962
MAXIMUM PEAK FLOW			10900	Jul 7	c19500	Apr 26 1990
MAXIMUM PEAK STAGE			21.53	Jul 7	a23.65	Apr 26 1990
ANNUAL RUNOFF (AC-FT)	14130		27580		20520	
10 PERCENT EXCEEDS	27		28		19	
50 PERCENT EXCEEDS	0.52		0.97		1.3	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated
h See PERIOD OF RECORD paragraph.
c From rating curve extended above 17,000 ft^3/s.
a From floodmark.

08099300 Sabana River near DeLeon, TX--Continued



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^2.

PERIOD OF RECORD.--Jan. 1963 to Sept. 2000 (contents furnished by U.S. Army Corps of Engineers), Oct. 2000 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.--No estimated daily contents. 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^3/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^2 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.--The capacity table dated Oct. 1, 1996 was provided by the Texas Water Development Board.

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 contents, 67,800 acre-ft, July 9, elevation, 1,164.48 ft; minimum contents, 34,200 acre-ft, Mar. 18, elevation, 1,156.63 ft.

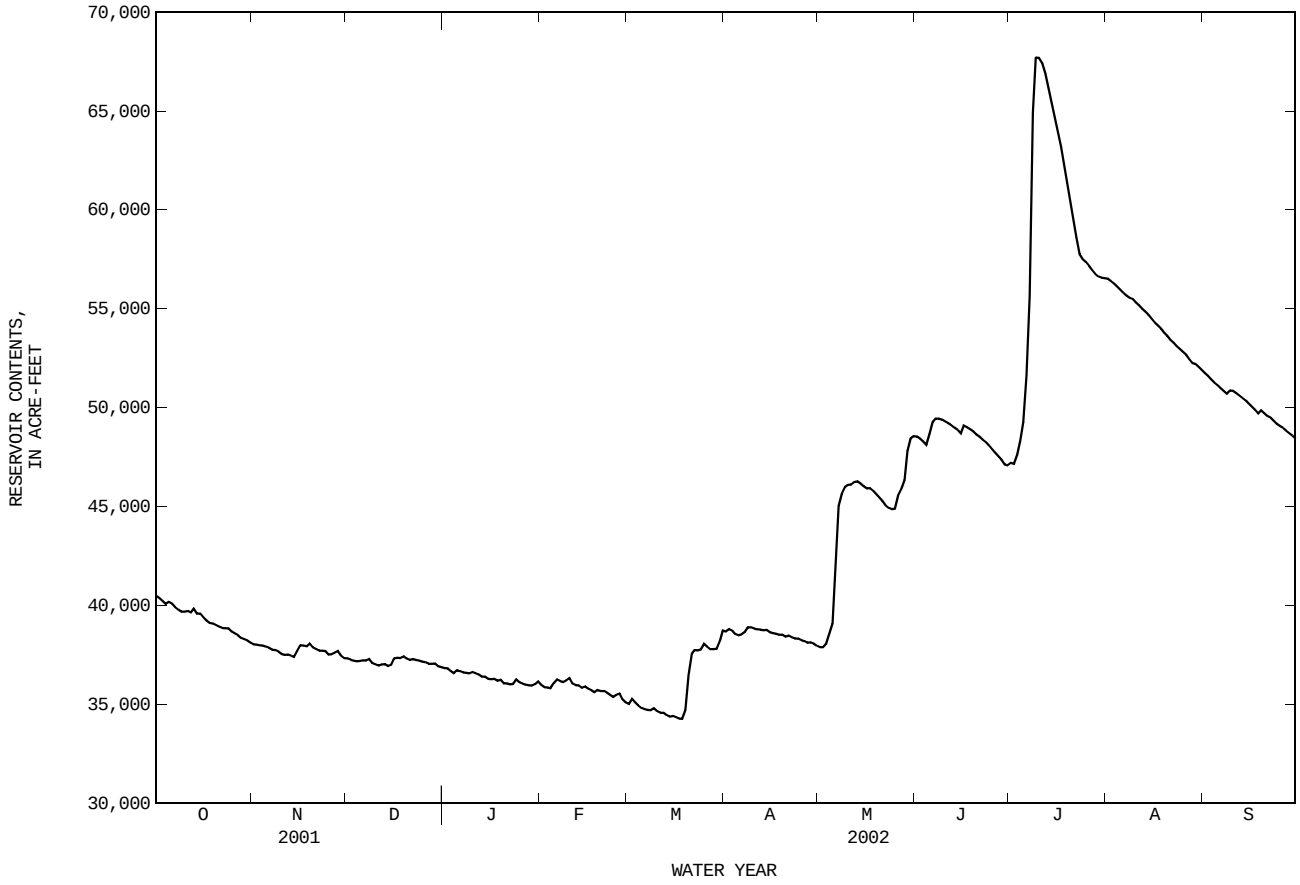
RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40470	38030	37310	36820	35970	34990	38660	37880	48540	47200	56510	51750
2	40350	38000	37250	36810	35860	35250	38790	37870	48430	47160	56400	51600
3	40210	37970	37200	36680	35840	35100	38710	38050	48280	47600	56270	51430
4	40070	37950	37170	36570	35810	34940	38540	38580	48100	48270	56100	51270
5	40170	37910	37180	36720	36060	34810	38480	39070	48650	49250	55960	51130
6	40080	37840	37220	36660	36240	34730	38520	42180	49270	51590	55810	50990
7	39910	37740	37200	36600	36170	34700	38640	45010	49430	55620	55660	50850
8	39770	37740	37280	36580	36110	34680	38880	45630	49440	64890	55540	50700
9	39680	37660	37060	36550	36190	34790	38880	45980	49390	67700	55470	50850
10	39670	37530	37000	36610	36330	34650	38820	46080	49300	67680	55320	50850
11	39710	37500	36930	36550	36040	34560	38780	46100	49210	67420	55160	50740
12	39620	37500	37000	36500	35950	34550	38760	46230	49110	66880	54990	50620
13	39820	37440	37020	36390	35960	34440	38730	46270	48980	66230	54840	50480
14	39580	37380	36920	36390	35830	34370	38750	46140	48870	65460	54690	50370
15	39570	37690	36990	36270	35890	34400	38650	46020	48690	64730	54490	50220
16	39390	37980	37310	36260	35770	34340	38590	45910	49080	63970	54300	50050
17	39220	37970	37340	36280	35700	34270	38560	45930	49000	63200	54140	49890
18	39110	37930	37330	36180	35600	34260	38520	45790	48900	62370	53980	49690
19	39080	38060	37410	36230	35710	34690	38510	45610	48790	61470	53800	49860
20	39000	37870	37300	36060	35660	36470	38410	45460	48630	60500	53630	49710
21	38920	37770	37220	36040	35670	37520	38460	45270	48520	59540	53430	49560
22	38850	37700	37270	35990	35580	37740	38380	45050	48380	58600	53270	49490
23	38840	37700	37230	36010	35470	37710	38320	44920	48250	57760	53120	49320
24	38830	37690	37200	36250	35360	37770	38320	44850	48080	57500	52970	49180
25	38670	37510	37150	36100	35460	38050	38240	44890	47900	57360	52820	49070
26	38570	37520	37110	36030	35530	37910	38180	45550	47730	57170	52670	48960
27	38490	37600	37040	35990	35240	37780	38100	45870	47550	56950	52440	48820
28	38350	37680	37030	35950	35070	37790	38130	46330	47360	56750	52250	48700
29	38280	37460	37060	35930	---	37790	38050	47780	47120	56620	52200	48580
30	38220	37330	36930	36020	---	38190	37940	48430	47080	56550	52060	48430
31	38100	---	36870	36140	---	38710	---	48540	---	56540	51890	---
MEAN	39310	37720	37150	36330	35790	35870	38510	44620	48540	58730	54260	50110
MAX	40470	38060	37410	36820	36330	38710	38880	48540	49440	67700	56510	51750
MIN	38100	37330	36870	35930	35070	34260	37940	37870	47080	47160	51890	48430
(+)	1157.75	1157.54	1157.41	1157.20	1156.90	1157.92	1157.71	1160.39	1160.04	1162.20	1161.17	1160.36
(@)	-2450	-770	-460	-730	-1070	+3640	-770	+10600	-1460	+9460	-4650	-3460

CAL YR 2001 MAX 68850 MIN 18940 (@) +17750
WTR YR 2002 MAX 67700 MIN 34260 (@) +7880

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

08099400 Proctor Lake near Proctor, TX--Continued



08100000 Leon River near Hamilton, TX
(Flood-hydrograph partial-record station)

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^2.

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. Flow is affected at times by discharge from the flood-detention pools of 14 floodwater-retarding structures with a combined detention capacity of 11,610 acre-ft. These structures control runoff from 43.9 mi^2.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--6 years (water years 1925-31) prior to regulation by Lake Leon, 130 ft^3/s (94,200 acre-ft/yr).

AVERAGE DISCHARGE FOR REGULATED PERIOD.--36 years (water years 1961-96), 210 ft^3/s (152,100 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1926-31).--Maximum discharge, 5,680 ft^3/s, May 22, 1931, gage height, 20.00 ft; no flow at times.

EXTREMES FOR REGULATED PERIOD.--Maximum discharge, 32,100 ft^3/s Dec. 20, 1991, gage height, 35.02 ft; no flow at times.

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 CURRENT YEAR.--Peak discharges greater than base discharge of 3,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
No peak greater than base discharge.				Mar. 20	0130	*3,120	*20.21

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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^2.

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.--No estimated daily discharges. Records good. Since 1954, at least 10% of contributing drainage area has been regulated by major reservoirs. Flow at times is slightly affected by discharge from 18 floodwater-retarding structures. These structures control runoff from 47.0 mi^2 in the northeast tributaries and Pecan Creek drainage basins. 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^3/s (61,060 acre-ft/yr)

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS,1951-1953).-- Maximum discharge, 7,230 ft^3/s May 28, 1952 (gageheight, 24.79 ft.) No flow at times in 1951-52.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1854, about 35 ft in May 1908, from information by local residents.

DISCHARGE FROM THE DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	28	43	87	3330	112	1160	85	89	124	43	5.7
2	16	28	46	86	667	110	553	78	74	693	38	5.3
3	16	28	47	83	392	108	363	73	58	1980	34	5.2
4	16	29	49	82	304	107	263	69	44	757	32	5.0
5	17	27	49	86	572	104	211	68	35	268	30	4.9
6	20	27	50	87	1910	103	207	75	29	664	25	4.6
7	16	28	51	83	1060	102	208	102	25	433	22	5.0
8	14	28	57	80	634	103	352	102	112	381	19	10
9	13	26	56	78	500	100	560	86	193	459	20	13
10	13	27	55	79	412	95	462	73	104	340	20	9.7
11	54	28	55	80	340	91	329	64	70	264	18	7.1
12	28	29	61	75	295	87	259	58	52	487	17	7.1
13	195	31	61	74	277	86	223	57	40	645	16	9.8
14	80	34	60	73	260	85	200	49	33	662	15	11
15	204	259	87	71	241	83	187	44	27	553	13	15
16	172	679	2340	71	228	83	183	39	39	845	12	15
17	87	390	779	70	215	84	179	37	26	799	11	19
18	60	206	349	72	201	83	169	34	21	615	33	16
19	48	167	246	73	203	87	161	31	20	596	40	21
20	41	124	192	71	208	345	149	28	19	533	25	17
21	36	91	173	69	197	2510	138	26	45	508	19	17
22	34	73	164	71	177	1190	132	25	49	497	16	23
23	34	64	146	72	162	490	128	25	39	493	14	18
24	33	55	129	75	154	334	121	25	29	481	12	15
25	29	49	118	83	151	265	113	25	23	466	10	12
26	27	45	112	85	136	225	108	29	19	365	9.4	11
27	25	42	108	140	122	194	102	25	16	183	8.4	11
28	24	41	105	126	117	174	97	35	14	106	7.7	11
29	24	41	100	110	---	164	94	30	12	75	7.0	9.7
30	26	42	94	107	---	176	90	41	61	60	6.8	8.7
31	27	---	90	864	---	912	---	77	---	49	6.3	---
TOTAL	1447	2766	6072	3363	13465	8792	7501	1615	1417	15381	599.6	342.8
MEAN	46.68	92.20	195.9	108.5	480.9	283.6	250.0	52.10	47.23	496.2	19.34	11.43
MAX	204	679	2340	864	3330	2510	1160	102	193	1980	43	23
MIN	13	26	43	69	117	83	90	25	12	49	6.3	4.6
AC-FT	2870	5490	12040	6670	26710	17440	14880	3200	2810	30510	1190	680

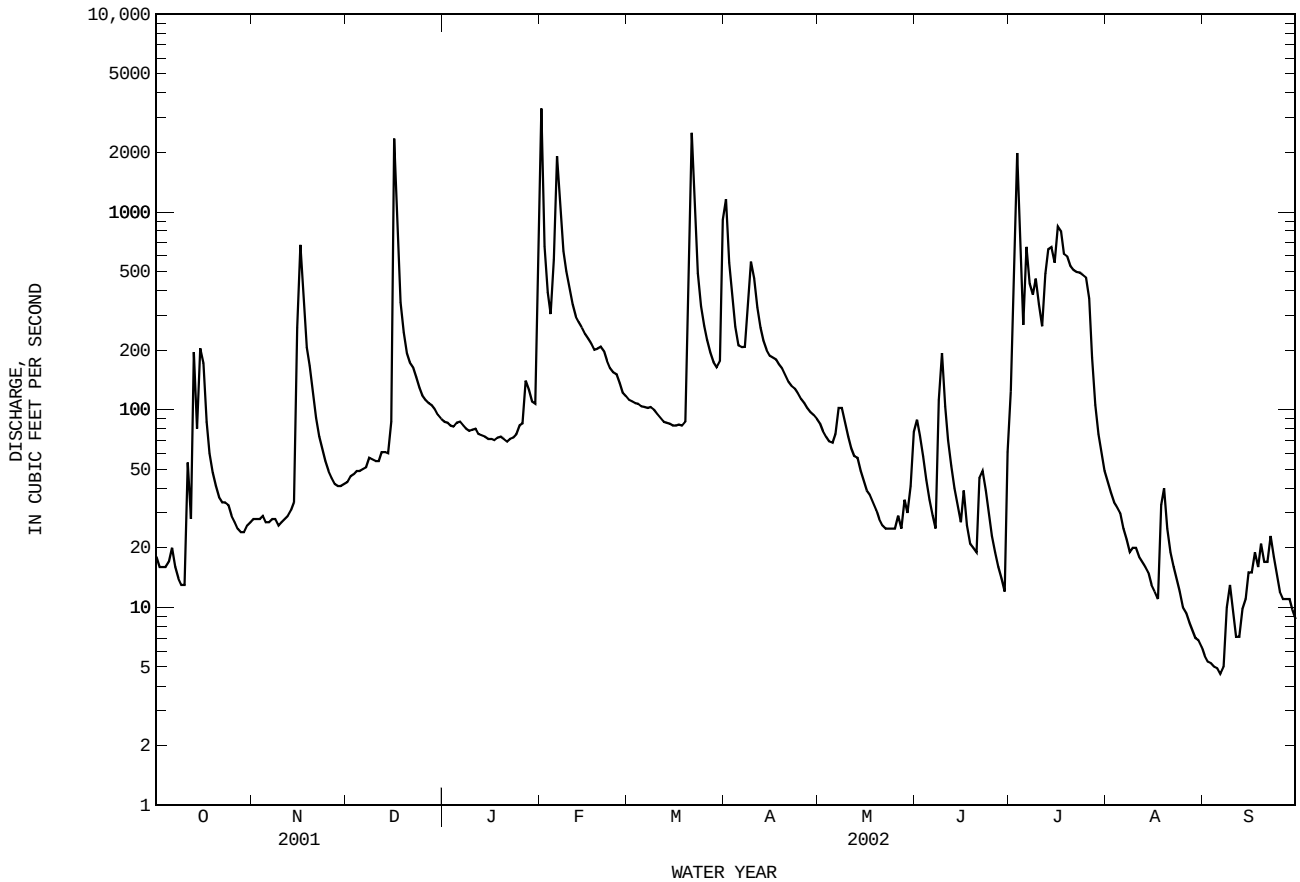
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2002z, BY WATER YEAR (WY)

MEAN	230.2	140.8	217.1	228.3	367.3	377.9	422.5	777.7	491.8	283.8	149.5	156.7
MAX	4054	907	4580	2517	3752	3014	2134	6224	2191	1482	1497	1097
(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	0.068	0.000	0.000
(WY)	1957	1979	1955	1955	1957	1956	1984	1984	1954	1954	1954	1954

08100500 Leon River at Gatesville, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1954 - 2002z	
ANNUAL TOTAL	100341.6		62761.4			
ANNUAL MEAN	274.9		171.9		320.1	
HIGHEST ANNUAL MEAN					1758	1992
LOWEST ANNUAL MEAN					6.22	1978
HIGHEST DAILY MEAN	3870	Mar 13	3330	Feb 1	49100	Dec 21 1991
LOWEST DAILY MEAN	1.7	Aug 12	4.6	Sep 6	0.00	Jul 15 1954
ANNUAL SEVEN-DAY MINIMUM	1.9	Aug 6	5.1	Sep 1	0.00	Jul 15 1954
MAXIMUM PEAK FLOW			4340	Jul 3	68000	Dec 21 1991
MAXIMUM PEAK STAGE			17.81	Jul 3	35.00	Dec 21 1991
ANNUAL RUNOFF (AC-FT)	199000		124500		231900	
10 PERCENT EXCEEDS	670		464		757	
50 PERCENT EXCEEDS	112		73		45	
90 PERCENT EXCEEDS	3.8		14		2.0	

z Period of regulated streamflow.



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^2.

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 good except those for daily discharges below 1.0 ft^3/s, which are fair. No known regulation or diversions. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.1	30	41	443	65	139	22	7.3	72	7.7	0.70
2	1.7	1.2	26	41	213	68	97	19	6.7	118	6.8	0.63
3	1.5	1.2	23	41	167	67	79	17	6.2	1060	6.7	0.61
4	1.4	1.2	23	41	152	62	63	16	5.6	552	6.7	0.60
5	1.3	1.1	23	43	807	60	58	16	5.5	736	5.6	0.58
6	1.5	1.1	23	45	1330	61	61	15	13	618	4.9	0.50
7	2.1	1.1	22	43	658	61	73	14	44	244	4.5	0.50
8	1.8	1.2	36	42	455	61	364	13	21	139	4.1	0.53
9	1.5	1.1	67	43	329	59	228	12	12	94	4.0	1.7
10	1.3	1.2	40	41	253	56	109	11	8.4	69	3.7	3.7
11	1.4	1.3	33	39	199	52	83	9.9	7.1	53	3.5	2.3
12	89	1.7	38	37	189	54	74	9.0	6.2	36	3.4	1.3
13	119	1.9	41	36	180	53	66	9.7	5.5	85	3.2	0.88
14	120	2.3	45	35	160	51	60	9.5	5.0	182	2.8	1.1
15	44	414	47	33	148	50	58	8.7	4.9	130	2.4	1.5
16	19	726	2130	32	134	47	57	8.2	65	406	2.1	1.4
17	11	190	314	31	123	45	53	7.6	19	282	2.0	1.3
18	6.6	110	150	29	119	44	49	7.3	8.4	143	1.8	1.3
19	4.9	85	112	30	128	51	45	7.3	6.4	100	1.5	1.7
20	4.0	106	91	29	140	653	43	7.0	5.8	69	1.4	1.8
21	3.4	81	80	30	113	371	40	6.8	5.7	54	1.2	1.4
22	3.0	63	77	28	98	170	39	6.6	5.2	44	1.0	0.91
23	3.2	54	69	28	91	114	38	6.1	4.7	33	1.0	0.78
24	2.8	46	62	29	90	102	37	6.0	4.1	26	0.97	0.73
25	1.8	35	60	55	84	93	34	6.1	3.7	22	0.96	0.44
26	1.8	30	57	79	71	81	30	6.8	3.5	19	0.90	0.34
27	1.9	23	55	57	65	73	29	6.1	3.0	15	0.90	0.24
28	1.6	19	54	46	64	70	29	24	2.8	12	0.85	0.24
29	1.4	21	50	41	---	68	28	16	3.1	11	e0.80	0.20
30	1.3	24	46	36	---	119	25	11	20	9.4	0.78	0.20
31	1.2	---	43	3220	---	358	---	8.5	---	8.3	0.70	---
TOTAL	458.2	2045.7	3967	4401	7003	3339	2188	343.2	318.8	5441.7	88.86	30.11
MEAN	14.78	68.19	128.0	142.0	250.1	107.7	72.93	11.07	10.63	175.5	2.866	1.004
MAX	120	726	2130	3220	1330	653	364	24	65	1060	7.7	3.7
MIN	1.2	1.1	22	28	64	44	25	6.0	2.8	8.3	0.70	0.20
AC-FT	909	4060	7870	8730	13890	6620	4340	681	632	10790	176	60
CFSM	0.03	0.15	0.28	0.31	0.55	0.24	0.16	0.02	0.02	0.39	0.01	0.00
IN.	0.04	0.17	0.32	0.36	0.57	0.27	0.18	0.03	0.03	0.44	0.01	0.00

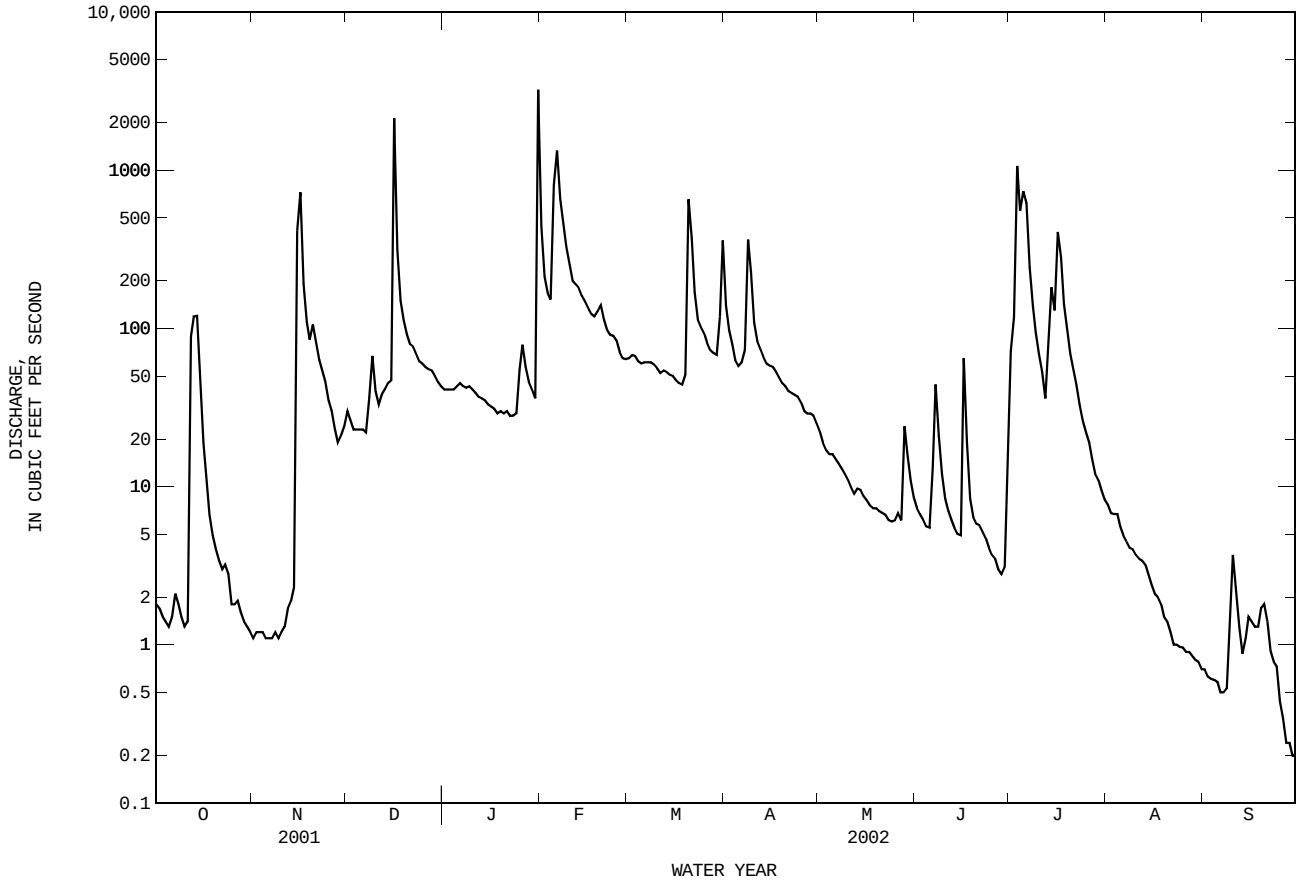
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2002, BY WATER YEAR (WY)

MEAN	75.34	39.30	83.34	76.41	158.4	144.8	140.3	215.9	113.0	36.75	19.83	32.72
MAX	1416	425	1894	767	2170	1274	1033	2116	702	399	240	433
(WY)	1960	1966	1992	1961	1997	1997	1957	1965	1987	1976	1966	1970
MIN	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.76	0.073	0.000	0.000	0.000
(WY)	1952	1952	1952	1952	1952	1952	1956	1978	1956	1954	1951	1952

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1951 - 2002	
ANNUAL TOTAL	44046.18		29624.57			
ANNUAL MEAN	120.7		81.16		94.34	
HIGHEST ANNUAL MEAN					482	1992
LOWEST ANNUAL MEAN					1.18	1978
HIGHEST DAILY MEAN	2920	Feb 16	3220	Jan 31	35200	Oct 4 1959
LOWEST DAILY MEAN	0.00	Aug 21	0.20	Sep 29	0.00	May 21 1951
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 21	0.34	Sep 24	0.00	Jul 6 1951
MAXIMUM PEAK FLOW			11000	Jan 31	110000	Dec 20 1991
MAXIMUM PEAK STAGE			20.45	Jan 31	44.30	Dec 20 1991
ANNUAL RUNOFF (AC-FT)	87370		58760		68350	
ANNUAL RUNOFF (CFSM)	0.27		0.18		0.21	
ANNUAL RUNOFF (INCHES)	3.60		2.42		2.82	
10 PERCENT EXCEEDS	282		145		150	
50 PERCENT EXCEEDS	46		28		6.5	
90 PERCENT EXCEEDS	1.1		1.2		0.00	

e Estimated

08101000 Cowhouse Creek at Pidcoke, TX--Continued



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^2.

PERIOD OF RECORD.--Mar. 1954 to Sept. 2000 (contents furnished by U.S. Army Corps of Engineers). Oct. 2000 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.--No estimated daily contents. Records fair. 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. Conservation pool storage is 434,500 acre-ft. 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.--Maximum contents, 1,168,000 acre-ft, Mar. 6, 1992, elevation, 634.36 ft; minimum since initial filling, 113,400 acre-ft, Dec. 16, 1956, elevation, 553.06 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 466,500 acre-ft, Dec. 20, elevation, 596.52 ft; minimum contents, 416,800 acre-ft, Sept. 30, elevation, 592.54 ft.

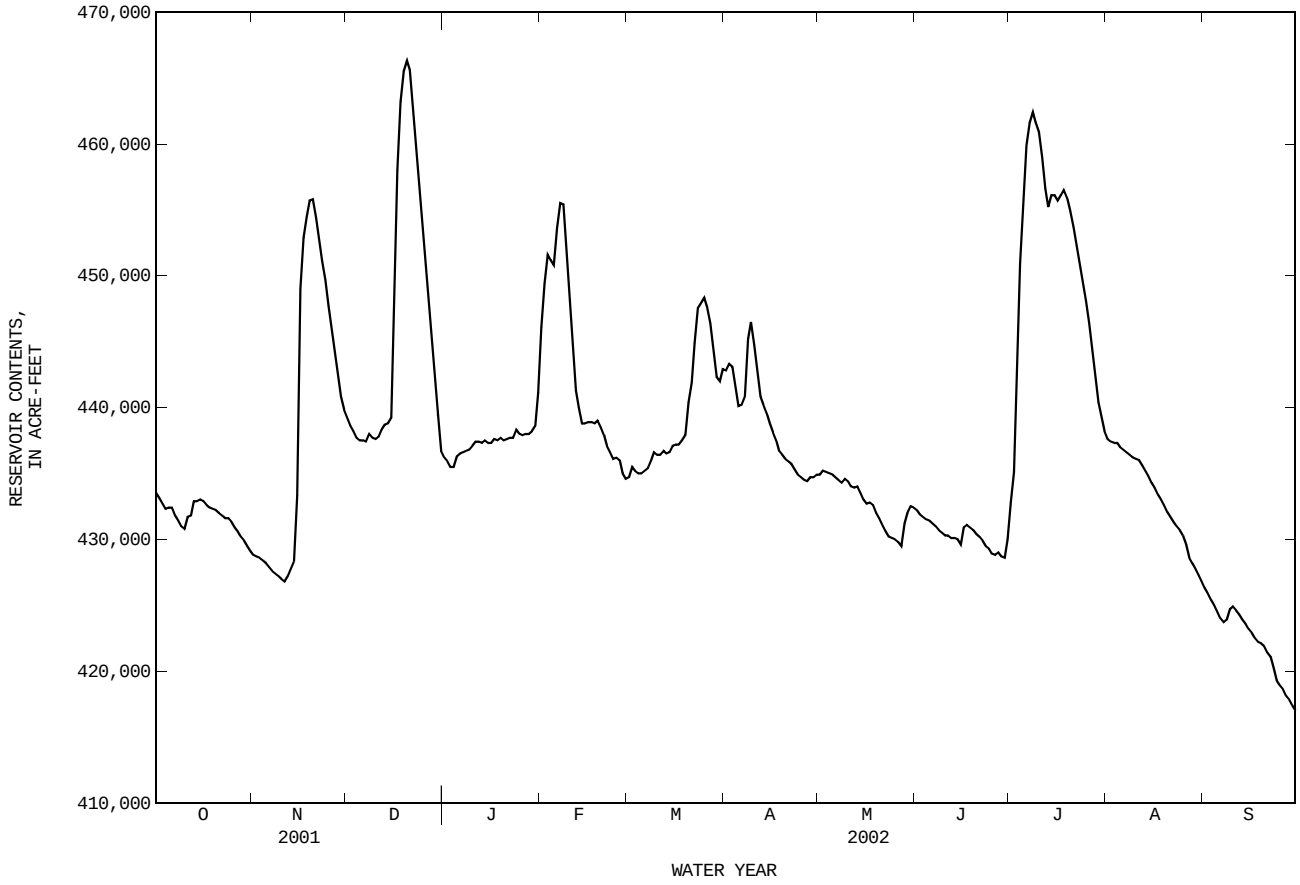
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	433500	428800	439200	436200	446100	434700	442800	434900	432200	432800	437600	426300
2	433100	428700	438600	435900	449400	435500	443300	435200	431900	435100	437400	425900
3	432700	428600	438200	435500	451600	435200	443100	435100	431700	442200	437300	425400
4	432300	428400	437700	435500	451200	435000	441700	435000	431500	450900	437300	425000
5	432400	428200	437500	436300	450800	435000	440100	434900	431400	455700	437000	424500
6	432400	427900	437500	436500	453600	435200	440200	434700	431200	459900	436800	424000
7	431800	427600	437400	436600	455500	435400	440800	434500	431000	461600	436600	423700
8	431400	427400	438000	436700	455400	435900	445200	434300	430700	462400	436400	423900
9	431000	427200	437700	436800	452700	436600	446500	434600	430500	461600	436200	424700
10	430800	427000	437600	437100	449400	436400	444800	434400	430300	460900	436100	424900
11	431700	426800	437800	437400	445100	436400	442700	434000	430300	459000	436000	424600
12	431800	427200	438300	437400	441300	436700	440800	433900	430100	456600	435600	424300
13	432900	427800	438700	437300	440000	436500	440200	434000	430100	455200	435200	423900
14	432900	428300	438800	437500	438800	436600	439600	433500	430000	456100	434800	423600
15	433000	433300	439200	437300	438800	437100	438800	433000	429600	456100	434300	423200
16	432900	449000	447300	437300	438900	437200	438100	432700	430900	455700	433900	422900
17	432600	452900	458000	437600	438900	437200	437500	432800	431100	456100	433400	422500
18	432400	454500	463200	437500	438800	437500	436700	432600	430900	456500	433000	422200
19	432300	455700	465500	437700	439000	437900	436400	432000	430700	455900	432600	422100
20	432200	455800	466300	437500	438500	440400	436100	431600	430400	454900	432100	421900
21	432000	454400	465600	437600	437900	441900	435900	431100	430200	453700	431700	421400
22	431800	452700	463200	437700	437100	444900	435700	430600	429900	452400	431300	421100
23	431600	451100	460600	437700	436600	447500	435300	430200	429500	451000	431000	420200
24	431600	449700	457700	438300	436100	447900	434900	430100	429300	449600	430700	419300
25	431300	447700	454700	438000	436200	448300	434700	430000	428900	448100	430300	418900
26	430900	446000	451700	437900	436000	447600	434500	429800	428800	446400	429600	418600
27	430600	444400	448500	438000	435000	446400	434400	429500	429000	444500	428600	418100
28	430200	442800	445600	438000	434600	444200	434700	431200	428700	442400	428200	417800
29	429900	440800	442700	438200	---	442300	434700	432000	428600	440400	427800	417400
30	429500	439800	439500	438600	---	442000	434900	432500	430000	439200	427300	417000
31	429100	---	436700	441100	---	442900	---	432400	---	438200	426800	---
MEAN	431800	438700	446400	437400	443000	439500	438800	432800	430300	451300	433300	422300
MAX	433500	455800	466300	441100	455500	448300	446500	435200	432200	462400	437600	426300
MIN	429100	426800	436700	435500	434600	434700	434400	429500	428600	432800	426800	417000
(+)	593.56	594.42	594.17	594.52	594.00	594.67	594.02	593.82	593.62	594.29	593.37	592.56
(@)	-4800	+10700	-3100	+4400	-6500	+8300	-8000	-2500	-2400	+8200	-11400	-9800

CAL YR 2001 MAX 493100 MIN 412500 (@) -14400
WTR YR 2002 MAX 466300 MIN 417000 (@) -16900

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

08102000 Belton Lake near Belton, TX--Continued



08102500 Leon River near Belton, TX

LOCATION.--Lat 31°04'12", long 97°26'28", Bell County, Hydrologic Unit 12070201, on left bank 1,400 ft upstream from bridge on Farm Road 817, 2,000 ft upstream from concrete dam, 1.0 mi upstream from bridge on Interstate Highway 35 and U.S. Highway 81, 1.6 mi northeast of Belton, 3.2 mi downstream from Belton Dam, 5.2 mi upstream from Nolan Creek, and 13.1 mi upstream from mouth.

DRAINAGE AREA.--3,542 mi^2.

PERIOD OF RECORD.--Oct. 1923 to current year.
Water-quality records.--Chemical data: Mar. 1961 to Aug. 1964, Jan. 1994 to Aug. 1998. Biochemical data: Mar. 1961 to Aug. 1964, Jan. 1994 to Aug. 1998. Water temperature: Mar. 1957 to Oct. 1972.

REVISED RECORDS.--WSP 1442: 1925(M), 1935(M), 1936, 1938(M), 1941-42(M), 1944-45(M). WSP 1712: 1937(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and concrete dam. Datum of gage is 476.68 ft above NGVD of 1929. Prior to May 21, 1931, nonrecording gage. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since Mar. 8, 1954, at least 10% of contributing drainage area has been regulated. The city of Temple diverts water from the pool at gage and returns wastewater effluent to Little Elm Creek downstream from station. The Brazos River Authority returns wastewater effluent to the Leon River downstream from station for their Temple-Belton plant. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--30 years (water years 1924-53) prior to regulation by Belton Lake, 659 ft^3/s (477,400 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1924-53).--Maximum discharge, 56,500 ft^3/s Apr. 22, 1945 (gage height, 24.41 ft). No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Dec. 1913 reached a stage of 25 ft, and a flood in Sept. 1921 reached a stage of 21 ft, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	47	407	301	476	157	777	51	23	21	126	48
2	49	50	402	302	802	60	1020	25	19	43	18	52
3	42	52	387	183	796	67	1020	25	15	39	15	34
4	51	55	301	108	969	60	1020	25	11	73	21	22
5	50	49	227	109	1300	60	844	23	4.6	74	22	19
6	52	46	161	105	1310	65	716	21	5.7	171	17	15
7	54	47	101	108	1620	60	723	18	3.8	274	14	31
8	55	54	99	109	2300	60	718	19	5.5	562	12	51
9	54	54	94	108	2650	59	1260	20	12	758	16	35
10	49	53	98	105	2640	65	1720	18	10	1040	18	56
11	52	53	96	107	2630	61	1710	19	9.2	1660	27	19
12	51	53	100	102	1780	59	1150	22	4.4	1460	18	21
13	69	49	91	101	924	59	662	16	2.1	1300	19	16
14	51	59	95	101	693	59	662	14	1.7	1300	15	18
15	49	143	105	101	333	59	658	11	1.9	1300	11	19
16	50	87	135	101	332	58	658	9.4	15	1290	19	16
17	52	59	102	98	328	59	661	10	16	1290	14	16
18	59	64	96	100	332	57	546	14	18	1290	8.2	14
19	55	134	101	98	484	62	349	15	14	1290	11	19
20	50	532	363	98	640	56	350	8.8	5.1	1300	10	18
21	47	874	1220	95	638	54	351	7.5	10	1300	5.3	15
22	52	874	1650	100	490	337	353	5.9	8.0	1290	5.0	11
23	50	882	1650	94	397	588	355	5.3	3.8	1300	7.7	15
24	47	876	1650	97	394	592	351	6.5	2.6	1290	4.9	13
25	44	875	1640	94	390	588	259	6.6	2.7	1290	6.6	21
26	52	870	1650	92	388	587	84	7.3	6.5	1290	10	23
27	45	864	1640	100	340	964	82	5.5	14	1300	36	24
28	50	859	1640	92	249	1190	75	11	12	1300	41	24
29	55	606	1630	92	---	893	75	20	7.1	858	52	23
30	49	415	1640	91	---	643	78	19	24	571	43	20
31	51	---	984	73	---	648	---	22	---	384	44	---
TOTAL	1591	9735	20555	3565	26625	8386	19287	500.8	287.7	28708	686.7	728
MEAN	51.32	324.5	663.1	115.0	950.9	270.5	642.9	16.15	9.590	926.1	22.15	24.27
MAX	69	882	1650	302	2650	1190	1720	51	24	1660	126	56
MIN	42	46	91	73	249	54	75	5.3	1.7	21	4.9	11
AC-FT	3160	19310	40770	7070	52810	16630	38260	993	571	56940	1360	1440

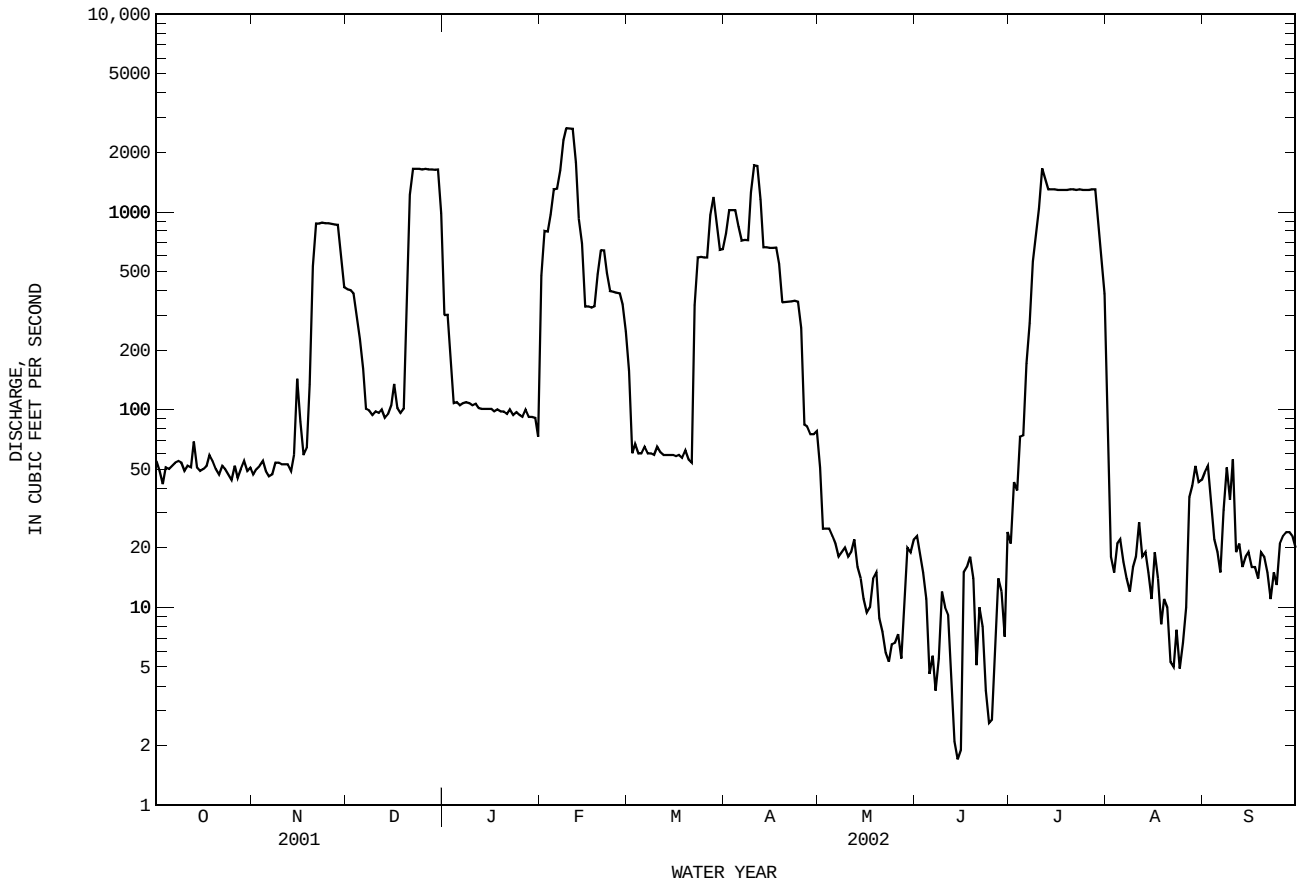
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2002z, BY WATER YEAR (WY)

MEAN	315.1	295.6	307.9	495.5	488.2	853.5	792.2	1025	1059	778.5	308.0	176.6
MAX	3918	3058	1924	5066	2902	6621	5170	4560	6002	6287	3084	1657
(WY)	1960	1960	1961	1992	1961	1997	1992	1990	1957	1957	1992	1986
MIN	2.79	1.07	0.67	2.51	2.19	2.56	1.70	0.87	0.053	0.26	1.86	0.25
(WY)	1969	1955	1955	1955	1981	1955	1954	1954	1954	1954	1954	1954

08102500 Leon River near Belton, TX--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1954 - 2002z	
ANNUAL TOTAL	237330.4		120655.2			
ANNUAL MEAN	650.2		330.6		575.2	
HIGHEST ANNUAL MEAN					3067	1992
LOWEST ANNUAL MEAN					4.71	1955
HIGHEST DAILY MEAN	3040	Mar 27	2650	Feb 9	10200	Mar 6 1992
LOWEST DAILY MEAN	9.4	Aug 14	1.7	Jun 14	0.00	Oct 1 1953
ANNUAL SEVEN-DAY MINIMUM	15	Jul 28	5.5	Jun 20	0.00	Oct 1 1953
MAXIMUM PEAK FLOW			2680	Feb 9	10200	Mar 6 1992
MAXIMUM PEAK STAGE			6.37	Feb 9	9.74	Mar 6 1992
ANNUAL RUNOFF (AC-FT)	470700		239300		416700	
10 PERCENT EXCEEDS	2190		1290		2060	
50 PERCENT EXCEEDS	249		60		44	
90 PERCENT EXCEEDS	26		11		5.0	

z Period of regulated streamflow.



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^2.

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 and crest-stage gage. 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. Flow is affected at times by discharge from the flood detention pools of 13 floodwater-retarding structures. These structures control runoff from 131 mi^2 in the Sulphur and Bennett Creeks drainage basins. 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^3/s (109,400 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1963-73).--Maximum discharge, 71,000 ft^3/s, May 16, 1965 (gage height, 32.98 ft), minimum daily, 1.4 ft^3/s, July 17, 1971.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	22	32	58	523	100	111	52	37	129	97	21
2	16	22	35	59	193	96	99	46	31	71	86	30
3	16	21	40	58	146	93	87	46	30	4300	79	30
4	16	22	39	58	125	87	82	46	27	1230	74	29
5	19	21	40	64	235	86	78	46	29	5430	68	29
6	25	21	39	61	839	87	83	46	61	2740	63	28
7	18	21	39	58	302	85	91	44	111	1360	59	30
8	19	21	72	56	209	87	127	42	68	900	55	50
9	22	22	50	57	181	86	137	45	48	683	57	94
10	18	21	38	58	158	81	107	44	38	519	52	55
11	21	23	39	56	137	80	92	43	32	403	52	42
12	20	22	47	54	130	81	87	42	27	318	49	34
13	30	22	43	54	130	81	82	41	24	284	46	32
14	22	24	43	53	124	79	79	39	22	354	44	30
15	25	2750	43	51	121	81	77	40	28	368	41	28
16	23	1060	1800	52	115	71	74	40	82	621	41	27
17	20	159	240	53	111	71	70	41	105	810	50	28
18	15	85	134	51	111	73	68	36	45	648	43	28
19	21	59	108	52	118	97	68	35	35	422	39	29
20	22	53	90	51	122	401	65	35	30	320	35	26
21	23	48	86	50	112	215	62	35	26	260	32	25
22	23	42	85	50	105	142	61	33	23	224	30	25
23	23	39	79	53	99	116	63	32	21	200	28	24
24	24	35	72	60	99	110	61	33	21	182	26	24
25	23	32	69	54	98	104	56	32	13	169	26	23
26	22	32	65	52	93	93	54	33	17	156	25	23
27	20	32	65	55	89	87	52	35	18	144	24	22
28	21	33	65	56	88	87	52	386	20	134	24	20
29	21	32	63	58	---	87	51	94	19	123	22	21
30	21	32	59	54	---	96	49	65	255	117	22	20
31	22	---	58	3790	---	114	---	49	---	107	21	---
TOTAL	646	4828	3777	5446	4913	3254	2325	1676	1343	23726	1410	927
MEAN	20.84	160.9	121.8	175.7	175.5	105.0	77.50	54.06	44.77	765.4	45.48	30.90
MAX	30	2750	1800	3790	839	401	137	386	255	5430	97	94
MIN	15	21	32	50	88	71	49	32	13	71	21	20
AC-FT	1280	9580	7490	10800	9740	6450	4610	3320	2660	47060	2800	1840

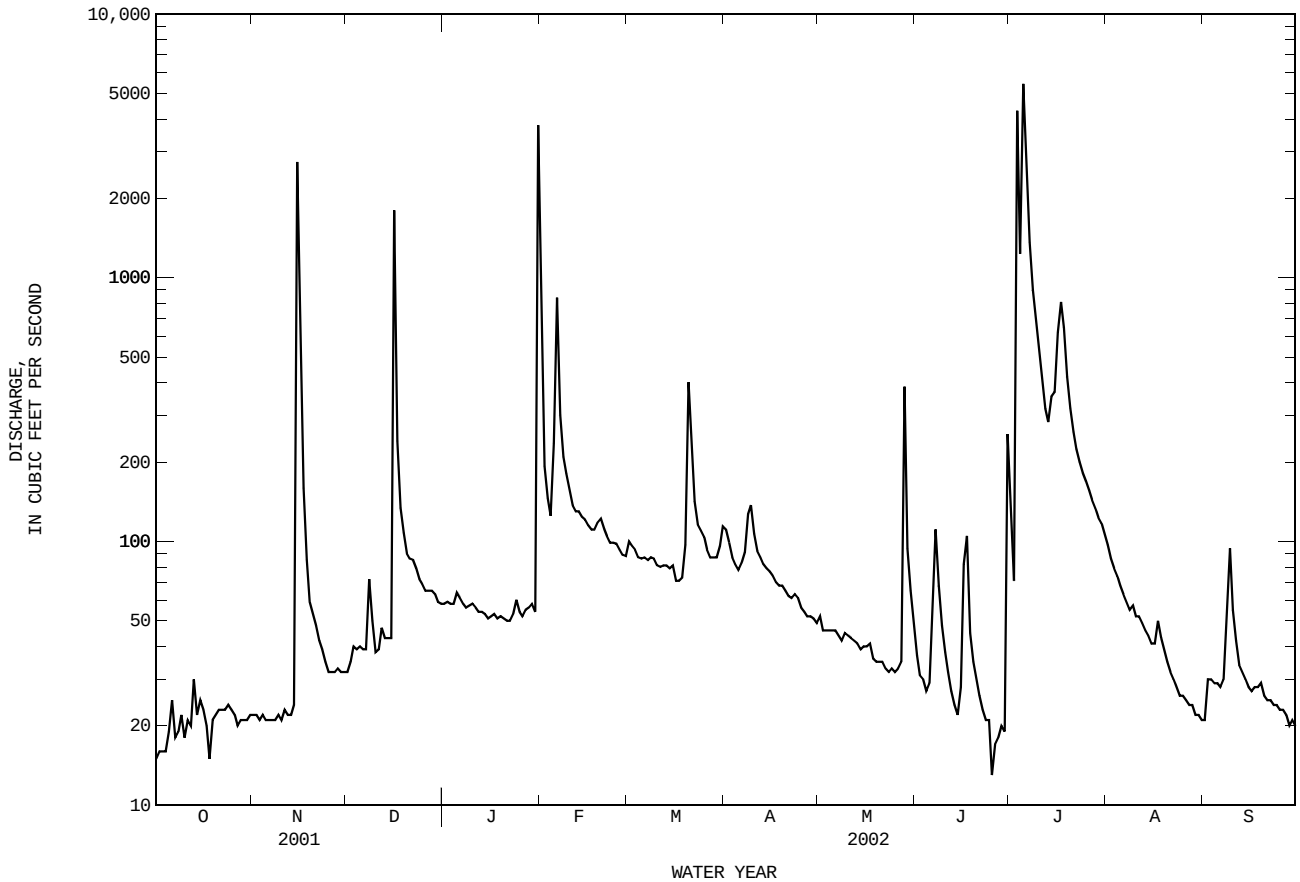
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2002z, BY WATER YEAR (WY)

MEAN	69.95	65.23	179.7	111.3	331.3	279.8	216.4	229.7	294.7	87.04	40.75	40.38
MAX	453	398	3193	1107	3526	1559	1106	783	1716	765	206	171
(WY)	1986	1987	1992	1992	1992	1997	1977	1997	1987	2002	1979	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1974 - 2002z	
ANNUAL TOTAL	53366		54271			
ANNUAL MEAN	146.2		148.7		161.0	
HIGHEST ANNUAL MEAN					949	1992
LOWEST ANNUAL MEAN					10.7	1984
HIGHEST DAILY MEAN	2750	Nov 15	5430	Jul 5	42500	Dec 21 1991
LOWEST DAILY MEAN	14	Sep 30	13	Jun 25	2.0	Jul 10 1984
ANNUAL SEVEN-DAY MINIMUM	15	Sep 25	18	Oct 1	2.9	Jul 9 1984
MAXIMUM PEAK FLOW			17400	Jul 5	78000	Dec 20 1991
MAXIMUM PEAK STAGE			15.75	Jul 5	35.00	Dec 20 1991
ANNUAL RUNOFF (AC-FT)	105900		107600		116600	
10 PERCENT EXCEEDS	391		186		299	
50 PERCENT EXCEEDS	48		52		32	
90 PERCENT EXCEEDS	20		22		12	

z Period of regulated streamflow.



08103900 South Fork Rocky Creek near Briggs, TX

LOCATION.--Lat 30°54′41", long 98°02′12", Burnet County, Hydrologic Unit 12070203, 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^2.

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 and crest-stage gages. Datum of gage is 955.8 ft above NGVD of 1929. Satellite telemeter at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	2.8	5.5	4.4	3.2	3.0	0.88	0.60	42	8.5	0.94
2	0.0	0.0	2.7	5.3	3.1	3.0	2.5	0.77	0.47	95	7.9	0.85
3	0.0	0.0	3.3	5.1	3.1	2.7	2.1	0.71	0.37	549	7.1	0.76
4	0.0	0.0	3.3	5.3	3.0	2.5	1.9	0.68	0.33	119	6.4	0.71
5	0.0	0.0	3.0	6.0	7.0	2.5	1.9	0.62	0.33	565	5.9	0.60
6	0.0	0.0	2.6	5.6	11	2.5	2.0	0.55	0.31	130	5.7	0.55
7	0.0	0.0	2.6	4.8	6.4	2.6	8.4	0.52	0.25	81	5.2	0.81
8	0.0	0.0	2.7	4.8	5.2	2.6	23	0.49	0.24	66	4.8	17
9	0.0	0.0	2.6	5.2	4.8	2.4	5.1	0.46	0.23	50	5.9	7.0
10	0.0	0.0	2.3	5.1	4.0	2.1	3.6	0.43	0.20	42	5.4	2.5
11	0.0	0.0	2.7	4.6	3.6	2.1	3.2	0.36	0.15	37	6.8	1.7
12	0.0	0.0	5.4	4.3	3.9	2.2	3.0	0.31	0.07	33	4.9	1.4
13	0.0	0.0	4.0	4.3	3.9	2.2	2.9	0.25	0.0	31	4.0	1.3
14	0.0	0.0	3.7	4.3	3.6	2.1	2.7	0.22	0.0	51	3.6	1.2
15	0.0	1000	3.5	3.8	3.7	2.0	2.3	0.20	0.0	36	3.2	1.0
16	0.0	37	73	4.1	3.4	1.9	2.3	0.17	0.70	69	e2.8	1.1
17	0.0	7.2	15	4.1	3.3	1.8	e2.2	0.11	0.26	60	2.7	0.99
18	0.0	4.3	10	3.8	3.4	1.9	e2.1	0.0	0.15	42	2.4	0.94
19	0.0	3.2	9.0	4.0	3.8	2.4	e2.0	0.0	0.11	33	2.2	1.0
20	0.0	2.8	8.1	3.6	3.4	6.2	e1.8	0.0	0.07	29	2.0	0.95
21	0.0	2.7	8.0	3.6	3.0	3.9	e1.8	0.0	0.0	26	1.9	0.84
22	0.0	2.6	8.2	3.4	2.9	2.7	1.6	0.0	0.0	24	1.7	0.75
23	0.0	2.6	7.4	3.7	2.7	2.4	1.5	0.0	0.0	22	1.6	0.69
24	0.0	2.3	6.9	3.9	2.8	2.4	e1.4	0.0	0.0	20	1.5	0.64
25	0.0	1.9	6.9	3.7	2.7	2.3	1.2	0.0	0.0	18	1.3	0.62
26	0.0	2.0	6.7	3.3	2.3	2.1	1.2	0.0	0.0	16	1.2	0.58
27	0.0	2.0	6.6	3.2	2.5	1.9	1.2	32	0.0	14	1.1	0.55
28	0.0	1.9	6.4	3.3	3.0	1.9	1.1	186	0.0	13	1.1	0.48
29	0.0	2.6	6.1	3.3	---	1.9	1.0	3.1	0.0	11	1.0	0.45
30	0.0	3.0	5.5	3.2	---	9.8	0.91	1.4	118	11	1.1	0.42
31	0.0	---	5.6	3.9	---	5.0	---	0.84	---	9.6	1.0	---
TOTAL	0.0	1078.1	236.6	132.1	109.9	87.2	90.91	231.07	122.84	2344.6	111.9	49.32
MEAN	0.000	35.94	7.632	4.261	3.925	2.813	3.030	7.454	4.095	75.63	3.610	1.644
MAX	0.00	1000	73	6.0	11	9.8	23	186	118	565	8.5	17
MIN	0.00	0.00	2.3	3.2	2.3	1.8	0.91	0.00	0.00	9.6	1.0	0.42
AC-FT	0.00	2140	469	262	218	173	180	458	244	4650	222	98
CFSM	0.00	1.08	0.23	0.13	0.12	0.08	0.09	0.22	0.12	2.27	0.11	0.05
IN.	0.00	1.20	0.26	0.15	0.12	0.10	0.10	0.26	0.14	2.62	0.13	0.06

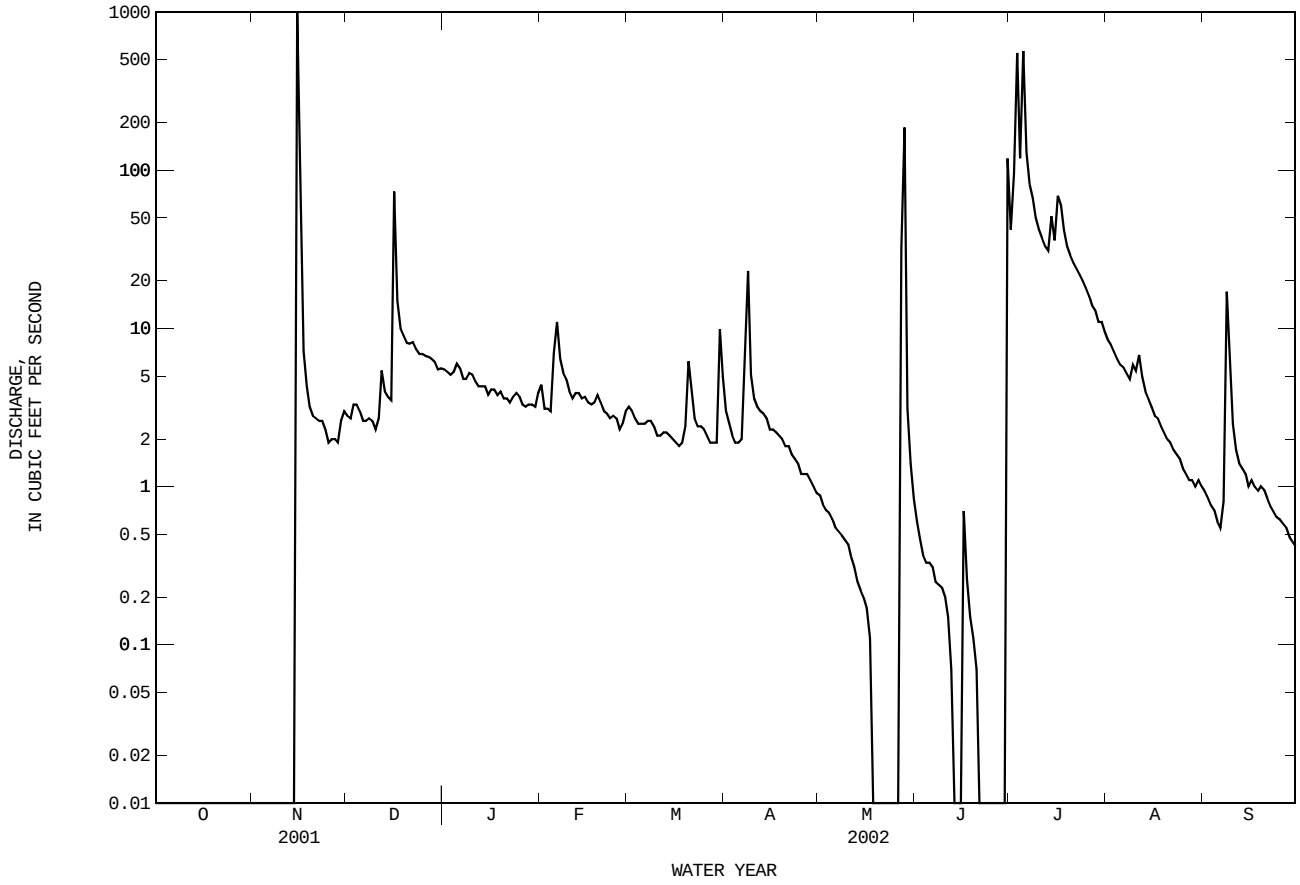
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002, BY WATER YEAR (WY)

MEAN	3.801	5.450	10.01	10.91	18.61	19.14	13.39	20.65	18.25	6.143	2.018	3.092
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1968	1968	1971	1971	1971	1971	1971	1978	1967	1963	1963	1965

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1963 - 2002	
ANNUAL TOTAL	5532.18		4594.54			
ANNUAL MEAN	15.16		12.59		10.90	
HIGHEST ANNUAL MEAN					49.2	1992
LOWEST ANNUAL MEAN					0.036	1978
HIGHEST DAILY MEAN	1000	Nov 15	1000	Nov 15	1510	Jun 19 1976
LOWEST DAILY MEAN	0.00	Jul 17	0.00	Oct 1	0.00	May 1 1963
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 17	0.00	Oct 1	0.00	May 9 1963
MAXIMUM PEAK FLOW			12100	Nov 15	31200	Jun 19 1976
MAXIMUM PEAK STAGE			a16.20	Nov 15	22.70	Jun 19 1976
ANNUAL RUNOFF (AC-FT)	10970		9110		7890	
ANNUAL RUNOFF (CFSM)	0.46		0.38		0.33	
ANNUAL RUNOFF (INCHES)	6.18		5.13		4.45	
10 PERCENT EXCEEDS	35		13		26	
50 PERCENT EXCEEDS	3.0		2.3		0.70	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated
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^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Sept. 1966 to Sept. 2000 (contents furnished by U.S. Army Corps of Engineers), Oct. 2000 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.--No estimated daily contents. 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. Conservation pool storage is 226,063 acre-ft. 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.--Maximum contents, 654,000 acre-ft, Mar. 4, 1992, elevation, 667.97 ft; minimum since conservation storage was reached on Apr. 12, 1969, 172,700 acre-ft, Aug. 23, 1996, elevation, 612.8 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 264,500 acre-ft, July 8, elevation, 627.70 ft; minimum contents, 223,700 acre-ft, May 27, elevation, 621.63 ft.

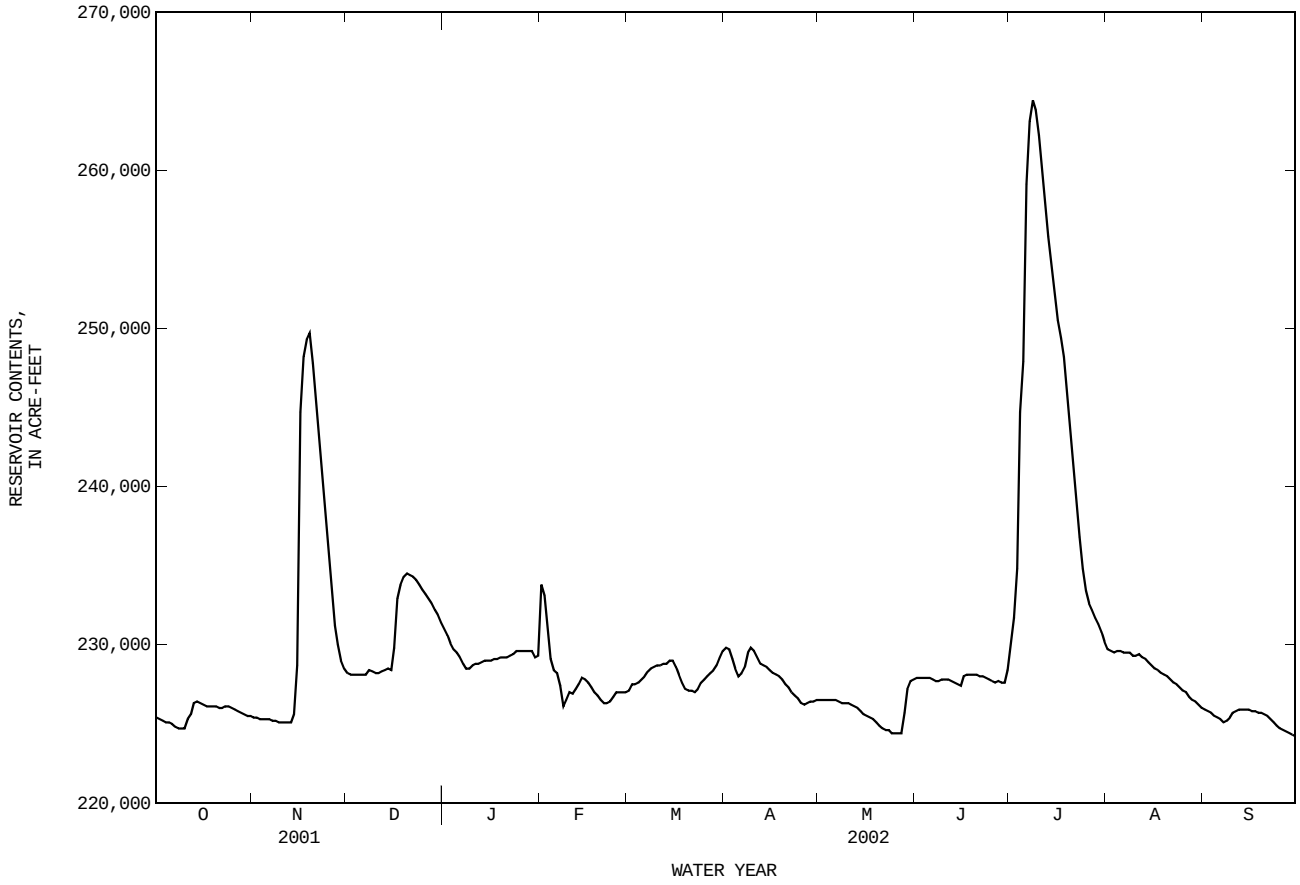
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225400	225400	228200	231000	233800	227100	229800	226500	227900	230100	229700	225900
2	225300	225400	228100	230600	233100	227500	229700	226500	227900	231700	229600	225800
3	225200	225300	228100	230100	231000	227500	229100	226500	227900	234800	229500	225700
4	225100	225300	228100	229700	229100	227600	228500	226500	227900	244700	229600	225500
5	225100	225300	228100	229500	228400	227800	228000	226500	227900	247900	229600	225400
6	225000	225300	228100	229200	228200	228000	228200	226500	227800	259100	229500	225300
7	224800	225200	228100	228800	227400	228300	228600	226400	227700	263100	229500	225100
8	224700	225200	228400	228500	226100	228500	229500	226300	227700	264400	229500	225200
9	224700	225100	228300	228500	226500	228600	229800	226300	227800	263800	229300	225400
10	224700	225100	228200	228700	227000	228700	229600	226300	227800	262200	229300	225700
11	225300	225100	228200	228800	226900	228700	229200	226200	227800	260200	229400	225800
12	225600	225100	228300	228800	227200	228800	228800	226100	227700	258000	229200	225900
13	226300	225100	228400	228900	227500	228800	228700	226000	227600	255800	229100	225900
14	226400	225600	228500	229000	227900	229000	228600	225800	227500	254000	228900	225900
15	226300	228700	228400	229000	227800	229000	228400	225600	227400	252300	228700	225900
16	226200	244700	229800	229000	227600	228600	228200	225500	228000	250500	228500	225800
17	226100	248200	232900	229100	227300	228100	228100	225400	228100	249400	228400	225800
18	226100	249300	233800	229100	227000	227600	228000	225300	228100	248200	228200	225700
19	226100	249700	234300	229200	226800	227200	227800	225100	228100	246400	228100	225700
20	226100	247800	234500	229200	226500	227100	227500	224900	228100	244300	228000	225600
21	226000	245500	234400	229200	226300	227100	227300	224700	228000	241900	227800	225500
22	226000	243100	234300	229300	226300	227000	227000	224600	228000	239300	227600	225300
23	226100	240800	234100	229400	226400	227200	226800	224600	227900	236800	227500	225100
24	226100	238400	233800	229600	226700	227600	226600	224400	227800	234800	227300	224900
25	226000	235900	233500	229600	227000	227800	226300	224400	227700	233400	227100	224700
26	225900	233400	233200	229600	227000	228000	226200	224400	227600	232600	227000	224600
27	225800	231200	232900	229600	227000	228200	226300	224400	227700	232200	226700	224500
28	225700	230000	232600	229600	227000	228400	226400	225700	227600	231700	226500	224400
29	225600	229000	232200	229600	---	228700	226400	227200	227600	231300	226400	224300
30	225500	228500	231900	229200	---	229200	226500	227700	228400	230800	226200	224200
31	225500	---	231400	229300	---	229600	---	227800	---	230200	226000	---
TOTAL	6994700	6977700	7153100	7108700	6376800	7071300	6839900	7000100	6835000	7595900	7077700	6760500
MEAN	225600	232600	230700	229300	227700	228100	228000	225800	227800	245000	228300	225400
MAX	226400	249700	234500	231000	233800	229600	229800	227800	228400	264400	229700	225900
MIN	224700	225100	228100	228500	226100	227000	226200	224400	227400	230100	226000	224200
(+)	621.91	622.38	622.84	622.50	622.15	622.54	622.07	622.28	622.37	622.65	622.00	621.70
(@)	-300	+3000	+2900	-2100	-2300	+2600	-3100	+1300	+600	+1800	-4200	-1800

CAL YR 2001 MAX 249700 MIN 221200 (@) -1200
WTR YR 2002 MAX 264400 MIN 224200 (@) -1600

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

08104050 Stillhouse Hollow Lake near Belton, TX--Continued



08104050 Stillhouse Hollow Lake near Belton, TX--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--Oct. 1, 2001 to Sept. 30, 2002.

INSTRUMENTATION.--Recording tipping bucket rain gage at site.

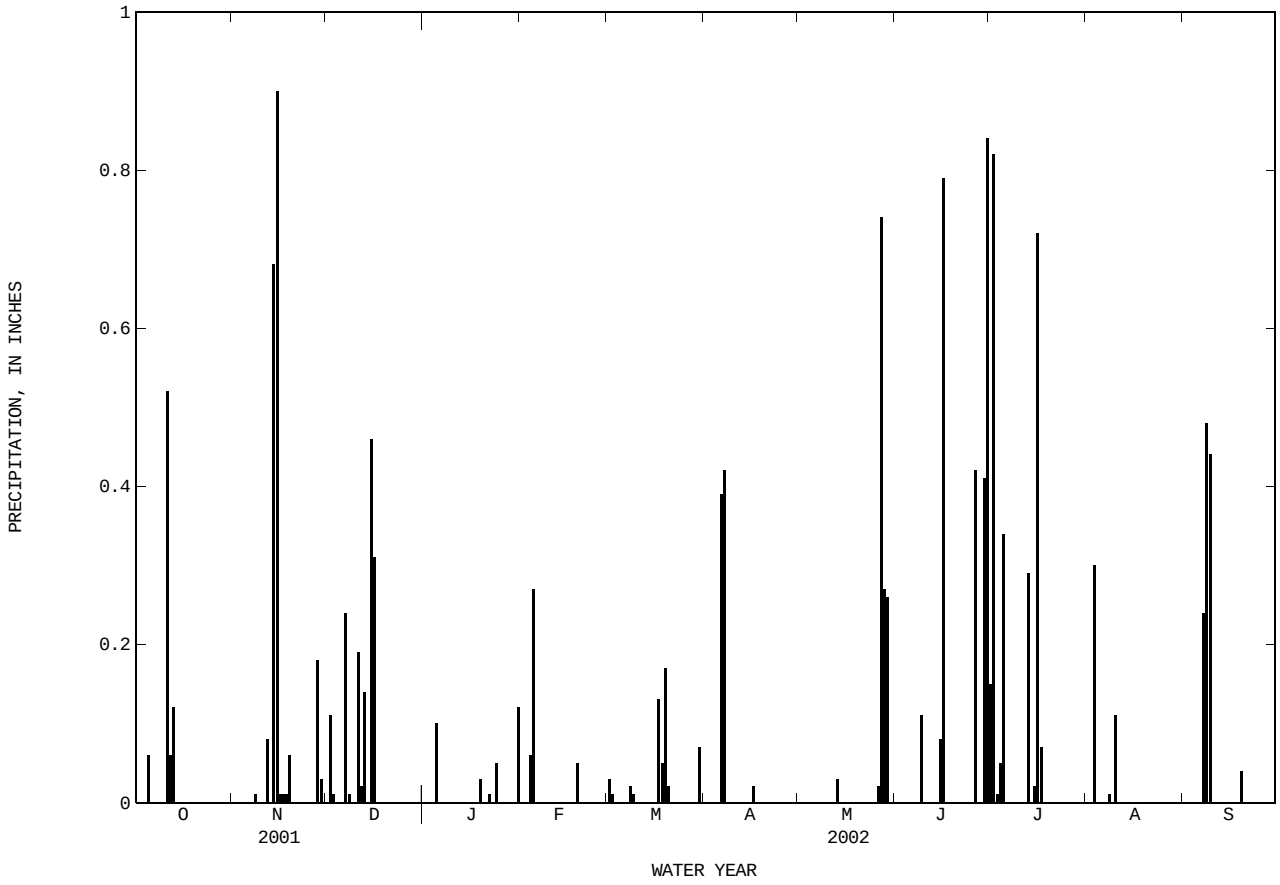
REMARKS.--Records fair.

EXTREMES FOR CURRENT YEAR.--Maximum daily accumulation, 0.90 in., Nov. 15.

PRECIPITATION FROM DCP, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.15	0.0	0.0
2	0.0	0.0	0.11	0.0	0.0	0.01	0.0	0.0	0.0	0.82	0.0	0.0
3	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.30	0.0
4	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.05	0.0	0.0
5	0.06	0.0	0.0	0.10	0.27	0.0	0.0	0.0	0.0	0.34	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.24	0.0	0.0	0.0	0.42	0.0	0.0	0.0	0.0	0.24
8	0.0	0.01	0.01	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.01	0.48
9	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.11	0.0	0.0	0.44
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0
11	0.52	0.0	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.06	0.08	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.12	0.0	0.14	0.0	0.0	0.0	0.0	0.03	0.0	0.29	0.0	0.0
14	0.0	0.68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.90	0.46	0.0	0.0	0.0	0.0	0.0	0.08	0.02	0.0	0.0
16	0.0	0.01	0.31	0.0	0.0	0.0	0.02	0.0	0.79	0.72	0.0	0.0
17	0.0	0.01	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.07	0.0	0.0
18	0.0	0.01	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.06	0.0	0.03	0.05	0.17	0.0	0.0	0.0	0.0	0.0	0.04
20	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.42	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.74	0.0	0.0	0.0	0.0
28	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.0
29	0.0	0.03	0.0	0.0	---	0.0	0.0	0.26	0.41	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	---	0.07	0.0	0.0	0.84	0.0	0.0	0.0
31	0.0	---	0.0	0.12	---	0.0	---	0.0	---	0.0	0.0	---
TOTAL	0.76	1.97	1.49	0.31	0.38	0.51	0.83	1.32	2.65	2.47	0.42	1.20

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^2.

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.--Records fair. 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^3/s (266,600 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1963-66).--Maximum discharge, 77,600 ft^3/s, May 17, 1965, gage height, 43.58 ft; minimum discharge, 0.2 ft^3/s, Oct. 14, 15, 16, 1963.

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^3/s).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	171	370	664	58	137	13	14	18	273	26
2	17	16	171	371	1520	16	384	13	15	23	127	12
3	16	15	171	372	1500	15	384	13	15	19	65	12
4	16	15	148	372	1110	15	383	12	15	305	65	12
5	16	14	135	373	740	14	197	12	15	781	64	13
6	15	14	143	373	1070	14	17	12	15	788	64	12
7	14	14	150	373	1440	49	17	13	15	793	64	14
8	14	13	158	258	805	91	17	13	16	1180	64	15
9	14	13	165	51	34	90	210	13	16	1680	64	13
10	14	13	173	107	203	89	400	13	15	1820	64	12
11	17	14	180	108	229	89	400	13	15	1810	62	13
12	15	14	181	107	32	88	292	13	16	1820	63	13
13	18	13	181	107	26	87	191	14	15	1820	63	14
14	15	15	180	107	151	88	193	13	15	1810	63	15
15	15	63	182	108	365	194	193	14	16	1810	64	15
16	15	22	193	110	364	403	192	14	19	1810	50	14
17	15	17	182	112	365	401	193	14	16	1820	37	14
18	15	20	184	113	366	399	199	13	16	1810	38	14
19	16	674	184	114	367	400	200	13	16	1800	38	15
20	16	1440	272	114	367	401	199	13	16	1790	38	14
21	16	1440	360	113	276	399	200	14	16	1780	38	14
22	16	1430	361	116	101	223	199	14	16	1770	37	14
23	16	1430	361	118	18	15	198	13	16	1620	37	15
24	17	1430	e373	122	17	15	198	14	16	1210	37	15
25	16	1420	e396	112	58	15	115	13	17	839	37	15
26	16	1420	407	112	97	14	19	13	17	519	37	15
27	15	1010	369	113	94	13	16	14	16	370	37	15
28	16	667	365	e155	93	14	15	17	16	369	37	15
29	15	520	367	e309	---	15	14	14	17	371	36	15
30	15	171	369	e401	---	15	13	13	21	371	36	14
31	16	---	370	439	---	14	---	14	---	372	36	---
TOTAL	484	13373	7602	6230	12472	3753	5385	414	479	35098	1835	429
MEAN	15.61	445.8	245.2	201.0	445.4	121.1	179.5	13.35	15.97	1132	59.19	14.30
MAX	18	1440	407	439	1520	403	400	17	21	1820	273	26
MIN	14	13	135	51	17	13	13	12	14	18	36	12
AC-FT	960	26530	15080	12360	24740	7440	10680	821	950	69620	3640	851

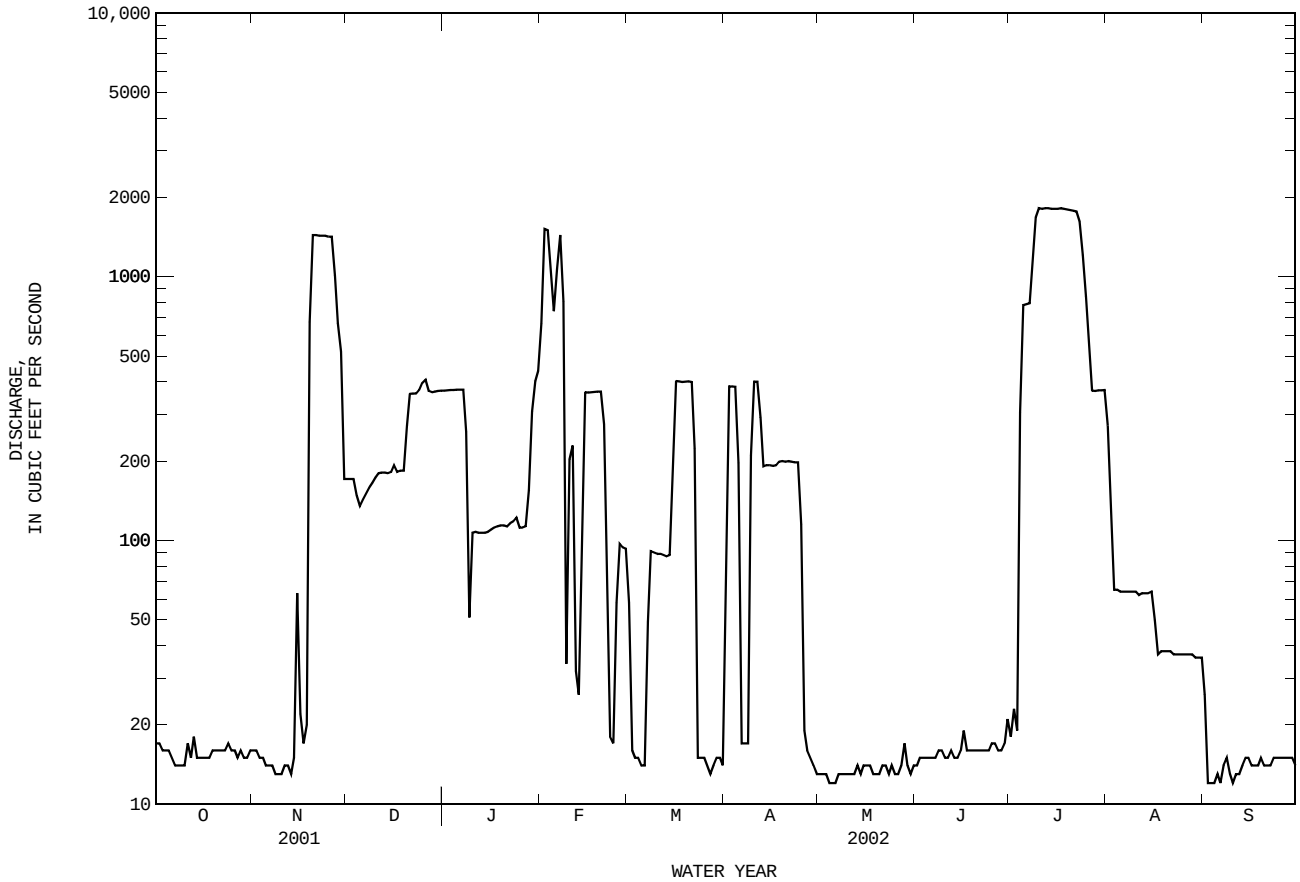
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2002hz, BY WATER YEAR (WY)

MEAN	100.0	132.2	131.9	275.8	225.8	244.8	279.9	399.3	322.0	305.1	63.07	86.38
MAX	797	756	828	1565	1258	965	1630	1672	1102	2023	268	741
(WY)	1975	1987	1975	1975	1975	2001	1970	1977	1977	1987	1984	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1967 - 2002hz	
ANNUAL TOTAL	145436.1		87554			
ANNUAL MEAN	398.5		239.9		214.1	
HIGHEST ANNUAL MEAN					713	1975
LOWEST ANNUAL MEAN					5.23	1989
HIGHEST DAILY MEAN	1540	Feb 19	1820	Jul 10	5370	Jul 1 1987
LOWEST DAILY MEAN	8.6	Aug 15	12	May 4	0.00	Aug 9 1967
ANNUAL SEVEN-DAY MINIMUM	8.9	Aug 19	13	Apr 30	0.00	Aug 9 1967
MAXIMUM PEAK FLOW			1850	Jul 13	y6240	Jul 1 1987
MAXIMUM PEAK STAGE			11.22	Jul 13	y19.23	Jul 1 1987
ANNUAL RUNOFF (AC-FT)	288500		173700		155100	
10 PERCENT EXCEEDS	1170		700		782	
50 PERCENT EXCEEDS	210		38		13	
90 PERCENT EXCEEDS	11		14		4.4	

e Estimated
h See PERIOD OF RECORD paragraph.
z Period of regulated streamflow.
y Also occurred July 1, 1999.



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^2.

WATER-DISCHARGE RECORDS

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. Flow is affected at times by discharge from the flood-detention pools of 13 floodwater-retarding structures. These structures control runoff from 47.4 mi^2. 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^3/s (513,700 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1924-29).--Maximum discharge, 28,400 ft^3/s Oct. 2, 1927, (gage height 43.3 ft); minimum, 8.9 ft^3/s Aug. 12, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900, 46.8 ft in Sept. 1921, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	163	924	862	842	466	879	150	111	675	704	123
2	173	163	794	860	2290	248	1540	110	108	925	395	109
3	161	158	775	793	2350	227	1550	104	103	1740	242	101
4	163	160	723	661	2230	224	1540	105	100	480	262	88
5	163	155	631	719	2470	215	1400	119	90	e1020	229	85
6	284	150	597	697	2850	221	1010	115	83	e1100	216	83
7	178	147	475	682	3050	224	972	103	78	1160	216	82
8	176	152	536	665	3430	280	1520	100	78	1410	210	133
9	174	149	451	386	2950	301	1320	99	84	2290	217	360
10	180	137	459	396	2930	282	2310	99	101	2590	240	200
11	336	152	459	387	3090	285	e2330	96	74	3380	255	121
12	256	205	574	383	2480	287	e1870	91	74	3300	237	95
13	556	219	504	381	1260	288	e1100	82	71	3140	209	97
14	321	211	560	387	1180	290	e1110	73	67	3360	208	92
15	230	1740	649	368	897	288	e1150	79	67	3140	195	96
16	197	5790	2320	377	895	516	1150	82	380	3130	201	96
17	185	922	959	362	874	538	1150	77	161	3280	174	91
18	187	703	717	328	874	562	1120	69	94	3220	159	94
19	193	773	646	341	953	564	739	74	90	3130	154	89
20	188	2080	734	359	1200	783	693	71	83	3110	154	146
21	177	2590	1650	364	1140	607	689	69	80	3080	153	93
22	189	2590	2400	359	885	650	709	70	82	3070	145	85
23	195	2610	2410	365	609	799	724	71	79	3020	143	80
24	192	2590	2380	387	600	786	740	68	76	2620	144	79
25	161	2570	2380	353	582	765	720	77	75	2260	143	75
26	149	2560	2370	364	618	755	274	94	75	1970	142	77
27	151	2360	2360	372	625	996	222	98	88	1770	148	79
28	146	1860	2350	386	498	1420	201	488	113	1750	127	78
29	154	1620	2330	499	---	1250	183	251	96	1530	122	79
30	153	978	2330	643	---	894	161	226	649	1050	126	81
31	151	---	2010	715	---	933	---	119	---	984	122	---
TOTAL	6290	36657	39457	15201	44652	16944	31076	3529	3510	68684	6392	3187
MEAN	202.9	1222	1273	490.4	1595	546.6	1036	113.8	117.0	2216	206.2	106.2
MAX	556	5790	2410	862	3430	1420	2330	488	649	3380	704	360
MIN	146	137	451	328	498	215	161	68	67	480	122	75
AC-FT	12480	72710	78260	30150	88570	33610	61640	7000	6960	136200	12680	6320

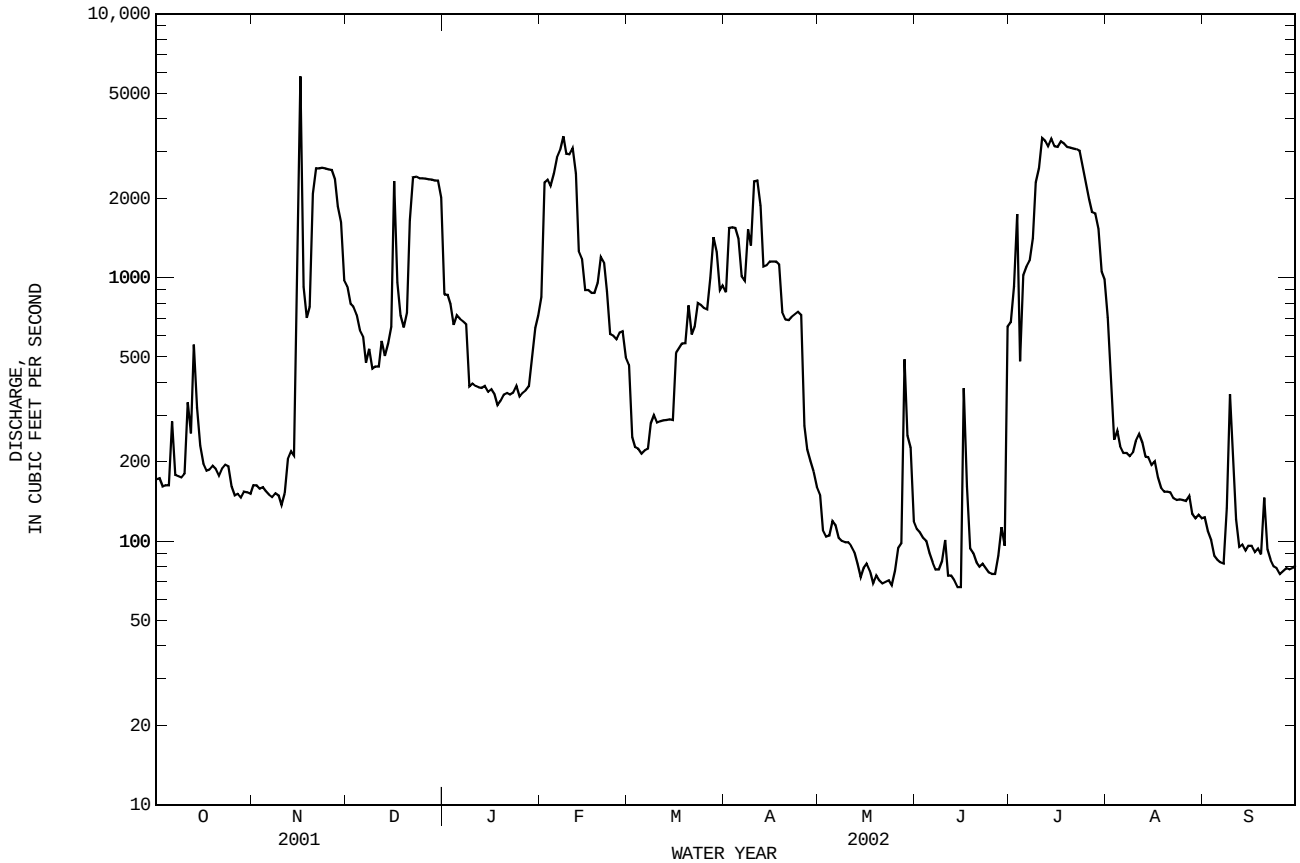
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002z, BY WATER YEAR (WY)

MEAN	426.1	482.3	616.6	955.2	1062	1446	1550	1933	1744	1192	489.2	396.7
MAX	2760	2136	2697	7252	6123	10200	9237	6833	7264	6205	3818	2009
(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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002z	
ANNUAL TOTAL	514615		275579			
ANNUAL MEAN	1410		755.0		1022	
HIGHEST ANNUAL MEAN					5054	1992
LOWEST ANNUAL MEAN					118	2000
HIGHEST DAILY MEAN	5790	Nov 16	5790	Nov 16	62000	May 17 1965
LOWEST DAILY MEAN	49	Aug 14	67	Jun 14	8.2	Aug 6 1963
ANNUAL SEVEN-DAY MINIMUM	54	Aug 8	70	May 18	9.5	Aug 3 1963
MAXIMUM PEAK FLOW			10000	Nov 16	79600	May 17 1965
MAXIMUM PEAK STAGE			25.86	Nov 16	42.85	May 17 1965
ANNUAL RUNOFF (AC-FT)	1021000		546600		740100	
10 PERCENT EXCEEDS	3380		2360		3200	
50 PERCENT EXCEEDS	959		359		262	
90 PERCENT EXCEEDS	93		83		65	

e Estimated
z Period of regulated streamflow.



PRECIPITATION RECORDS

PERIOD OF RECORD.--Oct. 1, 2001 to Sept. 30, 2002.

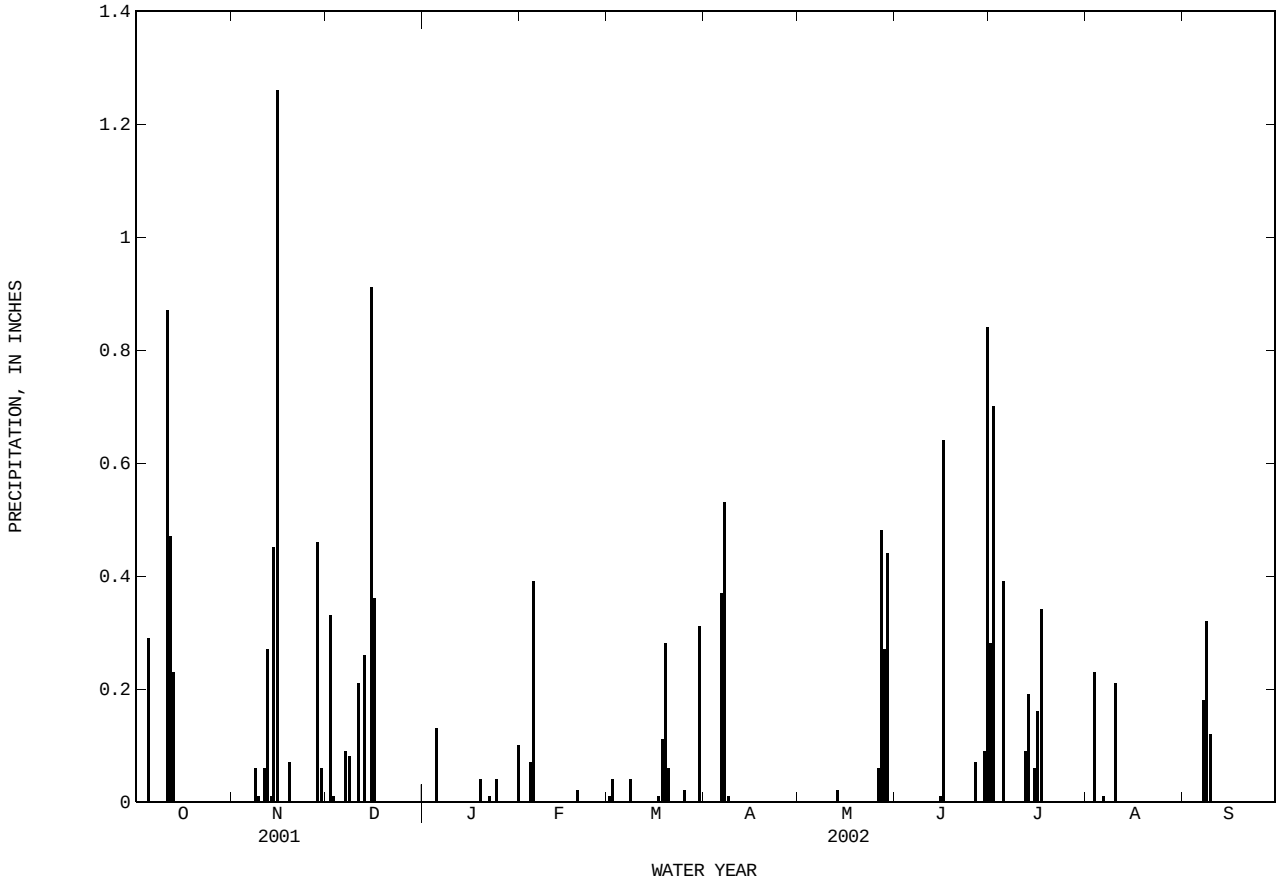
INSTRUMENTATION.--Recording tipping bucket rain gage at site.

REMARKS.--Records fair.

EXTREMES FOR CURRENT YEAR.--Maximum daily accumulation, 0.98 in., Nov. 15.

PRECIPITATION FROM DCP, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.28	0.0	0.0
2	0.0	0.0	0.33	0.0	0.0	0.04	0.0	0.0	0.0	0.70	0.0	0.0
3	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.0
4	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.29	0.0	0.0	0.13	0.39	0.0	0.0	0.0	0.0	0.39	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.37	0.0	0.0	0.0	0.01	0.0
7	0.0	0.0	0.09	0.0	0.0	0.0	0.53	0.0	0.0	0.0	0.0	0.18
8	0.0	0.06	0.08	0.0	0.0	0.04	0.01	0.0	0.0	0.0	0.0	0.32
9	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.0
11	0.87	0.06	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.47	0.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0
13	0.23	0.01	0.26	0.0	0.0	0.0	0.0	0.02	0.0	0.19	0.0	0.0
14	0.0	0.45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	1.26	0.91	0.0	0.0	0.0	0.0	0.0	0.01	0.06	0.0	0.0
16	0.0	0.0	0.36	0.0	0.0	0.0	0.0	0.0	0.64	0.16	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.34	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.07	0.0	0.04	0.02	0.28	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.07	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.48	0.0	0.0	0.0	0.0
28	0.0	0.46	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.0
29	0.0	0.06	0.0	0.0	---	0.0	0.0	0.44	0.09	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	---	0.31	0.0	0.0	0.84	0.0	0.0	0.0
31	0.0	---	0.0	0.10	---	0.0	---	0.0	---	0.0	0.0	---
TOTAL	1.86	2.71	2.25	0.32	0.48	0.88	0.91	1.27	1.65	2.21	0.45	0.62


1.4
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PRECIPITATION, IN INCHES
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2002
WATER YEAR

08104650 Lake Georgetown near Georgetown, TX

LOCATION.--Lat 30°40'03", long 97°43'38", Williamson County, Hydrologic Unit 12070205, at North San Gabriel Dam, on North Fork San Gabriel River, 2.5 mi upstream from Middle Fork San Gabriel River, 3.7 mi northwest of Georgetown, and 4.4 mi upstream from confluence with South Fork San Gabriel River.

DRAINAGE AREA.--247 mi^2.

PERIOD OF RECORD.--Mar. 1980 to Sept. 2000 (contents furnished by U.S. Army Corps of Engineers), Oct. 2000 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 May 13, 1980, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily contents. Records good. The lake is formed by a rolled earthfill dam, 6,700 ft long, including the spillway. The lake was built for water conservation and flood control. The dam is owned by the U.S. Army Corps of Engineers. Deliberate impoundment began on Mar. 3, 1980. The spillway is an ungated broad-crested weir 1,000 ft long, located near right end of dam. The spillway for normal flood releases is a gated, 11-foot-diameter conduit, controlled by two 5- by 11-foot slide gates, located near the center of dam. The invert for the floodgate is 720.0 ft. A low-flow outlet, consisting of four 3- by 4-foot gates is located near the center of dam. The inverts of these gates are 735.0, 749.0, 763.0, and 777.0 ft. Conservation pool storage is 37,010 acre-ft. Data regarding dam are given in the following table:

	Elevation (feet)
Top of dam	861.0
Design flood	856.2
Crest of spillway	834.0
Top of conservation pool	791.0
Lowest gated outlet (invert of 11-foot conduit)	720.0

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 Oct. 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 136,900 acre-ft, Mar. 4, 1992, elevation, 835.86 ft; minimum contents after initial filling, 13,990 acre-ft, Oct. 15, Nov. 2, 2000, elevation, 767.71 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 58,570 acre-ft, July 8, elevation, 804.78 ft; minimum contents, 29,110 acre-ft, Nov. 14, elevation, 784.45 ft.

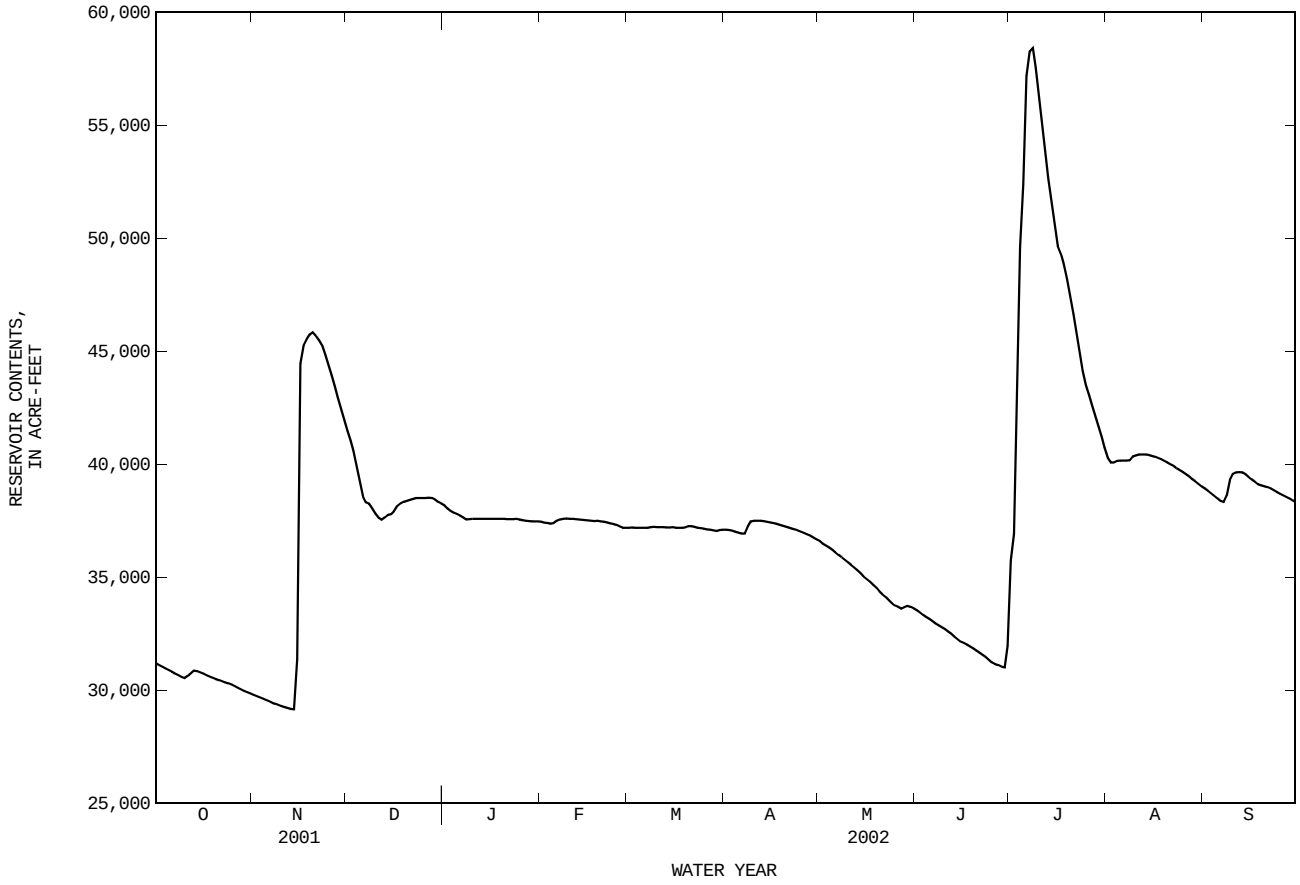
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31170	29780	41470	38180	37440	37180	37100	36580	33520	35740	40280	38910
2	31090	29720	41030	38030	37410	37200	37080	36470	33430	36910	40060	38820
3	31010	29670	40560	37930	37380	37170	37040	36390	33330	42320	40070	38700
4	30940	29620	39890	37840	37360	37180	37000	36300	33230	49600	40140	38590
5	30880	29560	39210	37790	37390	37170	36960	36200	33140	52370	40150	38480
6	30800	29500	38560	37720	37490	37170	36920	36090	33040	57180	40150	38370
7	30720	29430	38290	37630	37550	37180	36920	35970	32940	58250	40150	38310
8	30640	29380	38230	37550	37570	37210	37250	35870	32850	58410	40160	38600
9	30570	29330	38030	37560	37590	37210	37460	35760	32770	57530	40340	39310
10	30510	29280	37800	37570	37580	37200	37490	35650	32690	56400	40380	39550
11	30610	29240	37620	37580	37570	37210	37490	35540	32580	55190	40420	39630
12	30740	29200	37530	37580	37560	37200	37490	35420	32490	53930	40420	39640
13	30870	29150	37630	37580	37550	37190	37470	35290	32370	52650	40420	39630
14	30830	29150	37740	37580	37530	37190	37450	35170	32240	51640	40400	39540
15	30780	31350	37780	37580	37520	37200	37420	35030	32130	50680	40370	39430
16	30710	44440	37920	37580	37500	37180	37390	34910	32080	49640	40320	39320
17	30650	45230	38150	37580	37490	37170	37360	34800	32000	49280	40270	39210
18	30590	45520	38260	37580	37470	37170	37320	34660	31920	48820	40200	39110
19	30530	45720	38320	37580	37480	37200	37280	34520	31840	48170	40140	39060
20	30480	45810	38370	37570	37470	37250	37240	34380	31740	47420	40060	39020
21	30430	45670	38400	37560	37440	37250	37190	34240	31650	46630	39990	38970
22	30380	45470	38450	37560	37410	37220	37150	34110	31550	45790	39900	38910
23	30340	45240	38490	37570	37380	37180	37110	33980	31450	44940	39820	38840
24	30290	44830	38500	37570	37340	37170	37050	33850	31330	44090	39730	38760
25	30230	44360	38500	37550	37310	37140	36990	33730	31220	43460	39640	38680
26	30170	43900	38500	37520	37240	37110	36940	33680	31140	43030	39540	38610
27	30100	43410	38500	37490	37180	37090	36880	33590	31110	42590	39440	38530
28	30030	42920	38500	37470	37170	37060	36820	33660	31040	42140	39330	38470
29	29950	42430	38420	37460	---	37040	36740	33720	31000	41680	39220	38390
30	29900	41940	38330	37460	---	37070	36650	33680	31950	41200	39110	38320
31	29840	---	38250	37460	---	37090	---	33610	---	40720	39010	---
MEAN	30540	37010	38560	37620	37440	37170	37160	34930	32190	48010	39990	38920
MAX	31170	45810	41470	38180	37590	37250	37490	36580	33520	58410	40420	39640
MIN	29840	29150	37530	37460	37170	37040	36650	33590	31000	35740	39010	38310
(+)	785.10	794.54	791.98	791.31	791.09	790.03	790.70	788.29	786.91	793.69	792.45	791.94
(@)	-1430	+12100	-3690	-790	-290	-80	-440	-3040	-1660	+8770	-1710	-690

CAL YR 2001 MAX 45810 MIN 25770 (@) +12630
WTR YR 2002 MAX 58410 MIN 29150 (@) +7050

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

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^2.

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.--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^3/s (63,830 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1968-79).--Maximum discharge, 35,000 ft^3/s Sept. 17, 1974 (gage height, 26.20 ft); no flow July 23, 24, 25, 1971.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	16	241	107	32	4.4	9.6	2.4	7.5	8.5	198	12
2	1.8	16	241	108	32	4.3	9.4	2.0	e7.5	22	e62	12
3	2.1	16	327	108	32	3.9	8.2	2.6	e7.4	10	e9.0	12
4	2.4	15	386	109	32	4.0	10	2.9	7.2	9.1	e9.0	12
5	2.5	15	403	107	33	3.8	10	3.3	7.4	109	e9.0	11
6	3.4	15	317	108	33	3.9	9.9	2.9	6.8	332	e9.0	11
7	3.6	16	161	110	33	4.0	10	3.0	6.7	334	e9.0	13
8	3.4	15	165	78	33	3.7	10	3.3	7.0	725	e8.8	13
9	3.8	15	163	23	34	3.9	9.7	3.6	6.8	975	e8.8	13
10	4.3	15	162	24	33	4.0	9.6	3.9	6.6	967	8.8	12
11	6.3	16	161	24	34	4.1	9.5	4.0	6.4	953	8.8	12
12	6.2	17	83	24	34	4.1	7.1	4.2	6.4	939	8.8	11
13	11	16	2.2	25	34	4.5	6.5	4.4	6.4	930	8.8	36
14	9.6	17	30	24	34	4.7	6.7	4.4	6.3	918	11	59
15	8.8	34	54	25	34	5.3	6.8	4.5	6.5	e914	13	59
16	9.8	11	53	24	35	5.3	7.3	4.7	7.0	e800	12	59
17	10	9.4	54	25	33	5.7	7.3	4.9	6.7	e574	12	59
18	11	10	54	25	33	6.9	7.3	5.1	6.5	574	12	35
19	12	13	53	27	34	7.0	7.3	4.9	6.6	574	12	12
20	13	63	51	28	32	7.4	e6.7	4.6	6.6	574	12	11
21	14	142	51	26	32	7.3	e5.2	4.3	7.2	563	12	11
22	14	137	53	26	31	7.0	e4.7	5.3	7.3	558	12	11
23	15	195	52	27	31	6.7	e4.3	5.6	7.0	557	12	11
24	16	248	53	28	31	6.8	e3.5	6.2	7.2	468	12	11
25	17	246	56	28	31	7.1	3.3	6.0	6.7	331	12	11
26	16	250	53	27	31	6.0	3.1	6.2	5.9	281	12	11
27	16	251	53	28	21	5.7	3.2	6.2	6.1	284	12	11
28	16	251	80	29	4.9	7.0	3.0	8.7	6.4	278	12	10
29	17	250	108	30	---	10	3.0	7.8	7.4	274	12	10
30	16	247	108	32	---	10	2.7	8.3	9.5	272	12	10
31	16	---	108	32	---	9.7	---	7.8	---	271	12	---
TOTAL	299.5	2577.4	3936.2	1446	876.9	178.2	204.9	148.0	207.0	15378.6	573.8	581
MEAN	9.661	85.91	127.0	46.65	31.32	5.748	6.830	4.774	6.900	496.1	18.51	19.37
MAX	17	251	403	110	35	10	10	8.7	9.5	975	198	59
MIN	1.5	9.4	2.2	23	4.9	3.7	2.7	2.0	5.9	8.5	8.8	10
AC-FT	594	5110	7810	2870	1740	353	406	294	411	30500	1140	1150

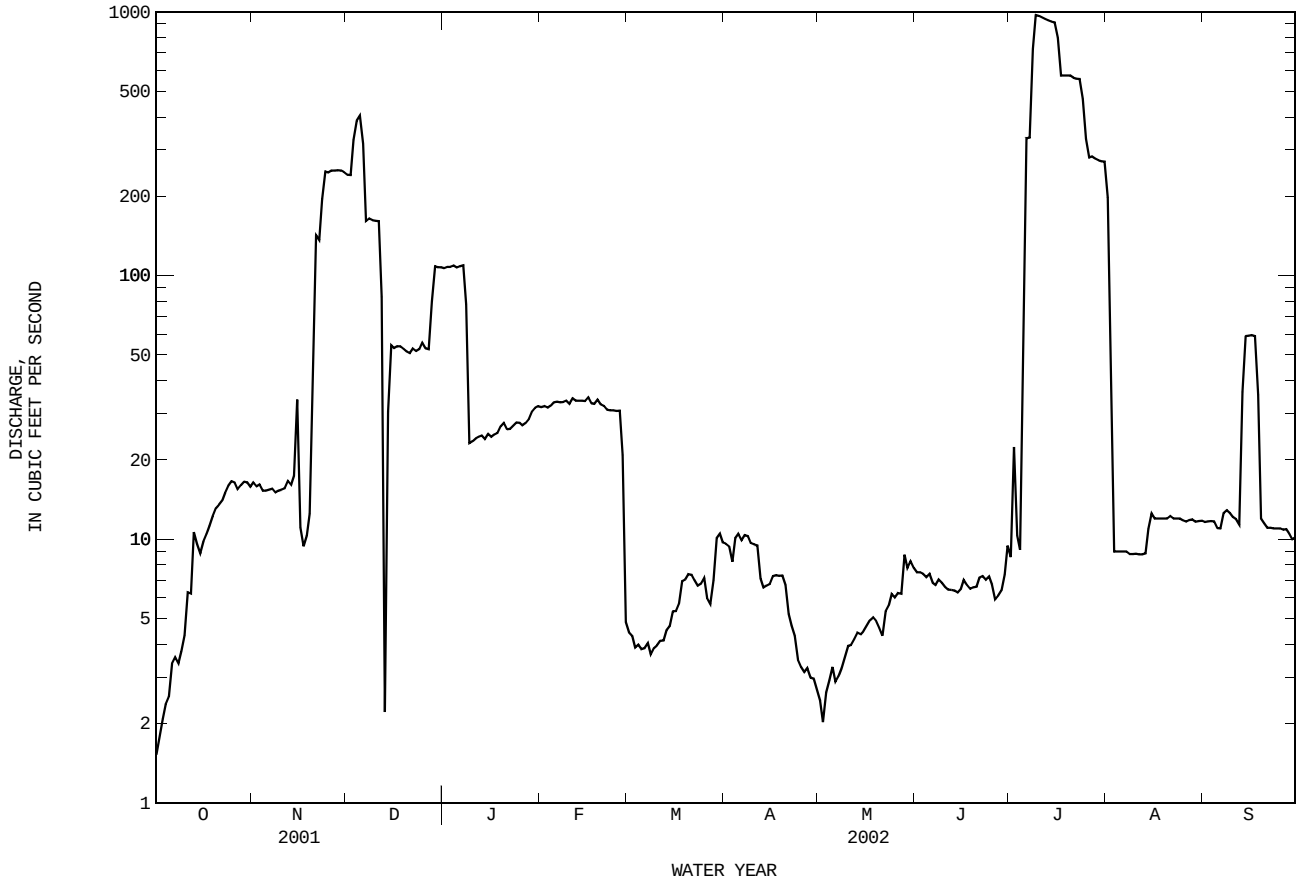
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2002z, BY WATER YEAR (WY)

MEAN	15.21	26.67	49.89	54.70	83.25	129.5	79.52	90.22	142.9	152.6	8.407	27.55
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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1980 - 2002z	
ANNUAL TOTAL	23466.8		26407.5			
ANNUAL MEAN	64.29		72.35		71.65	
HIGHEST ANNUAL MEAN					358	1992
LOWEST ANNUAL MEAN					4.00	1980
HIGHEST DAILY MEAN	440	Mar 14	975	Jul 9	4500	Jun 9 1981
LOWEST DAILY MEAN	1.4	Aug 7	1.5	Oct 1	0.00	Sep 27 1981
ANNUAL SEVEN-DAY MINIMUM	1.7	Aug 2	2.5	Oct 1	0.01	Oct 2 1981
MAXIMUM PEAK FLOW			1060	Jul 8	6070	Mar 4 1992
MAXIMUM PEAK STAGE			8.44	Jul 8	13.05	Mar 4 1992
INSTANTANEOUS LOW FLOW					0.00	Sep 27 1981
ANNUAL RUNOFF (AC-FT)	46550		52380		51900	
10 PERCENT EXCEEDS	231		246		171	
50 PERCENT EXCEEDS	13		12		6.7	
90 PERCENT EXCEEDS	2.5		4.1		2.1	

e Estimated
z Period of regulated streamflow.

08104700 North Fork San Gabriel River near Georgetown, TX--Continued



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^2.

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 good. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	4.3	38	44	33	23	18	7.2	1.7	704	43	12
2	1.9	4.3	42	43	27	24	15	5.0	2.1	916	40	13
3	1.8	3.5	44	40	27	23	14	4.2	2.1	4090	38	14
4	1.7	3.9	41	41	26	21	12	5.3	2.0	543	53	9.3
5	1.7	4.1	39	43	29	22	12	6.6	1.9	1200	40	8.6
6	2.0	2.9	37	42	43	23	13	5.4	1.8	664	37	9.0
7	1.8	3.0	35	38	39	23	15	3.2	1.8	301	33	19
8	2.2	3.1	66	35	31	22	30	2.7	1.8	225	31	105
9	2.0	3.2	47	35	31	21	31	2.5	1.8	176	39	133
10	2.0	2.7	41	36	30	20	18	2.2	1.8	149	34	51
11	12	4.0	46	34	27	20	16	2.2	1.6	137	31	32
12	40	3.7	55	34	27	18	14	3.3	1.5	124	29	25
13	31	3.7	53	34	26	18	13	3.2	1.4	119	26	23
14	19	5.2	57	33	26	20	15	1.8	1.4	168	25	22
15	10	10000	63	32	26	19	15	1.4	1.4	121	23	20
16	6.1	1630	68	30	26	18	12	1.4	1.7	132	22	19
17	4.8	202	83	31	26	18	12	1.4	1.6	163	21	19
18	3.8	129	68	29	27	19	13	1.4	1.5	144	20	20
19	4.0	99	61	31	26	17	11	1.6	1.4	107	19	19
20	3.2	77	57	31	24	21	11	2.0	1.4	96	17	20
21	3.9	70	57	28	24	20	12	1.5	1.4	89	16	19
22	3.8	65	57	28	22	16	12	1.4	1.4	82	14	18
23	3.9	61	54	30	23	17	10	1.4	1.4	75	14	16
24	3.2	55	51	29	24	19	11	1.4	1.4	72	13	13
25	2.6	50	51	27	24	18	9.2	1.4	1.4	69	13	12
26	2.2	46	50	28	21	16	9.4	1.4	4.8	64	12	13
27	1.9	42	49	28	20	16	10	1.8	4.8	60	11	11
28	2.3	41	47	28	22	15	10	5.3	2.1	58	11	9.5
29	3.2	41	48	27	---	15	9.9	2.0	7.1	51	9.4	10
30	2.1	39	46	28	---	20	8.2	1.8	1510	48	9.4	9.1
31	2.3	---	45	27	---	20	---	1.7	---	44	12	---
TOTAL	184.7	12698.6	1596	1024	757	602	411.7	85.1	1569.5	10991	755.8	723.5
MEAN	5.958	423.3	51.48	33.03	27.04	19.42	13.72	2.745	52.32	354.5	24.38	24.12
MAX	40	10000	83	44	43	24	31	7.2	1510	4090	53	133
MIN	1.7	2.7	35	27	20	15	8.2	1.4	1.4	44	9.4	8.6
AC-FT	366	25190	3170	2030	1500	1190	817	169	3110	21800	1500	1440

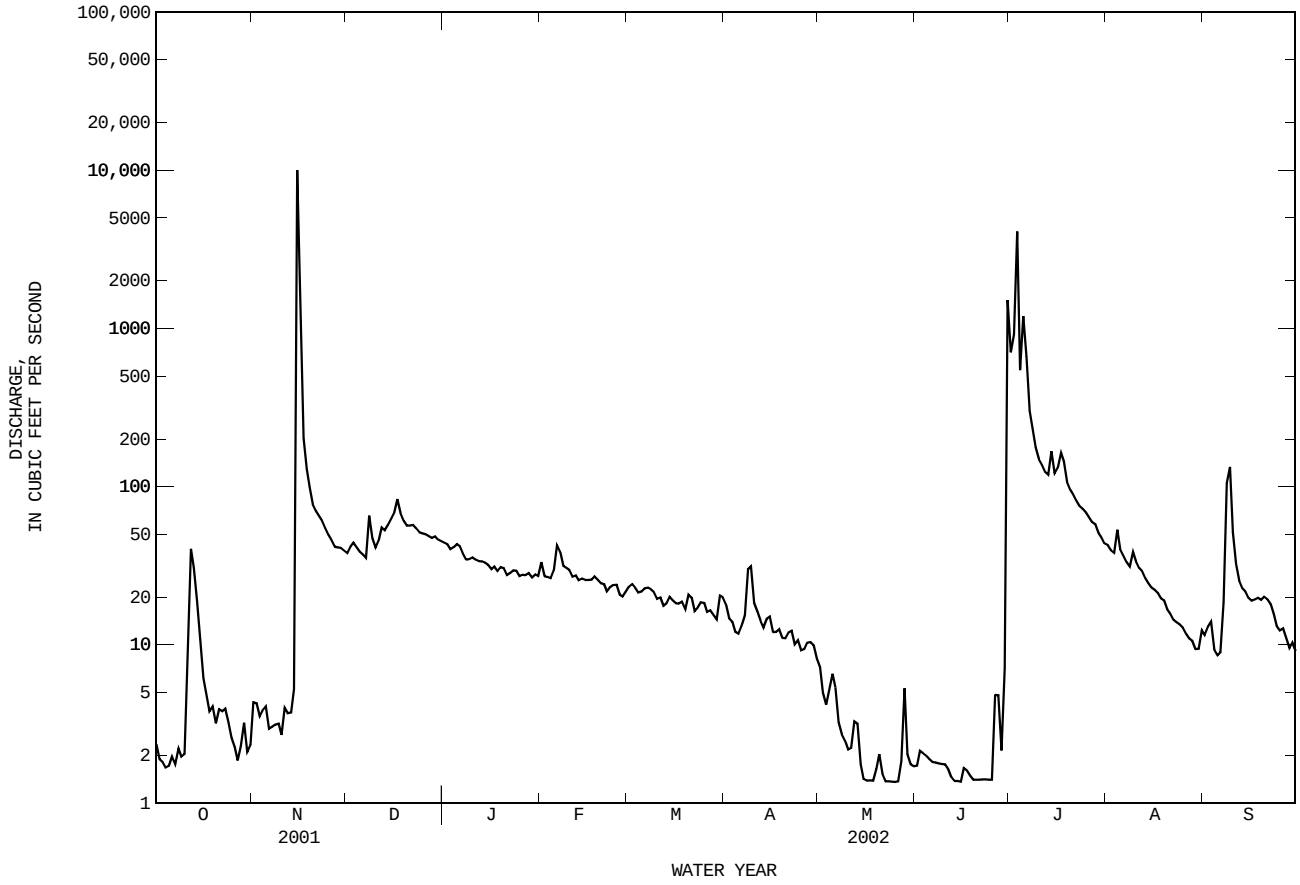
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2002h, BY WATER YEAR (WY)

MEAN	36.78	35.35	46.87	50.93	74.43	65.52	70.92	93.82	112.5	34.02	13.13	20.98
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	0.069	0.16	0.22	0.31	0.81	1.10	0.89	0.24	0.37	0.13	0.036	0.022
(WY)	1979	1989	1989	1996	1990	1996	1996	1984	1971	1978	1980	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1968 - 2002h	
ANNUAL TOTAL	31011.26		31398.9			
ANNUAL MEAN	84.96		86.02		54.48	
HIGHEST ANNUAL MEAN					203	1992
LOWEST ANNUAL MEAN					2.00	2000
HIGHEST DAILY MEAN	10000	Nov 15	10000	Nov 15	10000	Nov 15 2001
LOWEST DAILY MEAN	0.37	Aug 12	1.4	May 15	0.00	Jul 3 1971
ANNUAL SEVEN-DAY MINIMUM	0.42	Aug 8	1.4	Jun 19	0.00	Jul 3 1971
MAXIMUM PEAK FLOW			i60600	Nov 15	i60600	Nov 15 2001
MAXIMUM PEAK STAGE			a27.06	Nov 15	a27.06	Nov 15 2001
ANNUAL RUNOFF (AC-FT)	61510		62280		39470	
10 PERCENT EXCEEDS	113		68		101	
50 PERCENT EXCEEDS	46		20		12	
90 PERCENT EXCEEDS	1.7		1.8		0.32	

a From floodmark.
i Field determination on basis of slope-area measurement of peak flow.
h See PERIOD OF RECORD paragraph

08104900 South Fork San Gabriel River at Georgetown, TX--Continued



08105100 Berry Creek near Georgetown, TX

LOCATION (REVISED).--Lat 30°41′28", long 97°39′21", Williamson County, Hydrologic Unit 12070205, on right bank at upstream side of upstream service road on Interstate Highway 35, 2.9 mi north of the county courthouse at Georgetown, and 3.6 mi upstream from mouth.

DRAINAGE AREA.--83.1 mi^2.

PERIOD OF RECORD.--July 1967 to current year.
Water-quality records.--Sediment data: Oct. 1976 to Sept. 1981

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 659.97 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those daily discharges from Nov. 30 to Mar. 14, which are poor. No known regulation or diversions. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1921, 25.0 ft, occurred Sept. 1921, from information by Texas Department of Transportation and local residents (discharge not determined).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.42	0.85	e8.1	e13	14	8.4	3.0	1.2	0.98	0.11	9.9	1.4
2	0.26	0.86	e9.3	14	14	6.9	3.5	1.2	1.1	287	8.7	1.4
3	0.22	1.2	e11	12	13	6.6	2.6	1.1	1.0	377	7.9	1.5
4	0.25	2.0	e9.3	14	13	6.4	2.3	1.2	0.70	137	8.8	1.5
5	0.32	2.1	e8.6	16	13	7.2	2.6	1.0	0.63	21	6.2	1.3
6	0.20	2.1	e10	16	13	7.9	2.4	1.2	0.55	14	5.3	1.3
7	0.09	1.5	e11	16	13	7.9	3.0	0.97	0.61	21	4.7	2.8
8	0.07	1.4	e64	17	12	7.7	3.0	0.90	0.40	15	5.0	2.7
9	0.07	1.8	e53	e17	12	6.5	5.6	0.85	0.22	14	28	1.3
10	0.08	2.0	e27	e17	12	5.7	6.1	0.70	0.15	14	14	1.3
11	0.50	2.5	e18	e19	12	5.8	6.0	0.66	0.03	14	9.6	1.4
12	1.2	3.1	e16	e18	12	6.3	5.7	0.51	0.0	14	8.7	1.5
13	4.9	3.3	e17	e18	12	5.8	5.2	0.37	0.0	201	7.9	1.7
14	0.63	4.3	e21	e19	11	5.7	4.7	0.30	0.0	196	7.2	1.8
15	0.62	668	e21	19	12	4.9	4.0	0.30	0.0	28	6.4	1.8
16	0.59	984	e24	18	11	4.1	3.3	0.28	0.03	23	5.4	1.8
17	0.94	39	e22	18	11	4.1	2.8	0.25	0.0	34	4.8	1.8
18	1.3	16	e21	18	11	4.2	2.6	0.04	0.0	37	4.3	1.6
19	1.2	10	e21	17	11	4.0	2.4	0.03	0.0	26	3.9	1.4
20	1.7	9.1	e22	17	11	3.5	2.2	0.02	0.0	20	3.6	1.4
21	1.3	9.7	e22	17	10	3.1	2.0	0.0	0.0	18	3.2	1.5
22	0.44	9.2	e21	17	9.7	2.7	2.0	0.0	0.0	17	2.9	1.4
23	0.31	8.8	e20	17	9.2	3.3	2.1	0.0	0.0	17	2.6	1.2
24	0.32	7.2	e19	16	10	4.1	2.0	0.0	0.0	17	2.2	1.1
25	0.19	6.6	e17	16	9.8	3.1	1.7	0.0	0.0	17	2.0	1.0
26	0.44	6.3	e17	16	7.2	2.8	1.6	0.0	0.50	16	1.6	1.2
27	0.60	5.1	e17	16	7.5	2.9	1.7	0.39	0.01	15	1.5	0.98
28	0.61	6.0	e16	15	7.6	3.3	1.5	4.3	0.0	13	1.6	0.88
29	0.99	6.0	e16	15	---	3.4	1.3	1.0	0.0	12	1.4	0.90
30	1.1	e8.1	e15	15	---	3.8	1.3	0.78	3.2	10	1.4	0.91
31	1.0	---	e15	14	---	2.9	---	0.83	---	10	1.8	---
TOTAL	22.86	1828.11	609.3	507	314.0	155.0	90.2	20.38	10.11	1655.11	182.5	43.77
MEAN	0.737	60.94	19.65	16.35	11.21	5.000	3.007	0.657	0.337	53.39	5.887	1.459
MAX	4.9	984	64	19	14	8.4	6.1	4.3	3.2	377	28	2.8
MIN	0.07	0.85	8.1	12	7.2	2.7	1.3	0.00	0.00	0.11	1.4	0.88
AC-FT	45	3630	1210	1010	623	307	179	40	20	3280	362	87

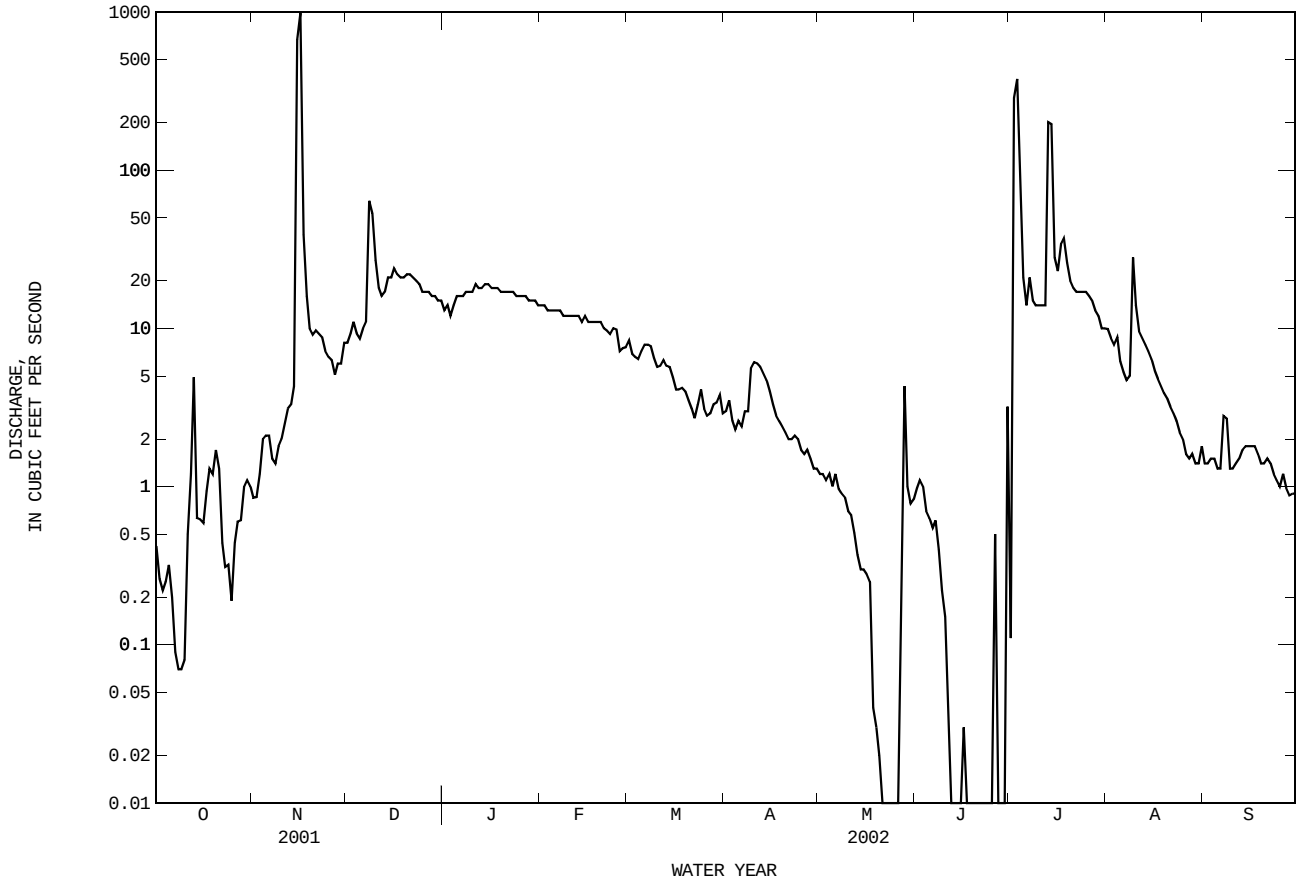
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2002, BY WATER YEAR (WY)

MEAN	15.90	12.40	25.91	29.89	47.45	36.15	37.06	44.32	48.38	14.17	4.669	8.839
MAX	158	74.2	238	264	409	172	225	148	322	53.4	18.3	85.5
(WY)	1975	1975	1992	1968	1992	1992	1997	1979	1981	2002	1975	1996
MIN	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1979	1989	1989	1990	1996	1996	1996	1996	1996	1978	1967	1978

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1967 - 2002	
ANNUAL TOTAL	13362.62		5438.34			
ANNUAL MEAN	36.61		14.90		26.84	
HIGHEST ANNUAL MEAN					106	1992
LOWEST ANNUAL MEAN					0.041	1967
HIGHEST DAILY MEAN	984	Nov 16	984	Nov 16	4670	Oct 31 1974
LOWEST DAILY MEAN	0.00	Aug 9	0.00	May 21	0.00	Jul 23 1967
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 18	0.00	Jun 17	0.00	Jul 23 1967
MAXIMUM PEAK FLOW			4320	Nov 16	15500	Oct 31 1974
MAXIMUM PEAK STAGE			12.48	Nov 16	19.33	Oct 31 1974
ANNUAL RUNOFF (AC-FT)	26500		10790		19440	
10 PERCENT EXCEEDS	72		18		51	
50 PERCENT EXCEEDS	15		4.0		4.4	
90 PERCENT EXCEEDS	0.32		0.22		0.00	

e Estimated

08105100 Berry Creek near Georgetown, TX--Continued



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^2.

PERIOD OF RECORD.--Jan. 1980 to Sept. 2000 (contents furnished by U.S. Army Corps of Engineers), Oct. 2000, 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 fair. 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. Conservation pool storage is 54,280 acre-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.--Maximum contents, 268,200 acre-ft, Mar. 5, 1992, elevation, 530.11 ft; minimum contents after initial filling, 44,860 acre-ft, Sept. 23, 2000, elevation, 501.43 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 91,410 acre-ft, Nov. 18, elevation, 511.22 ft; minimum contents, 53,960 acre-ft, June 26, elevation, 503.76 ft.

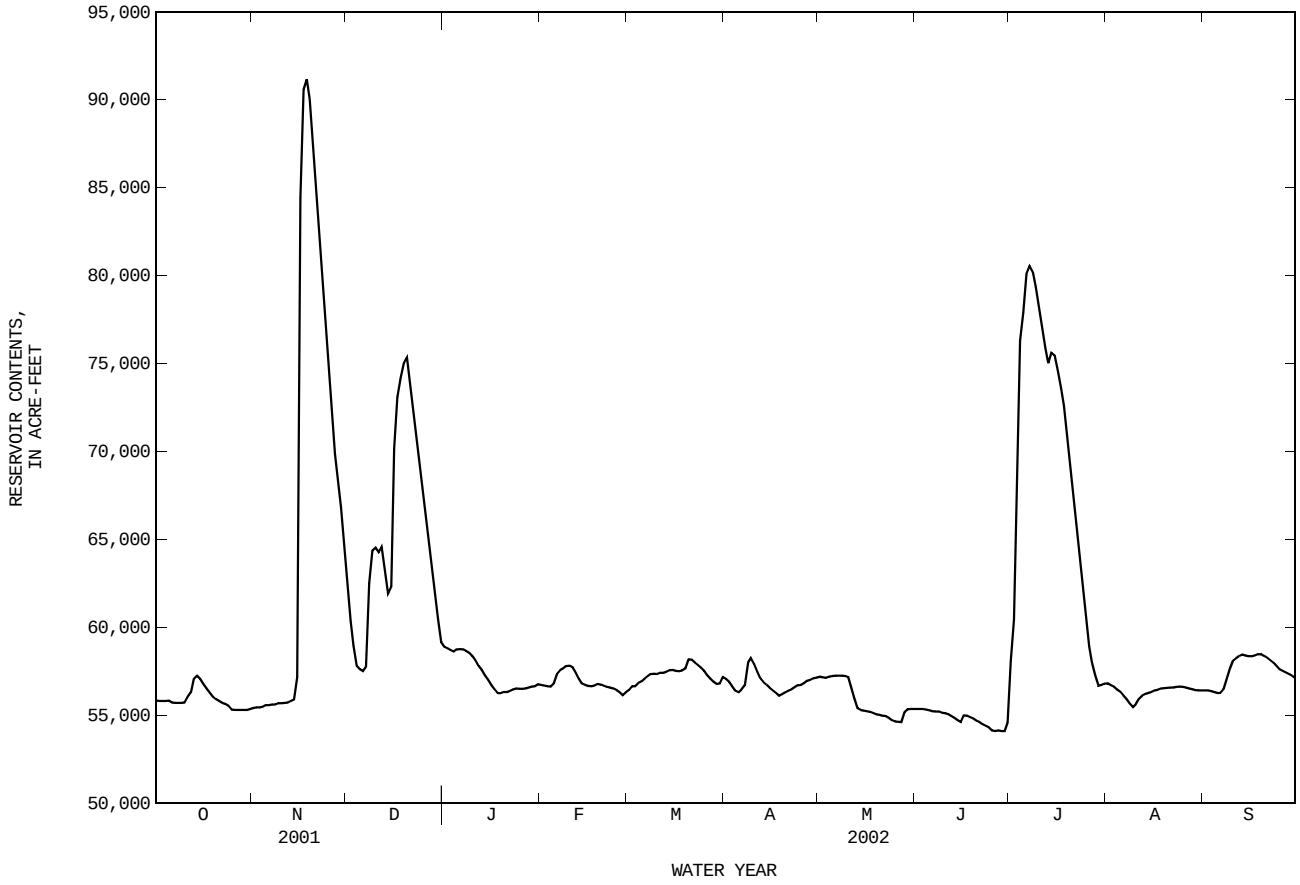
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55830	55400	62280	58890	56720	56430	57060	57180	55350	58090	56800	56410
2	55810	55430	60360	58790	56670	56650	56900	57160	55350	60440	56700	56410
3	55810	55440	58930	58700	56650	56640	56630	57120	55340	69070	56600	56370
4	55810	55480	57810	58600	56630	56820	56390	57180	55320	76310	56440	56310
5	55820	55560	57610	58730	56810	56920	56300	57230	55280	77900	56330	56260
6	55710	55560	57490	58750	57330	57070	56450	57250	55220	80090	56110	56250
7	55690	55600	57730	58730	57550	57220	56700	57250	55210	80550	55910	56470
8	55690	55610	62500	58640	57670	57330	57970	57250	55200	80200	55660	57080
9	55690	55670	64360	58540	57790	57350	58250	57230	55130	79370	55460	57670
10	55720	55680	64520	58350	57810	57340	57910	57150	55110	78250	55630	58080
11	56040	55690	64280	58100	57720	57400	57480	56590	55050	77080	55930	58230
12	56290	55720	64570	57810	57410	57410	57070	55940	54940	75900	56110	58350
13	57060	55810	63240	57570	57070	57460	56880	55390	54830	75020	56210	58440
14	57240	55870	61910	57260	56790	57550	56730	55290	54720	75610	56260	58390
15	57060	57160	62280	57000	56720	57570	56550	55250	54590	75470	56320	58360
16	56770	84410	70160	56720	56660	57510	56410	55220	54990	74590	56400	58360
17	56510	90590	73090	56470	56640	57500	56260	55190	54970	73610	56440	58390
18	56290	91180	74160	56250	56670	57540	56090	55110	54870	72620	56510	58460
19	56060	90060	75000	56240	56760	57650	56190	55030	54800	71300	56540	58460
20	55920	87250	75340	56320	56730	58170	56300	55020	54680	69820	56550	58360
21	55810	84360	74100	56320	56660	58150	56380	54970	54590	68210	56560	58260
22	55700	81720	72700	56360	56610	58010	56460	54940	54480	66540	56570	58120
23	55640	79200	71220	56450	56560	57860	56580	54830	54380	64720	56610	57970
24	55530	76700	69640	56520	56510	57700	56700	54710	54290	62960	56620	57780
25	55310	74330	68100	56500	56430	57510	56710	54630	54130	61010	56600	e57580
26	55290	72030	66570	56500	56290	57270	56820	54620	54080	58900	56570	e57490
27	55300	69860	65010	56510	56140	57070	56950	54600	54130	57960	56510	e57400
28	55300	68310	63500	56570	56290	56900	57000	55170	54090	57240	56480	e57310
29	55300	66810	61990	56620	---	56770	57090	55330	54090	56680	56430	e57220
30	55300	64570	60480	56650	---	56800	57130	55350	54560	56710	56410	57100
31	55340	---	59150	56750	---	57160	---	55350	---	56780	56410	---
MEAN	55890	67240	65160	57360	56870	57310	56810	55820	54790	69320	56340	57580
MAX	57240	91180	75340	58890	57810	58170	58250	57250	55350	80550	56800	58460
MIN	55290	55400	57490	56240	56140	56430	56090	54600	54080	56680	55460	56250
(+)	504.09	504.16	504.97	504.42	504.31	504.51	504.51	504.09	503.90	504.43	504.34	504.50
(@)	-510	+9230	-5420	-2400	-460	+870	-30	-1780	-790	+2220	-370	+690

CAL YR 2001 MAX 91180 MIN 51170 (@) -8830
WTR YR 2002 MAX 91180 MIN 54080 (@) +1250

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

08105600 Granger Lake near Granger, TX--Continued



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^2.

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. Datum of gage is 412.60 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 known diversions. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--14 years (water years 1966-79), 289 ft^3/s (209,400 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1965-79).--Maximum discharge, 31,200 ft^3/s Oct. 31, 1974 (gage height, 30.80 ft); minimum daily, 0.28 ft^3/s Aug. 25-28, 1978.

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).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	11	1600	331	151	32	173	7.0	6.5	6.8	266	10
2	10	11	1450	328	151	32	172	5.3	6.4	7.1	227	10
3	10	12	1290	326	151	32	173	6.6	6.5	7.1	115	10
4	10	12	1050	325	151	31	136	6.9	6.5	6.7	114	10
5	11	12	721	328	155	31	96	6.9	6.5	150	113	10
6	10	11	567	327	159	31	11	7.1	6.4	737	113	10
7	10	12	345	325	154	48	12	7.3	6.4	742	113	10
8	10	12	454	323	153	74	23	7.2	6.4	1110	114	10
9	11	12	353	323	153	73	160	7.3	6.5	1560	78	10
10	11	12	447	323	153	73	365	127	10	1720	10	9.6
11	14	12	747	332	244	73	363	335	22	1710	10	8.9
12	15	12	977	342	342	73	273	337	22	1690	10	8.7
13	46	12	1300	341	341	72	167	176	22	1670	10	27
14	152	12	1030	341	279	73	167	7.3	22	1670	10	57
15	151	18	816	340	152	79	168	6.7	22	1660	10	57
16	151	42	556	340	150	96	168	6.7	24	1640	10	58
17	150	14	24	341	151	97	166	6.6	22	1640	10	58
18	150	365	16	245	152	97	105	6.5	22	1630	10	58
19	125	1250	16	154	154	100	11	6.4	22	1620	10	59
20	90	1660	472	153	153	103	11	6.3	22	1620	10	58
21	89	1730	1050	152	155	97	10	6.3	22	1610	10	58
22	90	1690	1050	152	155	133	10	16	22	1630	10	58
23	91	1660	1050	153	155	173	9.9	28	21	1660	10	58
24	92	1640	1050	153	156	172	9.7	30	21	1640	10	58
25	57	1620	1050	153	157	173	9.0	32	21	1620	10	58
26	10	1600	1040	150	158	172	8.4	32	25	1360	10	58
27	10	1600	1040	150	120	172	8.3	32	23	655	10	59
28	10	1600	1040	150	32	171	7.9	34	17	654	10	59
29	10	1620	1030	151	---	173	7.6	22	6.3	446	10	59
30	10	1620	1030	151	---	176	7.4	6.8	7.9	267	10	57
31	10	---	731	151	---	175	---	6.6	---	265	10	---
TOTAL	1626	19894	25392	7854	4737	3107	3008.2	1328.8	476.3	34403.7	1473	1131.2
MEAN	52.45	663.1	819.1	253.4	169.2	100.2	100.3	42.86	15.88	1110	47.52	37.71
MAX	152	1730	1600	342	342	176	365	337	25	1720	266	59
MIN	10	11	16	150	32	31	7.4	5.3	6.3	6.7	10	8.7
AC-FT	3230	39460	50370	15580	9400	6160	5970	2640	945	68240	2920	2240

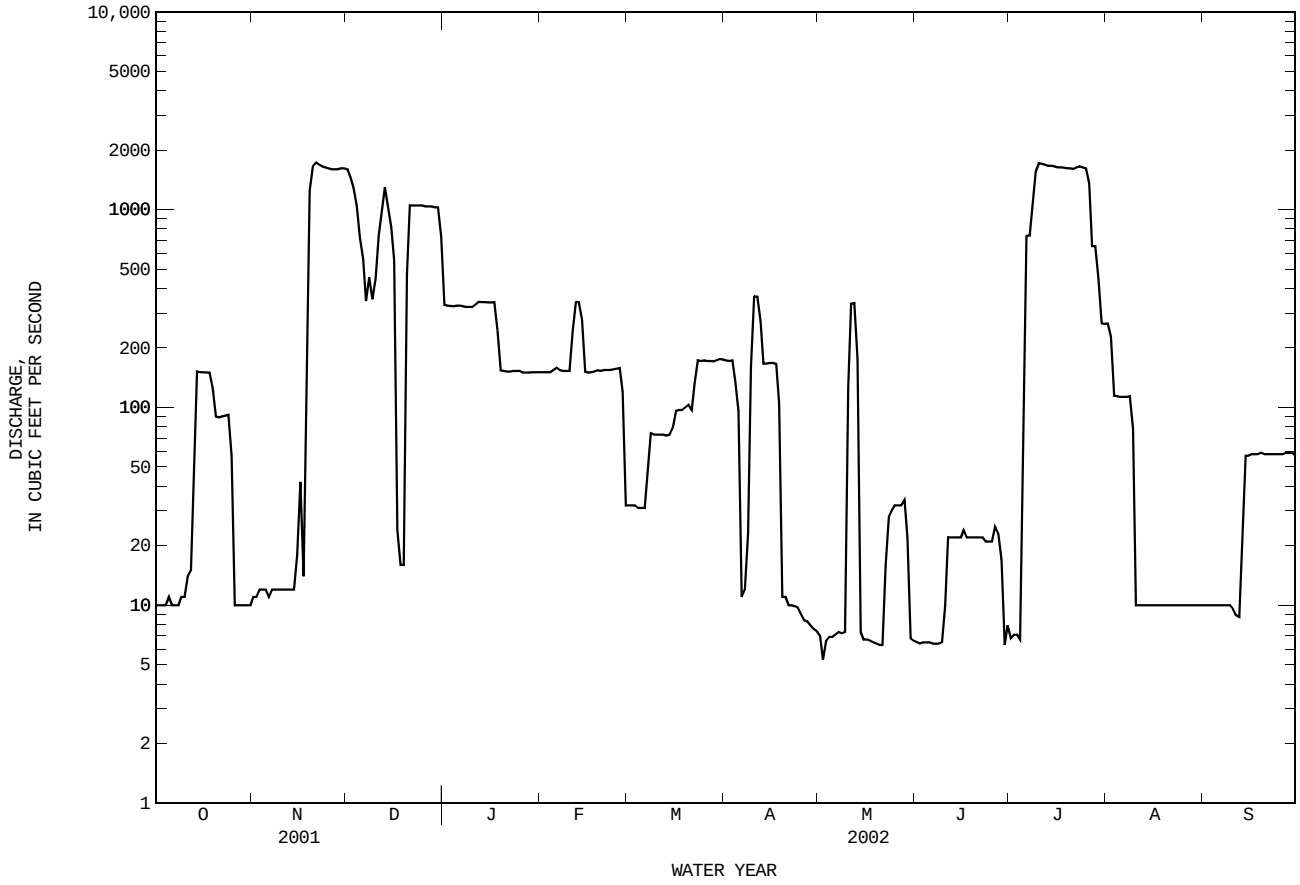
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2002z, BY WATER YEAR (WY)

MEAN	83.64	165.1	235.1	266.0	285.8	384.8	314.7	392.8	433.0	405.1	36.77	77.29
MAX	545	899	953	1233	1334	2210	1685	2103	1732	2196	134	922
(WY)	1999	1999	1986	1987	1992	1992	1992	1997	1981	1992	1992	1981
MIN	3.21	3.99	3.06	5.25	2.62	3.24	3.53	2.87	4.21	0.19	0.018	0.000
(WY)	1983	1983	1983	1981	1980	1980	1984	1984	1996	1984	1984	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1980 - 2002z	
ANNUAL TOTAL	136476.2		104431.2			
ANNUAL MEAN	373.9		286.1		256.5	
HIGHEST ANNUAL MEAN					1015	1992
LOWEST ANNUAL MEAN					18.4	2000
HIGHEST DAILY MEAN	1730	Nov 21	1730	Nov 21	6870	Mar 5 1992
LOWEST DAILY MEAN	1.7	Jan 9	5.3	May 2	0.00	Aug 21 1984
ANNUAL SEVEN-DAY MINIMUM	7.0	Jan 9	6.4	Jun 2	0.00	Aug 21 1984
MAXIMUM PEAK FLOW			1810	Nov 19	7540	Mar 5 1992
MAXIMUM PEAK STAGE			11.28	Nov 19	21.86	Mar 5 1992
ANNUAL RUNOFF (AC-FT)	270700		207100		185900	
10 PERCENT EXCEEDS	1040		1050		850	
50 PERCENT EXCEEDS	151		74		33	
90 PERCENT EXCEEDS	10		7.9		3.9	

z Period of regulated streamflow.

08105700 San Gabriel River at Laneport, TX--Continued



08106350 Little River near Rockdale, TX
(Partial-record station)

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^2.

PERIOD OF RECORD.--Feb. 1981 to current year (daily mean discharges less than 1,000 ft^3/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. Flow in the San Gabriel may be affected at times by discharge from the flood-detention pools of 46 flood water-retarding structures. These structures control runoff from 144 mi^2, in the Brushy Creek drainage basin. 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^3/s May 9, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 33.85 ft, Nov. 17 (maximum discharge not determined); minimum discharge, 113 ft^3/s, June 8, gage height, 4.32 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	277	247	---	---	---	762	---	252	210	860	---	154
2	263	232	---	---	---	739	---	244	175	---	971	152
3	253	224	---	---	---	535	---	212	161	---	618	151
4	249	225	---	---	---	475	---	189	169	---	475	142
5	249	221	---	---	---	446	---	185	169	---	468	137
6	240	218	---	---	---	400	---	183	148	---	424	123
7	328	215	---	---	---	395	---	175	126	---	397	132
8	264	205	---	---	---	423	---	165	119	---	386	201
9	239	213	---	---	---	487	---	147	126	---	378	---
10	245	214	---	---	---	512	---	141	135	---	313	760
11	254	224	---	---	---	501	---	303	140	---	287	516
12	---	221	---	---	---	502	---	415	150	---	365	345
13	---	245	---	---	---	490	---	432	141	---	283	243
14	---	329	---	---	---	483	---	228	135	---	250	217
15	---	387	---	---	---	480	---	180	130	---	235	224
16	738	---	---	---	---	488	---	160	178	---	232	207
17	572	---	---	---	---	717	---	144	311	---	216	221
18	509	---	---	---	---	813	---	133	331	---	207	225
19	466	---	---	834	---	850	---	128	215	---	186	199
20	415	---	---	808	---	---	840	130	173	---	171	186
21	393	---	---	795	---	---	800	138	160	---	174	231
22	377	---	---	782	---	---	780	143	146	---	165	209
23	368	---	---	783	---	---	776	138	140	---	164	197
24	358	---	---	806	990	---	767	147	135	---	157	203
25	354	---	---	831	972	---	754	147	130	---	153	183
26	320	---	---	811	976	---	715	152	132	---	149	169
27	267	---	---	780	---	---	395	154	276	---	149	165
28	260	---	---	777	933	---	304	214	267	---	147	157
29	255	---	---	783	---	---	285	540	259	---	158	156
30	254	---	---	874	---	---	267	392	246	---	162	157
31	258	---	---	---	---	---	---	329	---	---	160	---

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08106500 Little River near Cameron, TX

LOCATION (REVISED).--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^2.

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.

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 fair except those for estimated daily discharges, which are poor. Since water year 1954, at least 10% of the drainage area has been regulated. Many small diversions for irrigation and municipal supply affect low flows. The Aluminum Co. of America diverts water 10.9 mi upstream from the gage for use at their Rockdale plant. 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. Flow is slightly affected at times by discharge from the flood-detention pools of 65 floodwater-retarding structures. These structures control runoff from 209 mi^2 in the Nolan, Donahoe, and Brushy Creeks drainage basins. 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^3/s (1,309,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1917-53).--Maximum discharge since 1852, 647,000 ft^3/s, Sept. 10, 1921 (gage height, 53.2 ft, present datum, from floodmark), from rating curve extended above 110,000 ft^3/s, on basis of slope-area measurement of 647,000 ft^3/s.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	268	254	3380	3240	1110	795	1770	304	250	606	1290	163
2	261	244	3050	e2000	1270	707	1420	291	192	1560	1060	154
3	231	225	2860	e953	2490	624	1960	266	170	2010	744	155
4	208	232	3070	e1220	2720	557	2020	225	169	4930	559	143
5	207	228	2250	1790	2710	534	1980	221	176	e2060	531	137
6	196	220	1870	3050	4180	480	1820	215	160	e2750	495	127
7	278	230	1490	1730	4830	472	1460	208	127	2670	449	133
8	262	215	5470	1440	4200	493	2460	193	116	2520	428	145
9	235	222	7420	1380	4170	551	3270	174	112	3190	427	1030
10	250	212	2860	1200	3640	585	2200	159	138	4270	373	838
11	267	226	1940	1130	e3600	582	3090	277	132	4650	310	623
12	1210	223	3970	1080	e3960	580	3070	464	153	5380	410	442
13	1440	237	4240	1050	e3630	572	2560	494	142	5370	319	289
14	2900	344	4270	1020	e2060	559	1560	325	136	5340	272	233
15	1470	318	3380	997	e1680	552	1480	208	129	5810	244	255
16	821	10800	14400	989	1200	556	1460	189	173	5710	242	230
17	620	20100	23800	1010	1190	719	1430	161	256	5200	222	240
18	546	8500	9100	991	1200	838	1410	147	425	5340	212	253
19	493	2970	3000	862	1330	883	1300	138	252	5300	190	233
20	445	3500	2140	806	1420	1120	903	136	189	5070	169	205
21	397	4820	2760	790	1580	1550	839	141	167	4970	171	242
22	384	5210	3870	784	1560	1090	819	159	152	4920	159	248
23	375	5060	4640	800	1330	1050	818	137	140	4940	157	213
24	364	4950	4590	817	1000	1220	816	158	135	4870	148	224
25	351	4860	4510	811	958	1190	806	155	129	4490	148	207
26	344	4750	4450	800	969	1170	790	162	133	4040	143	174
27	280	4660	4390	786	983	1150	529	162	272	3110	141	180
28	267	4530	4350	787	951	1350	378	218	350	2500	136	166
29	262	5340	4270	796	---	1850	349	487	287	2470	142	164
30	251	4780	4150	856	---	1740	327	508	283	1910	153	164
31	259	---	4170	1030	---	1490	---	395	---	1350	163	---
TOTAL	16142	98460	150110	36995	61921	27609	45094	7477	5645	119306	10607	8010
MEAN	520.7	3282	4842	1193	2211	890.6	1503	241.2	188.2	3849	342.2	267.0
MAX	2900	20100	23800	3240	4830	1850	3270	508	425	5810	1290	1030
MIN	196	212	1490	784	951	472	327	136	112	606	136	127
AC-FT	32020	195300	297700	73380	122800	54760	89440	14830	11200	236600	21040	15890

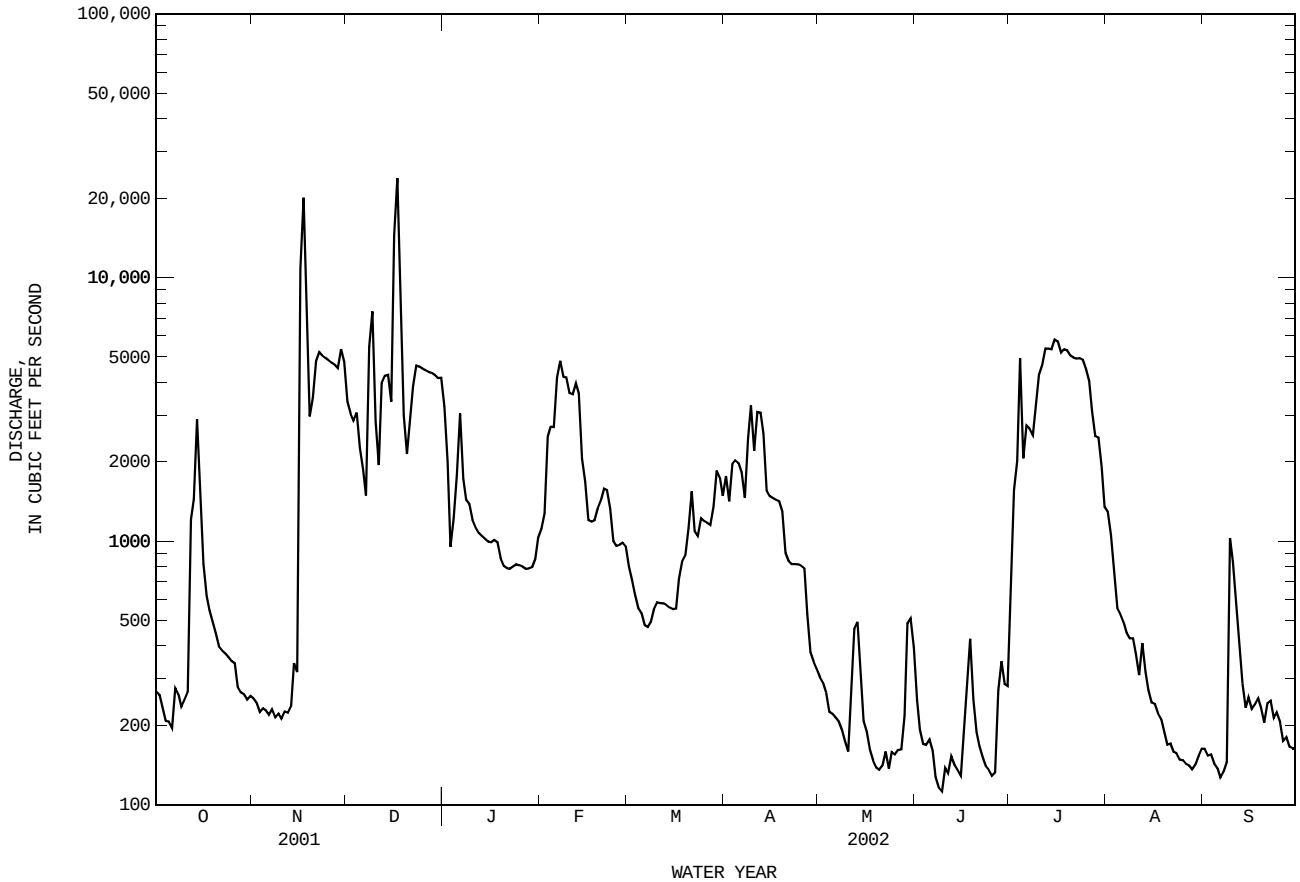
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2002z, BY WATER YEAR (WY)

MEAN	1231	1104	1441	1688	2057	2154	2334	3132	2574	1650	600.9	606.1
MAX	10140	5063	8579	9662	13030	14420	10750	12970	11330	9426	5106	3141
(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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1954 - 2002z	
ANNUAL TOTAL	974752		587376			
ANNUAL MEAN	2671		1609		1712	
HIGHEST ANNUAL MEAN					7759	1992
LOWEST ANNUAL MEAN					174	1956
HIGHEST DAILY MEAN	23800	Dec 17	23800	Dec 17	84200	May 18 1965
LOWEST DAILY MEAN	80	Aug 26	112	Jun 9	0.00	Jul 12 1956
ANNUAL SEVEN-DAY MINIMUM	91	Aug 20	131	Jun 7	0.00	Jul 12 1956
MAXIMUM PEAK FLOW			25900	Dec 17	116000	Apr 5 1957
MAXIMUM PEAK STAGE			31.44	Dec 17	39.56	Apr 5 1957
ANNUAL RUNOFF (AC-FT)	1933000		1165000		1241000	
10 PERCENT EXCEEDS	5520		4520		4950	
50 PERCENT EXCEEDS	1790		787		493	
90 PERCENT EXCEEDS	187		159		68	

e Estimated
z Period of regulated streamflow.



PRECIPITATION RECORDS

PERIOD OF RECORD.--Oct. 1, 2001 to Sept. 30, 2002.

INSTRUMENTATION.--Recording tipping bucket rain gage at site.

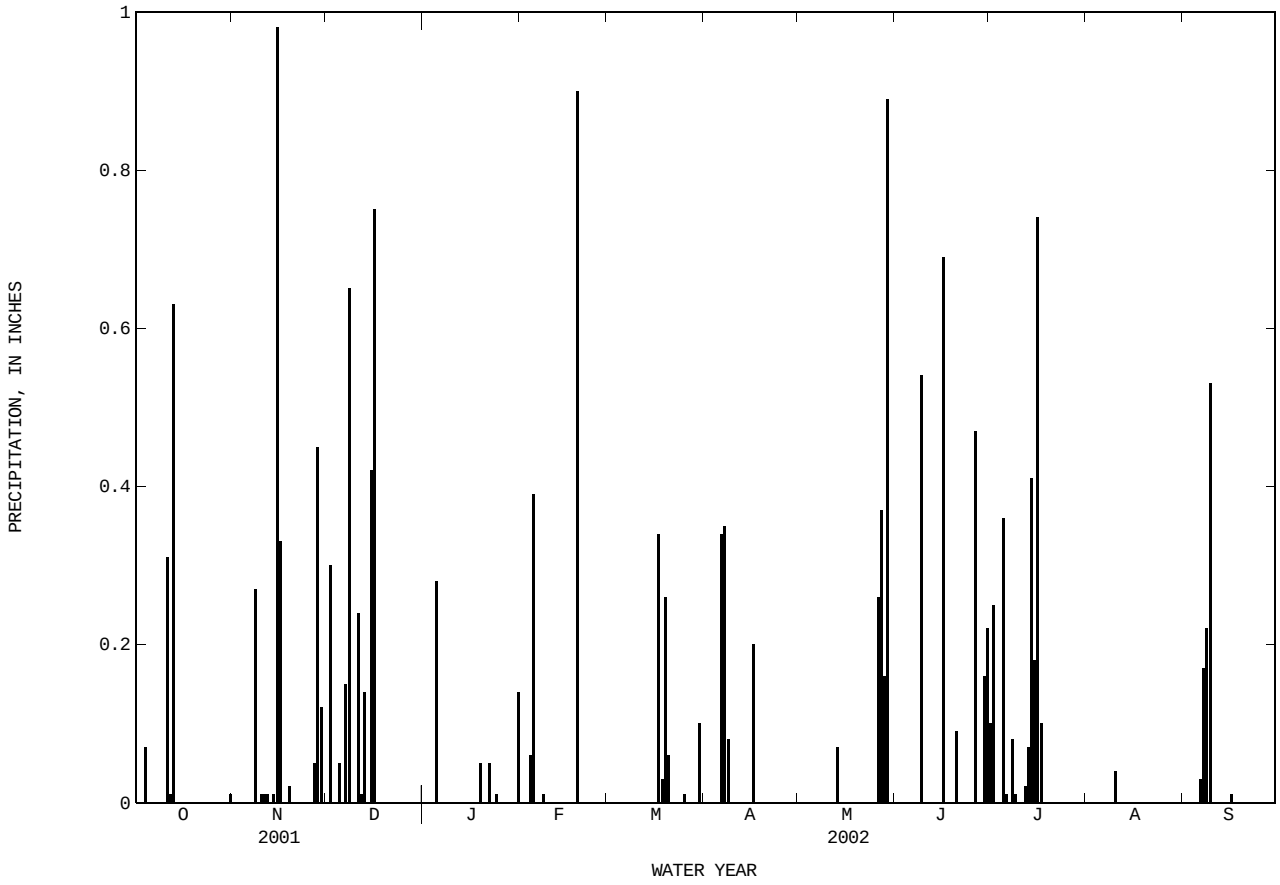
REMARKS.--Records fair.

EXTREMES FOR CURRENT YEAR.--Maximum daily accumulation, 0.98 in., Nov. 15.

PRECIPITATION FROM DCP, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.0	0.0
2	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.07	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.05	0.28	0.39	0.0	0.0	0.0	0.0	0.36	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.34	0.0	0.0	0.01	0.0	0.03
7	0.0	0.0	0.15	0.0	0.0	0.0	0.35	0.0	0.0	0.0	0.0	0.17
8	0.0	0.27	0.65	0.0	0.01	0.0	0.08	0.0	0.0	0.08	0.0	0.22
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.54	0.01	0.0	0.53
10	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0
11	0.31	0.01	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.01	0.01	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0
13	0.63	0.0	0.14	0.0	0.0	0.0	0.0	0.07	0.0	0.07	0.0	0.0
14	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.0	0.0
15	0.0	0.98	0.42	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.0
16	0.0	0.33	0.75	0.0	0.0	0.0	0.20	0.0	0.69	0.74	0.0	0.01
17	0.0	0.0	0.0	0.0	0.0	0.34	0.0	0.0	0.0	0.10	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.02	0.0	0.05	0.90	0.26	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.09	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.47	0.0	0.0	0.0
27	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.37	0.0	0.0	0.0	0.0
28	0.0	0.45	0.0	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.0
29	0.0	0.12	0.0	0.0	---	0.0	0.0	0.89	0.16	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	---	0.10	0.0	0.0	0.22	0.0	0.0	0.0
31	0.01	---	0.0	0.14	---	0.0	---	0.0	---	0.0	0.0	---
TOTAL	1.03	2.26	2.71	0.53	1.36	0.80	0.97	1.75	2.17	2.33	0.04	0.96

08106500 Little River near Cameron, TX--Continued



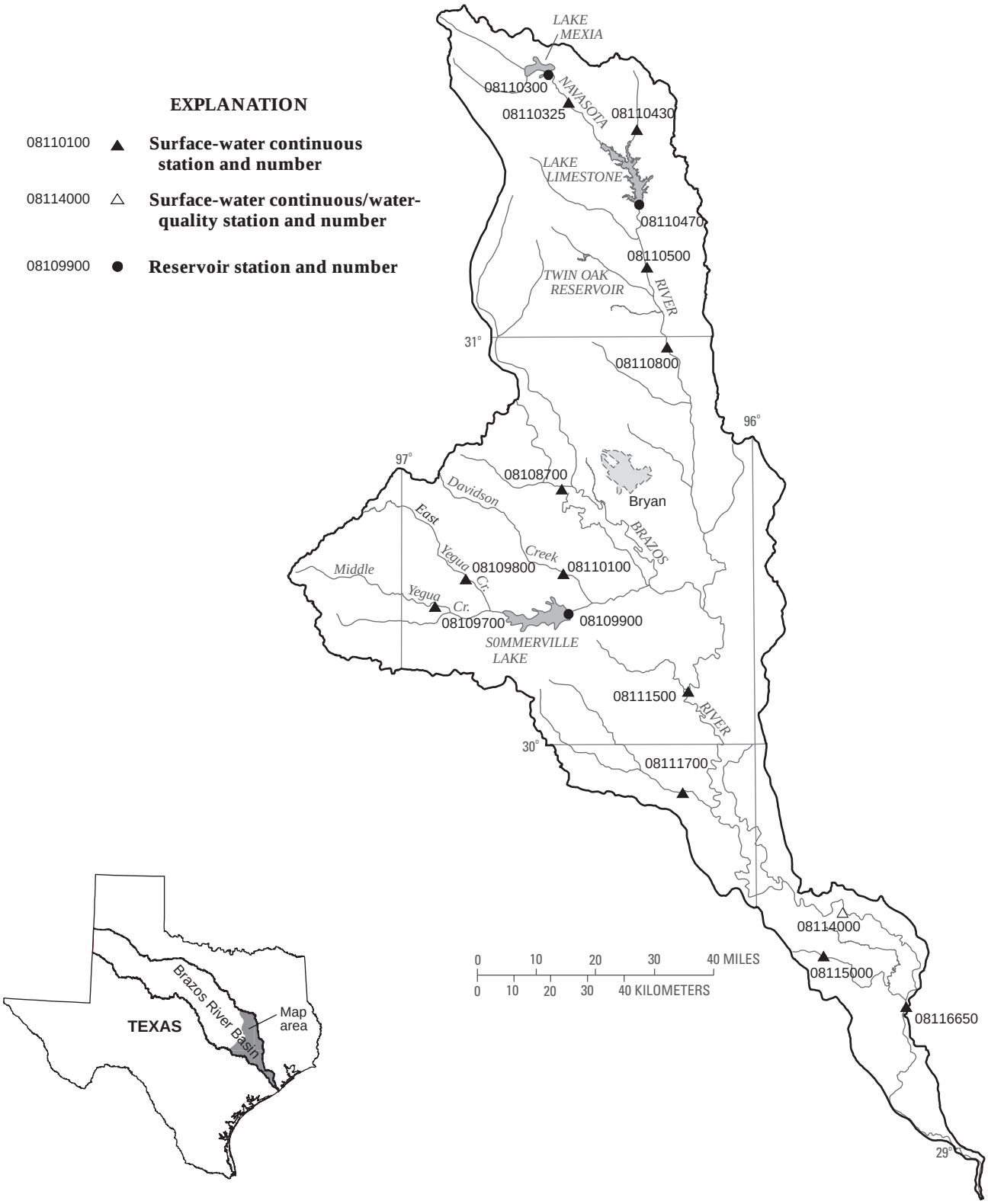


Figure 9.--Map showing location of gaging stations in the fourth section of the Brazos River Basin

08108700 Brazos River at State Highway 21 near Bryan, TX

LOCATION.--Lat 30°37′36", long 96°32′38", Brazos-Burleson County line, 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^2, approximately, of which 9,566 mi^2 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.--No estimated daily discharges. Records good. 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. Flow is affected at times by discharge from the flood-detention pools of 145 floodwater-retarding structures. These structures control runoff from 450 mi^2.

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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

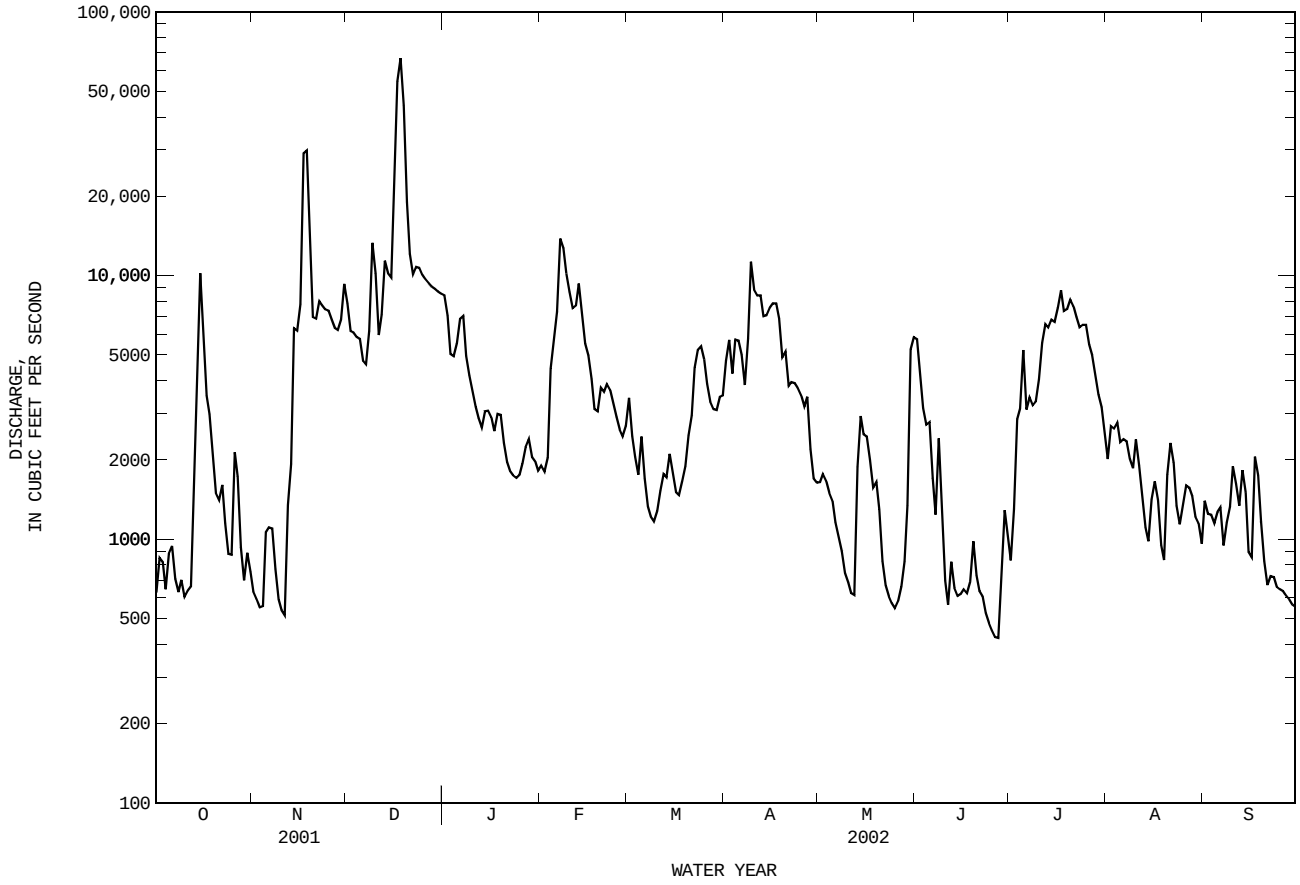
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	629	634	7840	8420	1900	3440	4760	1650	5740	831	2020	1400
2	851	594	6160	7050	1810	2460	5710	1770	4420	1300	2690	1250
3	819	551	6090	5050	2040	2060	4250	1670	3150	2850	2630	1240
4	646	558	5860	4950	4440	1760	5720	1500	2720	3130	2770	1150
5	883	1060	5750	5540	5600	2450	5680	1400	2780	5220	2340	1270
6	943	1110	4750	6860	7300	1700	5010	1160	1710	3100	2400	1320
7	707	1100	4600	7040	13800	1330	3850	1020	1240	3460	2350	948
8	630	772	6170	4960	12700	1220	5760	900	2410	3230	2020	1160
9	701	591	13300	4180	10200	1170	11300	743	1250	3330	1860	1330
10	604	539	10200	3660	8690	1280	8840	685	697	4050	2390	1890
11	638	516	5960	3170	7530	1530	8410	626	566	5570	1910	1620
12	662	1350	7110	2880	7690	1770	8420	614	823	6540	1440	1340
13	1920	1930	11400	2650	9330	1720	7020	1880	653	6350	1110	1830
14	5310	6310	10200	3060	7060	2110	7080	2930	610	6810	984	1510
15	10200	6190	9850	3080	5520	1800	7550	2500	620	6670	1420	898
16	6030	7790	22000	2900	4970	1510	7860	2450	644	7550	1660	854
17	3510	29100	54700	2570	4060	1470	7860	2000	623	8810	1410	2060
18	2980	29900	66900	2990	3120	1660	6890	1570	689	7350	951	1750
19	2180	13200	44200	2970	3060	1890	4900	1650	984	7460	834	1170
20	1500	6960	19000	2320	3760	2480	5140	1300	730	8120	1760	826
21	1410	6870	12100	1960	3630	2950	3820	827	638	7650	2320	670
22	1610	8000	10100	1820	3880	4470	3950	669	608	6980	1950	725
23	1150	7710	10800	1750	3690	5230	3910	608	525	6370	1340	720
24	882	7450	10700	1710	3290	5390	3740	573	481	6500	1140	661
25	875	7360	10100	1760	2910	4800	3520	548	452	6510	1340	646
26	2140	6800	9690	1940	2610	3890	3190	583	426	5480	1600	636
27	1730	6330	9370	2240	2460	3330	3470	662	423	5000	1570	609
28	933	6230	9090	2400	2690	3120	2200	825	767	4190	1460	589
29	699	6810	8890	2050	---	3090	1700	1340	1290	3540	1220	566
30	889	9310	8710	1970	---	3470	1640	5250	1050	3160	1150	554
31	755	---	8540	1820	---	3510	---	5830	---	2580	961	---
TOTAL	55416	183625	430130	107720	149740	80060	163150	47733	39719	159691	53000	33192
MEAN	1788	6121	13880	3475	5348	2583	5438	1540	1324	5151	1710	1106
MAX	10200	29900	66900	8420	13800	5390	11300	5830	5740	8810	2770	2060
MIN	604	516	4600	1710	1810	1170	1640	548	423	831	834	554
AC-FT	109900	364200	853200	213700	297000	158800	323600	94680	78780	316700	105100	65840

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2002, BY WATER YEAR (WY)

MEAN	2477	3533	6098	5034	5752	10040	7158	6301	4501	2511	2178	1856
MAX	11490	8769	13880	16460	21210	31650	26320	20120	16320	9389	11420	5125
(WY)	1999	1999	2002	1998	1997	1997	1997	1997	1997	1997	1995	2001
MIN	170	192	314	619	396	696	673	448	1113	565	548	213
(WY)	2000	2000	2000	2000	2000	2000	1996	1996	1999	2000	1996	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1993 - 2002	
ANNUAL TOTAL	2640936		1503176			
ANNUAL MEAN	7235		4118		4723	
HIGHEST ANNUAL MEAN					11920	1997
LOWEST ANNUAL MEAN					827	2000
HIGHEST DAILY MEAN	66900	Dec 18	66900	Dec 18	76600	Oct 20 1998
LOWEST DAILY MEAN	392	Aug 8	423	Jun 27	125	Sep 22 1999
ANNUAL SEVEN-DAY MINIMUM	589	Aug 5	508	Jun 21	130	Sep 20 1999
MAXIMUM PEAK FLOW			68400	Dec 18	78600	Oct 20 1998
MAXIMUM PEAK STAGE			39.67	Dec 18	42.55	Oct 20 1998
ANNUAL RUNOFF (AC-FT)	5238000		2982000		3421000	
10 PERCENT EXCEEDS	17700		8410		12900	
50 PERCENT EXCEEDS	5040		2400		1540	
90 PERCENT EXCEEDS	912		650		501	

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^2.

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). Jun 30 to July 21, 1970, nonrecording gage at same site and datum. 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 1851, 16 ft in Dec. 1913, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

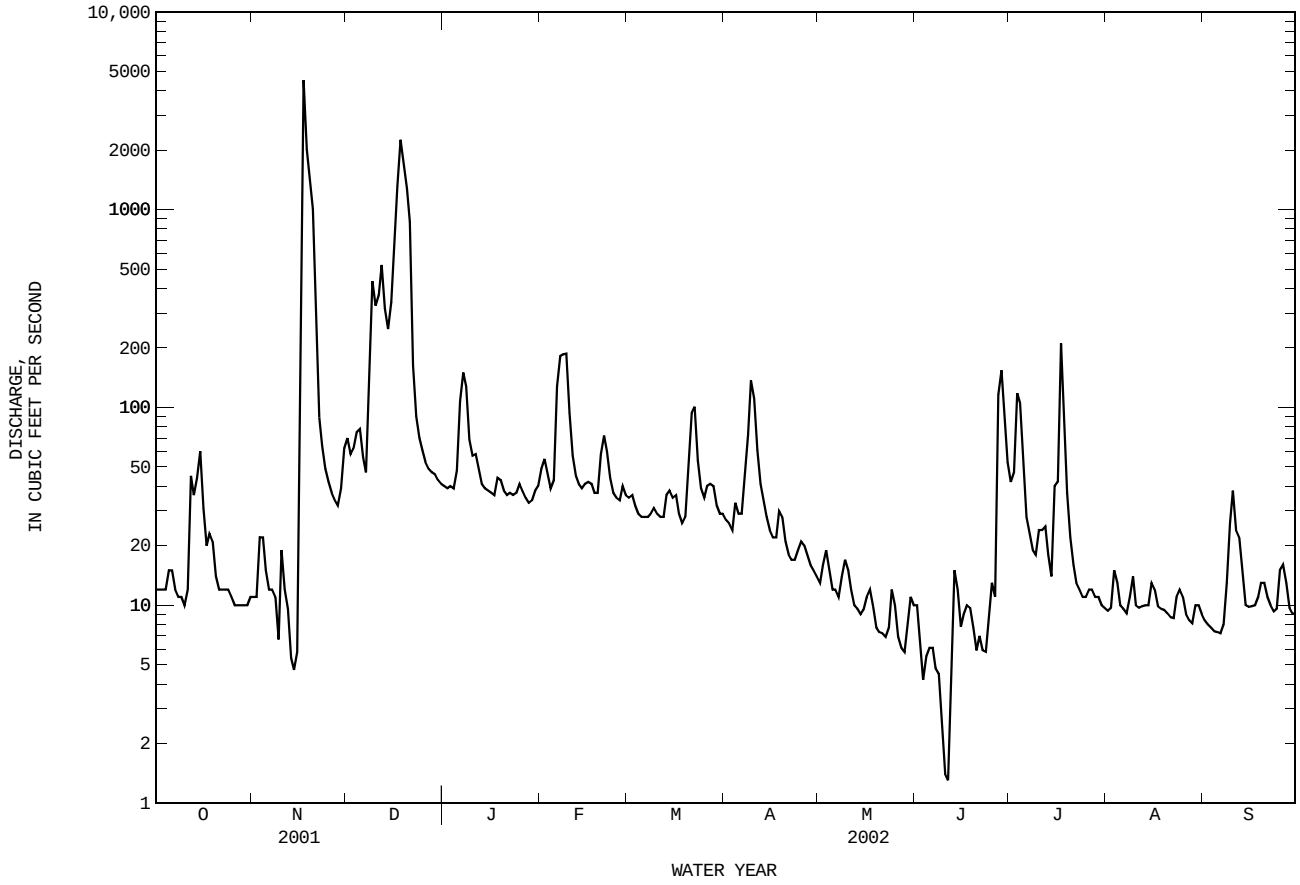
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	70	40	49	35	27	13	10	42	9.4	8.4
2	12	11	58	39	55	36	26	16	6.7	47	9.7	8.0
3	12	22	62	40	46	32	24	19	4.2	118	15	7.7
4	12	22	75	39	39	29	33	15	5.5	105	13	7.4
5	15	15	78	48	43	28	29	12	6.1	56	10	7.3
6	15	12	56	108	128	28	29	12	6.1	28	9.6	7.2
7	12	12	47	150	182	28	48	11	4.8	23	9.1	8.0
8	11	11	156	128	186	29	73	14	4.5	19	11	13
9	11	6.7	434	69	187	31	137	17	2.5	18	14	26
10	10	19	327	57	94	29	111	15	1.4	24	10	38
11	12	12	370	58	57	28	61	12	1.3	24	9.7	24
12	45	9.6	525	49	45	28	41	10	5.0	25	9.9	22
13	36	5.4	317	41	41	36	34	9.6	15	18	10	15
14	44	4.7	249	39	39	38	28	9.0	12	14	10	10
15	60	5.8	341	38	41	35	24	9.5	7.8	40	13	9.8
16	31	249	582	37	42	36	22	11	9.0	42	12	9.9
17	20	4510	1310	36	41	29	22	12	10	211	9.9	10
18	23	2020	2260	44	37	26	30	9.8	9.7	87	9.6	11
19	21	1410	1720	43	37	28	28	7.7	7.7	37	9.5	13
20	14	1010	1280	38	58	52	21	7.3	5.9	22	9.1	13
21	12	344	869	36	72	94	18	7.2	7.0	16	8.7	11
22	12	89	163	37	60	101	17	6.9	5.9	13	8.6	10
23	12	64	90	36	44	54	17	7.7	5.8	12	11	9.3
24	12	49	70	37	37	39	19	12	8.9	11	12	9.6
25	11	42	61	41	35	35	21	10	13	11	11	15
26	10	37	53	38	34	40	20	6.9	11	12	9.0	16
27	10	34	49	35	40	41	18	6.1	116	12	8.4	13
28	10	32	47	33	36	40	16	5.8	154	11	8.1	9.7
29	10	39	46	34	---	32	15	7.9	94	11	10	9.1
30	10	62	43	38	---	29	14	11	53	10	10	9.0
31	11	---	41	40	---	29	---	10	---	9.7	9.0	---
TOTAL	548	10170.2	11849	1546	1805	1175	1023	333.4	603.8	1128.7	319.3	380.4
MEAN	17.68	339.0	382.2	49.87	64.46	37.90	34.10	10.75	20.13	36.41	10.30	12.68
MAX	60	4510	2260	150	187	101	137	19	154	211	15	38
MIN	10	4.7	41	33	34	26	14	5.8	1.3	9.7	8.1	7.2
AC-FT	1090	20170	23500	3070	3580	2330	2030	661	1200	2240	633	755

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002, BY WATER YEAR (WY)

MEAN	33.06	65.83	89.33	65.92	84.59	67.79	55.70	109.6	93.84	8.175	2.908	17.81
MAX	385	528	694	481	891	280	355	662	1052	67.7	18.2	368
(WY)	1995	1999	1992	1991	1992	1970	1969	1975	1987	1975	1974	1974
MIN	0.000	0.000	0.000	0.006	0.007	0.65	0.72	0.000	0.000	0.000	0.000	0.000
(WY)	1964	1964	1964	1964	1964	1971	1971	1984	1984	1963	1962	1963

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002	
ANNUAL TOTAL	45464.5		30881.8			
ANNUAL MEAN	124.6		84.61		57.68	
HIGHEST ANNUAL MEAN					256	1992
LOWEST ANNUAL MEAN					0.55	1964
HIGHEST DAILY MEAN	4510	Nov 17	4510	Nov 17	9470	Dec 22 1991
LOWEST DAILY MEAN	4.7	Aug 28	1.3	Jun 11	0.00	Aug 1 1962
ANNUAL SEVEN-DAY MINIMUM	7.6	Aug 22	3.7	Jun 6	0.00	Aug 1 1962
MAXIMUM PEAK FLOW			8230	Nov 17	12500	Dec 22 1991
MAXIMUM PEAK STAGE			13.91	Nov 17	15.39	Dec 22 1991
ANNUAL RUNOFF (AC-FT)	90180		61250		41780	
10 PERCENT EXCEEDS	285		97		88	
50 PERCENT EXCEEDS	36		22		7.1	
90 PERCENT EXCEEDS	10		8.1		0.00	

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^2.

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. 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.--No estimated daily discharges. Records good. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

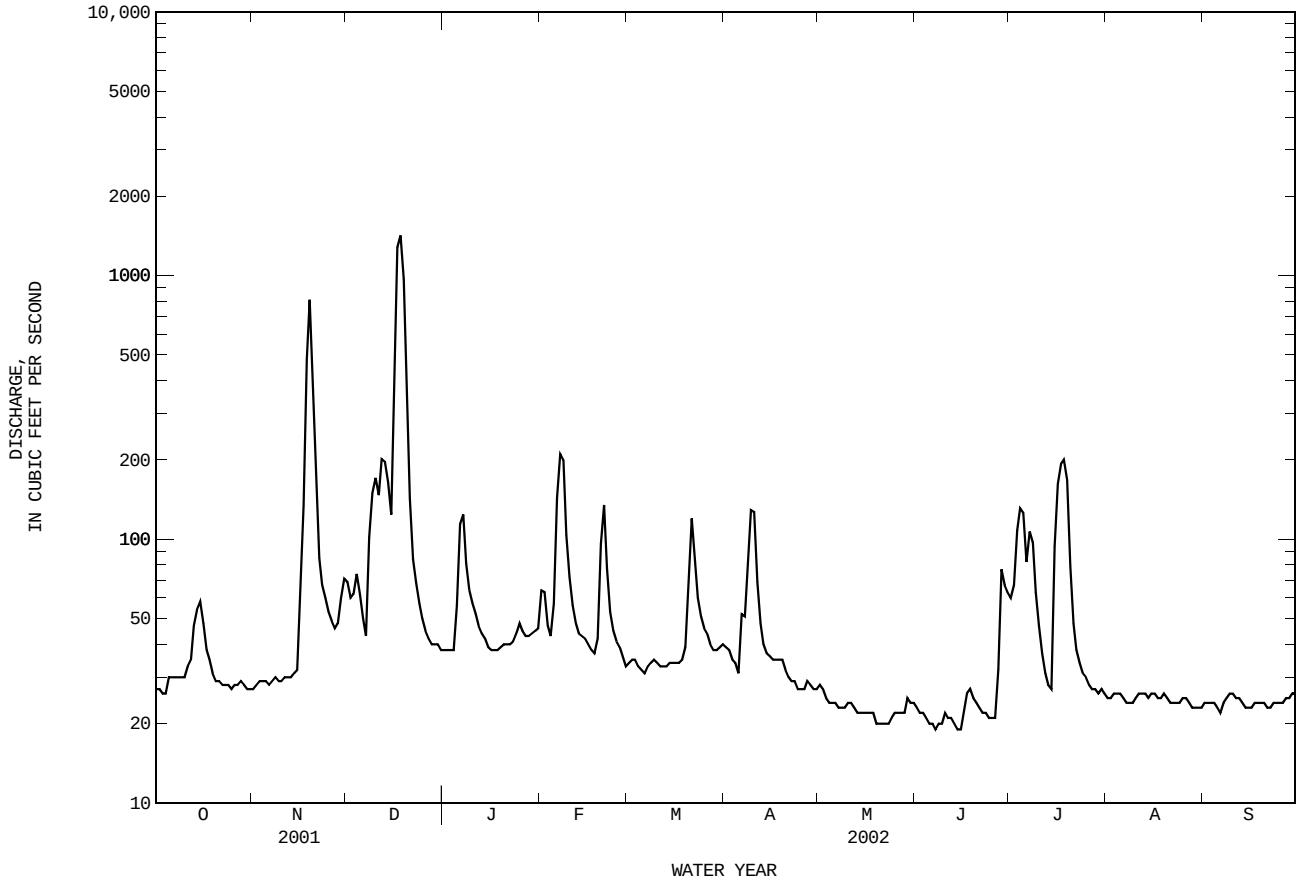
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	27	69	38	64	34	39	28	23	60	25	24
2	27	28	60	38	63	35	38	27	22	67	25	24
3	26	29	62	38	47	35	35	25	22	108	26	24
4	26	29	74	38	43	33	34	24	21	131	26	24
5	30	29	62	56	57	32	31	24	20	126	26	23
6	30	28	50	114	144	31	52	24	20	82	25	22
7	30	29	43	124	211	33	51	23	19	107	24	24
8	30	30	102	81	200	34	83	23	20	97	24	25
9	30	29	150	64	104	35	129	23	20	63	24	26
10	30	29	171	57	72	34	127	24	22	47	25	26
11	33	30	147	52	56	33	69	24	21	37	26	25
12	35	30	202	47	48	33	48	23	21	31	26	25
13	47	30	197	44	44	33	40	22	20	28	26	24
14	54	31	165	42	43	34	37	22	19	27	25	23
15	58	32	124	39	42	34	36	22	19	94	26	23
16	48	73	540	38	40	34	35	22	22	162	26	23
17	38	134	1280	38	38	34	35	22	26	193	25	24
18	35	480	1420	38	37	35	35	22	27	200	25	24
19	31	809	970	39	42	39	35	20	25	168	26	24
20	29	386	449	40	96	73	32	20	24	79	25	24
21	29	155	143	40	135	120	30	20	23	48	24	23
22	28	85	84	40	78	87	29	20	22	38	24	23
23	28	67	68	41	53	60	29	20	22	34	24	24
24	28	60	57	44	45	51	27	21	21	31	24	24
25	27	53	50	48	41	46	27	22	21	30	25	24
26	28	49	45	45	39	44	27	22	21	28	25	24
27	28	46	42	43	36	40	29	22	32	27	24	25
28	29	48	40	43	33	38	28	22	77	27	23	25
29	28	60	40	44	---	38	27	25	67	26	23	26
30	27	71	40	45	---	39	27	24	63	27	23	26
31	27	---	38	46	---	40	---	24	---	26	23	---
TOTAL	1001	3016	6984	1544	1951	1321	1301	706	802	2249	768	725
MEAN	32.29	100.5	225.3	49.81	69.68	42.61	43.37	22.77	26.73	72.55	24.77	24.17
MAX	58	809	1420	124	211	120	129	28	77	200	26	26
MIN	26	27	38	38	33	31	27	20	19	26	23	22
AC-FT	1990	5980	13850	3060	3870	2620	2580	1400	1590	4460	1520	1440

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002, BY WATER YEAR (WY)

MEAN	41.99	55.32	82.92	71.13	97.36	80.22	71.84	116.8	102.7	19.09	9.226	23.75
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	0.000	0.023	0.77	2.55	3.65	3.89	1.00	2.98	0.91	0.001	0.000	0.000
(WY)	1964	1964	1964	1990	1990	1972	1972	1984	1971	1967	1962	1963

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002	
ANNUAL TOTAL	32374		22368			
ANNUAL MEAN	88.70		61.28		63.93	
HIGHEST ANNUAL MEAN					245	1992
LOWEST ANNUAL MEAN					3.93	1971
HIGHEST DAILY MEAN	1420	Dec 18	1420	Dec 18	9490	May 24 1975
LOWEST DAILY MEAN	14	Aug 12	19	Jun 7	0.00	Aug 1 1962
ANNUAL SEVEN-DAY MINIMUM	15	Aug 9	20	Jun 3	0.00	Aug 1 1962
MAXIMUM PEAK FLOW			1560	Dec 18	14000	May 24 1975
MAXIMUM PEAK STAGE			9.92	Dec 18	13.91	May 24 1975
ANNUAL RUNOFF (AC-FT)	64210		44370		46310	
10 PERCENT EXCEEDS	185		103		78	
50 PERCENT EXCEEDS	38		33		13	
90 PERCENT EXCEEDS	17		22		0.38	

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^2.

PERIOD OF RECORD.--Feb. 1966 to Sept. 2000 (contents furnished by U.S. Army Corps of Engineers), Oct. 2000 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.--No estimated daily contents. Records fair. 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. Conservation pool storage is 155,062 acre-ft. 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.--Maximum contents, 547,600 acre-ft, Mar. 6, 1992, elevation, 259.60 ft; minimum, 88,800 acre-ft Oct. 5, 1984, elevation, 230.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 211,000 acre-ft, Dec. 22, elevation, 242.43 ft; minimum contents, 148,900 acre-ft, June 25, elevation, 237.44 ft.

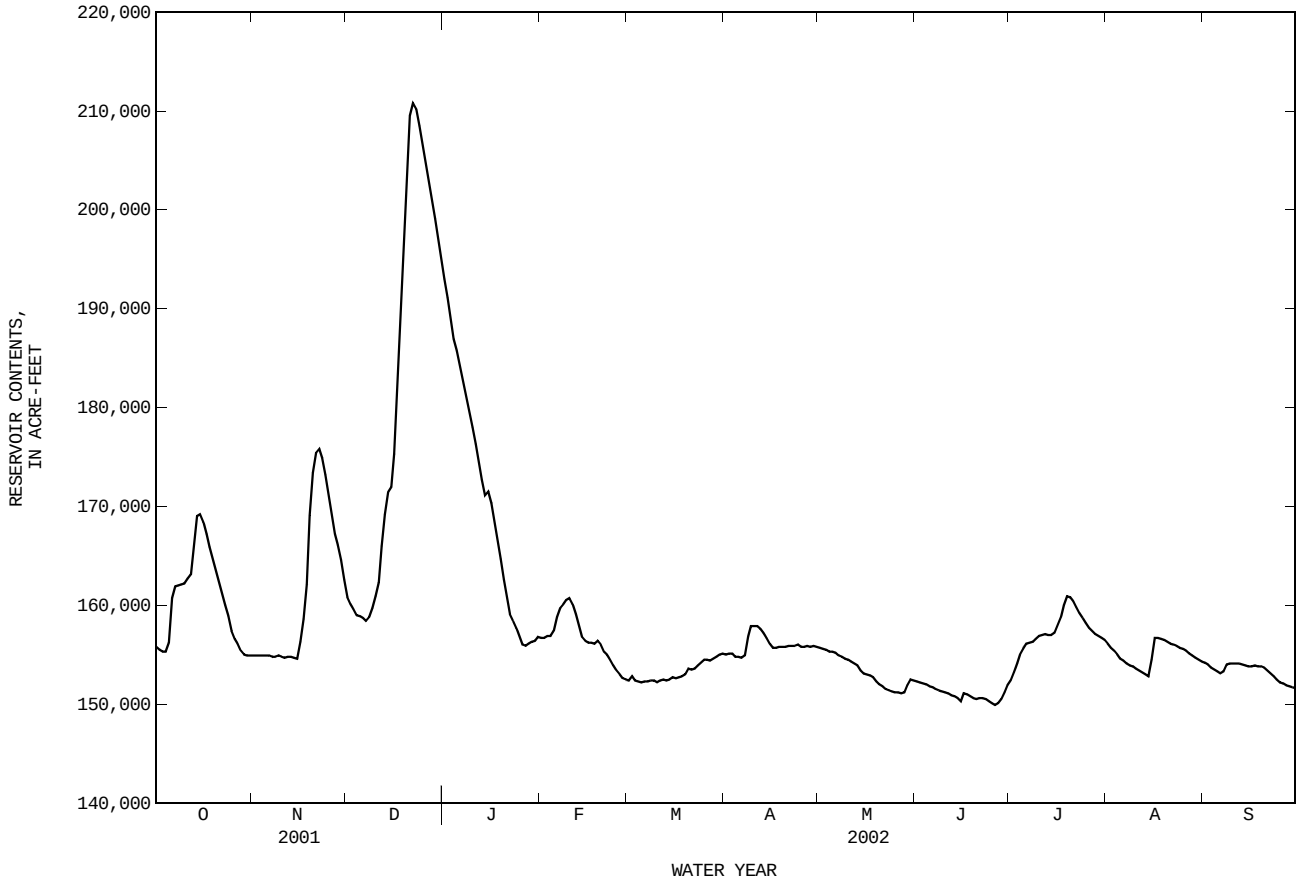
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155800	154900	160800	193000	156700	152400	155000	155700	152300	152400	156100	154200
2	155500	154900	160100	191100	156700	152800	155100	155600	152200	153200	155700	154000
3	155300	154900	159600	189100	156900	152400	155100	155500	152100	154100	155400	153700
4	155300	154900	159000	186900	156900	152300	154800	155300	152000	155000	155000	153500
5	156200	154900	158900	185700	157400	152200	154800	155300	151800	155600	154600	153300
6	160700	154900	158700	184100	158800	152300	154700	155200	151700	156100	154400	153100
7	161900	154800	158400	182400	159700	152300	154900	154900	151500	156200	154100	153300
8	162000	154800	158800	181000	160100	152400	156800	154800	151400	156300	153900	154000
9	162100	154900	159700	179500	160500	152400	157900	154600	151300	156600	153800	154100
10	162200	154800	160900	178000	160700	152200	157900	154500	151200	156900	153600	154100
11	162700	154700	162300	176300	160100	152400	157900	154300	151100	157000	153400	154100
12	163100	154800	166000	174600	159100	152500	157600	154100	150900	157100	153200	154100
13	165900	154800	169200	172700	158000	152400	157200	153900	150800	157000	153000	154000
14	169000	154700	171400	171100	156800	152500	156700	153400	150600	157000	152800	153900
15	169200	154600	171900	171500	156400	152700	156100	153100	150300	157200	154500	153800
16	168400	156300	175300	170300	156200	152600	155700	153000	151100	158000	156700	153800
17	167200	158600	185300	168500	156200	152700	155700	152900	151000	158800	156700	153900
18	165900	162100	193300	166500	156100	152800	155800	152700	150800	160000	156600	153800
19	164700	169100	199700	164700	156400	153000	155800	152300	150600	160900	156500	153800
20	163500	173400	205400	162600	156000	153600	155800	152000	150500	160800	156300	153700
21	162300	175400	209500	160800	155300	153500	155900	151800	150600	160400	156100	153400
22	161100	175800	210800	159100	155000	153600	155900	151500	150600	159800	156000	153100
23	160000	174900	210200	158400	154500	153900	155900	151400	150500	159200	155900	152800
24	158900	173200	208500	157700	153900	154200	156000	151300	150300	158700	155700	152500
25	157400	171200	206700	156800	153400	154500	155800	151200	150100	158200	155600	152200
26	156600	169300	204800	156000	153000	154500	155800	151200	149900	157700	155400	152100
27	156100	167200	202900	155900	152600	154400	155900	151100	150100	157400	155100	151900
28	155400	166100	201000	156100	152500	154600	155800	151200	150500	157100	154900	151800
29	155000	164600	199100	156300	---	154800	155900	151900	151200	156900	154700	151700
30	154900	162600	197100	156400	---	155000	155800	152500	151900	156700	154500	151600
31	154900	---	195100	156800	---	155100	---	152400	---	156500	154300	---
MEAN	160600	161400	181900	170300	156600	153200	156000	153200	151000	157300	155000	153300
MAX	169200	175800	210800	193000	160700	155100	157900	155700	152300	160900	156700	154200
MIN	154900	154600	158400	155900	152500	152200	154700	151100	149900	152400	152800	151600
(+)	237.98	238.64	241.24	238.14	237.76	238.00	238.05	237.75	237.71	238.11	237.92	237.68
(@)	-900	+7700	+32500	-38300	-4300	+2600	+700	-3400	-500	+4600	-2200	-2700

CAL YR 2001 MAX 210800 MIN 144600 (@) +55200
WTR YR 2002 MAX 210800 MIN 149900 (@) -4200

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

08109900 Somerville Lake near Somerville, TX--Continued



08110100 Davidson Creek near Lyons, TX

LOCATION.--Lat 30°25′10", long 96°32′24", Burleson County, Hydrologic Unit 12070102, on left bank 83 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^2.

PERIOD OF RECORD.--Oct. 1962 to current year.
Water-quality records.--Sediment data: June 1966 to Sept. 1975.

GAGE.--Water-stage recorder. Datum of gage is 220.26 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except those for daily discharges below 1 ft^3/s, 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	0.91	19	14	11	6.4	5.3	1.9	4.3	0.99	0.02	0.01
2	2.9	1.1	26	13	11	6.3	5.3	1.7	2.6	4.3	0.00	e0.03
3	2.2	1.4	47	13	14	6.0	5.0	1.6	1.6	3.8	0.00	e0.00
4	1.1	1.4	40	13	14	5.5	4.9	1.4	1.1	4.0	0.00	e0.0
5	313	1.1	22	38	53	5.6	4.8	1.3	0.71	2.6	0.00	e0.0
6	1240	0.99	14	119	516	5.6	16	1.3	0.52	3.9	0.00	e0.0
7	66	1.0	12	68	247	5.4	12	1.2	0.52	3.0	0.00	e0.0
8	14	1.3	136	42	101	5.6	98	1.0	1.2	1.9	0.00	e0.0
9	6.2	1.3	483	29	54	5.8	62	0.96	0.73	1.2	0.00	e0.00
10	4.1	1.3	102	23	39	6.1	41	0.88	0.42	0.86	0.00	e0.07
11	39	1.3	117	19	30	e6.5	21	0.81	0.38	0.73	0.00	e0.00
12	142	1.4	949	18	24	6.0	14	0.78	0.34	1.2	0.00	e0.00
13	477	1.3	611	15	20	5.5	9.9	0.75	0.31	1.3	0.0	e0.00
14	395	1.5	151	14	17	5.6	7.9	0.70	0.26	1.7	0.02	e0.00
15	41	1.6	97	12	15	5.6	6.9	0.65	0.20	2.9	178	e0.02
16	15	593	1360	11	13	5.5	6.2	0.61	0.54	49	200	e0.14
17	7.0	391	2230	11	12	5.7	5.7	0.62	0.65	201	13	e0.17
18	4.6	66	1590	11	10	5.5	5.2	0.58	1.9	135	2.0	e0.01
19	3.3	28	546	11	11	5.9	4.7	0.53	1.8	50	0.19	e0.00
20	2.7	15	123	11	13	7.5	4.3	0.52	1.1	13	0.0	e0.02
21	2.2	11	69	14	35	36	3.9	0.53	0.56	6.2	0.00	e0.08
22	1.9	8.8	47	14	27	43	3.7	0.50	0.27	4.1	0.00	e0.10
23	1.8	6.7	38	14	18	23	3.3	0.49	0.19	2.6	0.00	e0.05
24	1.7	5.2	29	9.6	13	13	3.1	0.48	0.15	1.7	0.00	e0.00
25	1.6	4.2	27	8.5	10	9.4	2.9	0.48	0.13	1.2	0.00	e0.00
26	1.4	3.5	23	13	8.5	7.5	2.7	0.49	0.16	0.80	0.00	e0.0
27	1.3	3.0	18	13	7.3	6.7	2.6	0.50	0.18	0.52	0.00	e0.0
28	1.2	116	16	12	6.6	6.3	2.4	0.61	0.11	0.33	0.00	e0.0
29	0.94	120	16	11	---	5.7	2.3	0.83	0.96	0.24	0.00	e0.0
30	0.80	39	16	9.8	---	5.6	2.1	8.1	1.6	0.19	0.00	e0.0
31	0.76	---	15	10	---	5.4	---	7.2	---	0.16	0.00	---
TOTAL	2794.60	1429.30	8989	633.9	1350.4	279.2	369.1	40.00	25.49	500.42	393.23	0.70
MEAN	90.15	47.64	290.0	20.45	48.23	9.006	12.30	1.290	0.850	16.14	12.68	0.023
MAX	1240	593	2230	119	516	43	98	8.1	4.3	201	200	0.17
MIN	0.76	0.91	12	8.5	6.6	5.4	2.1	0.48	0.11	0.16	0.00	0.00
AC-FT	5540	2840	17830	1260	2680	554	732	79	51	993	780	1.4

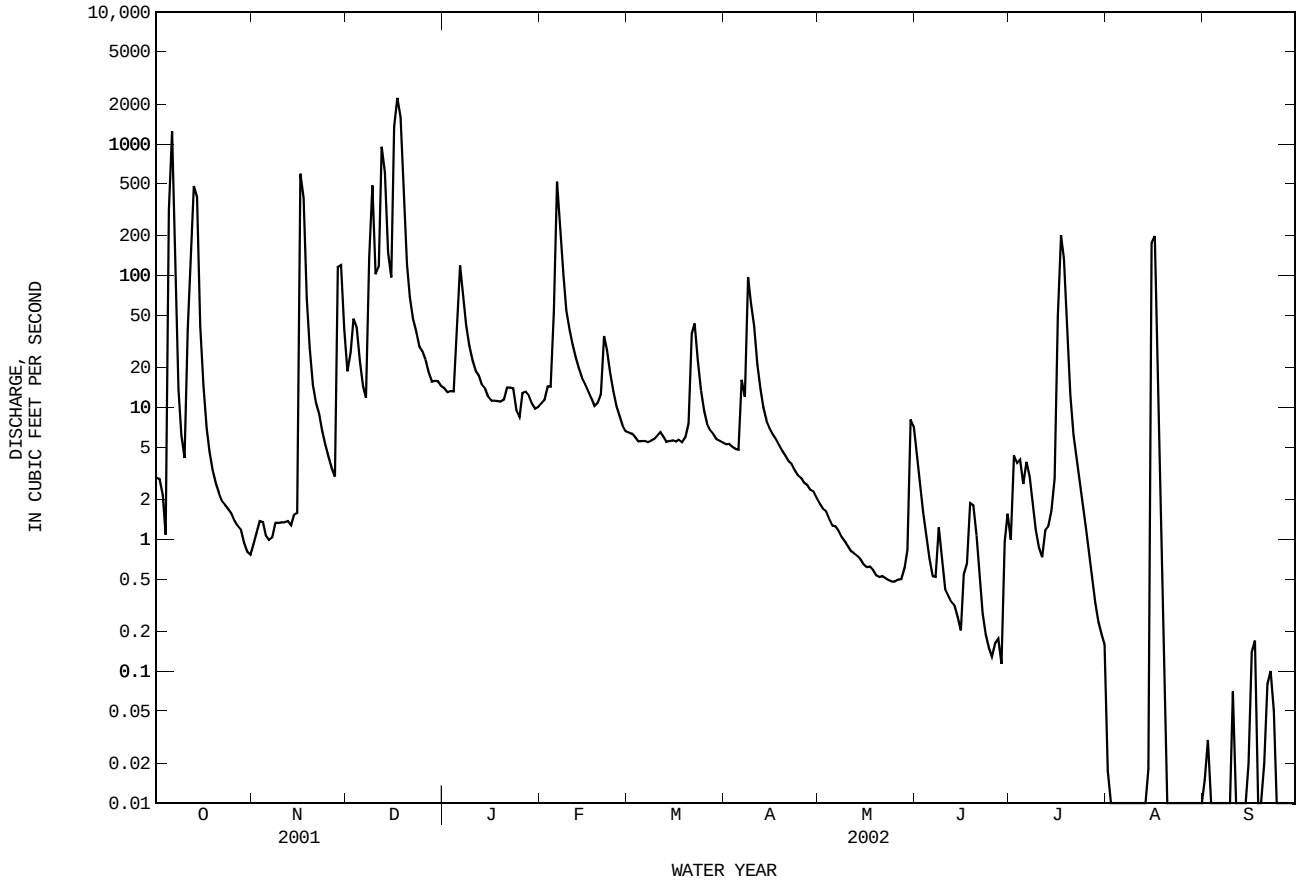
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002, BY WATER YEAR (WY)

MEAN	58.52	49.16	88.55	90.09	116.2	82.63	95.76	115.2	106.9	7.599	4.679	27.56
MAX	886	513	646	687	948	357	692	451	841	61.5	42.5	428
(WY)	1995	1999	1992	1991	1992	1979	1977	1992	1968	1968	1995	1974
MIN	0.000	0.000	0.000	0.19	0.93	0.44	0.23	0.62	0.060	0.000	0.000	0.000
(WY)	1964	1968	1968	1971	2000	1971	1972	1996	1971	1964	1964	1963

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1963 - 2002	
ANNUAL TOTAL	35253.42		16805.34			
ANNUAL MEAN	96.58		46.04		69.91	
HIGHEST ANNUAL MEAN					237	1992
LOWEST ANNUAL MEAN					1.42	1971
HIGHEST DAILY MEAN	2230	Dec 17	2230	Dec 17	18000	Oct 17 1994
LOWEST DAILY MEAN	0.00	Aug 1	0.00	Aug 2	0.00	Jun 16 1963
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 1	0.00	Aug 2	0.00	Jun 16 1963
MAXIMUM PEAK FLOW			2440	Dec 16	26400	Oct 17 1994
MAXIMUM PEAK STAGE			15.17	Dec 16	19.33	Oct 17 1994
ANNUAL RUNOFF (AC-FT)	69930		33330		50640	
10 PERCENT EXCEEDS	294		57		73	
50 PERCENT EXCEEDS	8.3		4.0		2.6	
90 PERCENT EXCEEDS	0.18		0.00		0.00	

e Estimated

08110100 Davidson Creek near Lyons, TX--Continued



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^2.

PERIOD OF RECORD.--July 1961 to Sept. 1986, Apr. 1999 to current year.

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

REMARKS.--No estimated daily contents. Records fair. The lake is formed by an earthfill dam, 1,645 ft long, including a 520-foot uncontrolled concrete ogge-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. Conservation pool storage is 4,806 acre-ft. 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.--Capacity table was computed from data furnished by Texas Water Development Board from survey of May 1996. Diversions from lake for municipal use were furnished by the Bistone Municipal Water Supply District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 22,460 acre-ft May 11, 1979, elevation, 455.36 ft; minimum, 2,440 acre-ft, Jan. 15, 1964, elevation, 445.48 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 14,740 acre-ft, Dec. 16, elevation, 453.95 ft; minimum contents, 2,950 acre-ft, Oct. 18, elevation, 446.24 ft.

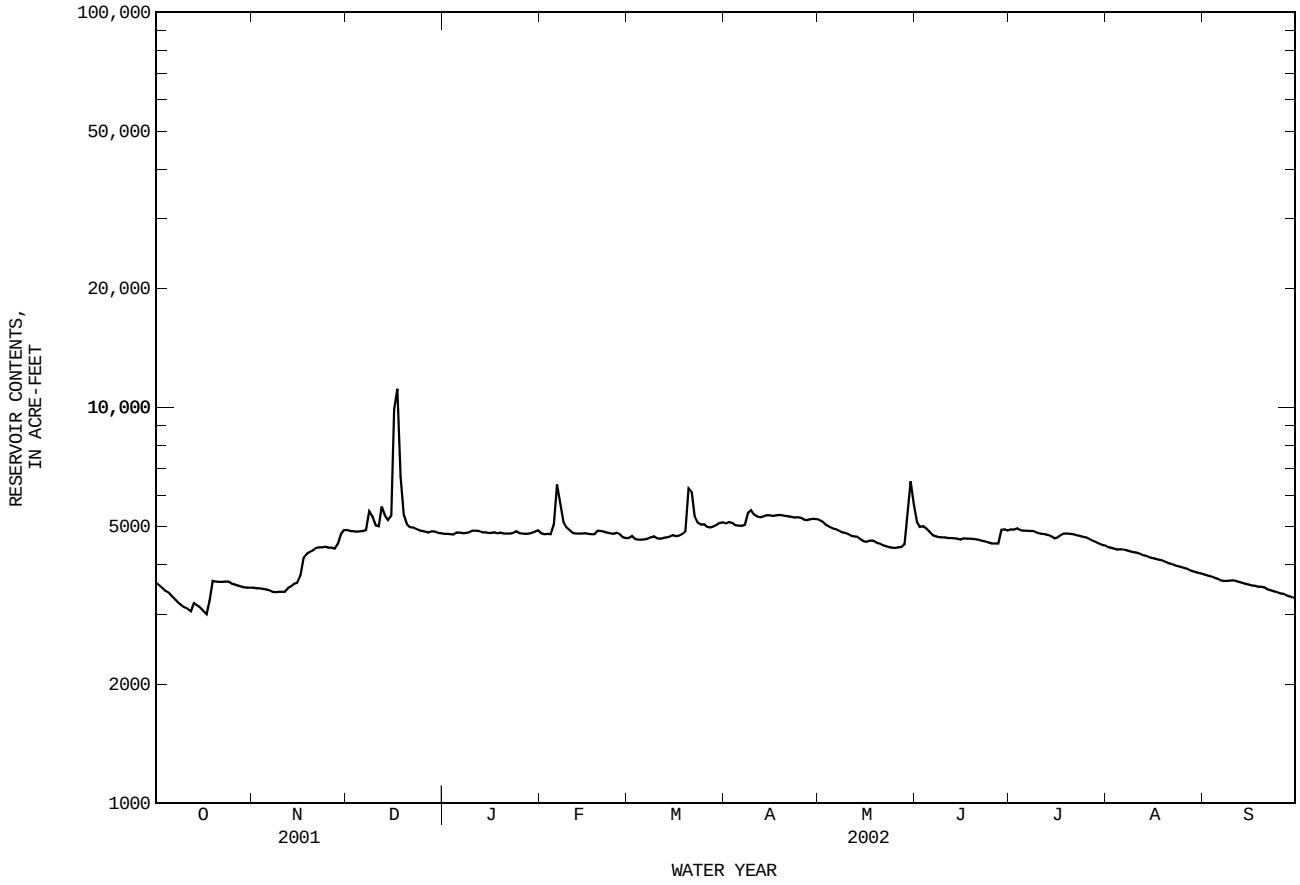
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3600	3500	4900	4790	4810	4680	5090	5180	5130	4920	4440	3780
2	3550	3490	4870	4790	4780	4730	5130	5130	4990	4910	4420	3760
3	3490	3490	4860	4780	4790	4650	5100	5050	5010	4950	4400	3740
4	3430	3480	4850	4770	4780	4630	5040	4990	4950	4900	4370	3710
5	3400	3470	4860	4830	5060	4630	5030	4950	4850	4880	4380	3690
6	3330	3450	4870	4830	6380	4640	5020	4930	4760	4880	4370	3660
7	3270	3420	4900	4810	5760	4660	5050	4880	4730	4870	4360	3640
8	3210	3410	5470	4820	5140	4690	5420	4840	4700	4870	4330	3640
9	3160	3420	5310	4840	4980	4720	5500	4820	4690	4840	4310	3650
10	3120	3420	5040	4880	4900	4670	5360	4780	4690	4810	4300	3660
11	3100	3420	5010	4880	4820	4660	5300	4740	4680	4790	4280	3640
12	3050	3490	5610	4870	4800	4680	5280	4720	4680	4780	4240	3620
13	3200	3530	5340	4840	4800	4690	5300	4710	4670	4760	4220	3600
14	3160	3580	5190	4840	4800	4710	5340	4640	4660	4720	4190	3580
15	3120	3600	5320	4820	4810	4760	5340	4590	4630	4670	4170	3570
16	3060	3750	9900	4820	4790	4730	5320	4570	4670	4690	4150	3550
17	3000	4170	11150	4840	4780	4740	5340	4610	4660	4760	4130	3540
18	3240	4260	6700	4810	4780	4780	5350	4610	4660	4800	4110	3520
19	3640	4310	5360	4830	4880	4850	5340	4560	4650	4800	4080	3520
20	3630	4350	5070	4800	4870	6240	5320	4530	4640	4790	4050	3510
21	3620	4410	4980	4800	4850	6110	5310	4490	4620	4780	4030	3470
22	3620	4430	4970	4800	4830	5320	5290	4460	4600	4760	4000	3450
23	3630	4430	4930	4820	4810	5110	5270	4440	4580	4740	3980	3430
24	3630	4450	4890	4860	4790	5060	5280	4420	4560	4710	3960	3410
25	3590	4420	4870	4810	4820	5070	5260	4410	4530	4690	3940	3390
26	3570	4420	4850	4800	4780	4990	5200	4430	4530	4650	3920	3380
27	3550	4400	4830	4790	4700	4970	5190	4440	4530	4610	3880	3350
28	3530	4510	4860	4800	4680	5000	5220	4510	4910	4570	3860	3330
29	3510	4780	4850	4820	---	5050	5230	5300	4920	4530	3840	3310
30	3500	4900	4820	4850	---	5100	5220	6500	4880	4500	3820	3300
31	3500	---	4810	4890	---	5120	---	5690	---	4480	3800	---
MEAN	3390	3940	5430	4820	4920	4920	5250	4800	4730	4760	4140	3550
MAX	3640	4900	11150	4890	6380	6240	5500	6500	5130	4950	4440	3780
MIN	3000	3410	4810	4770	4680	4630	5020	4410	4530	4480	3800	3300
(+)	446.92	448.36	448.30	448.35	448.18	448.52	448.59	448.91	448.35	447.97	447.25	446.68
(@)	-30	+1400	-90	+80	-210	+440	+100	+470	-810	-400	-680	-500

CAL YR 2001 MAX 11150 MIN 3000 (@) -310
WTR YR 2002 MAX 11150 MIN 3000 (@) -230

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

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, in city of Groesbeck at 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^2.

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 and concrete control. Datum of gage is 396.65 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair except those below 10 ft^3/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 (total amount unknown). 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

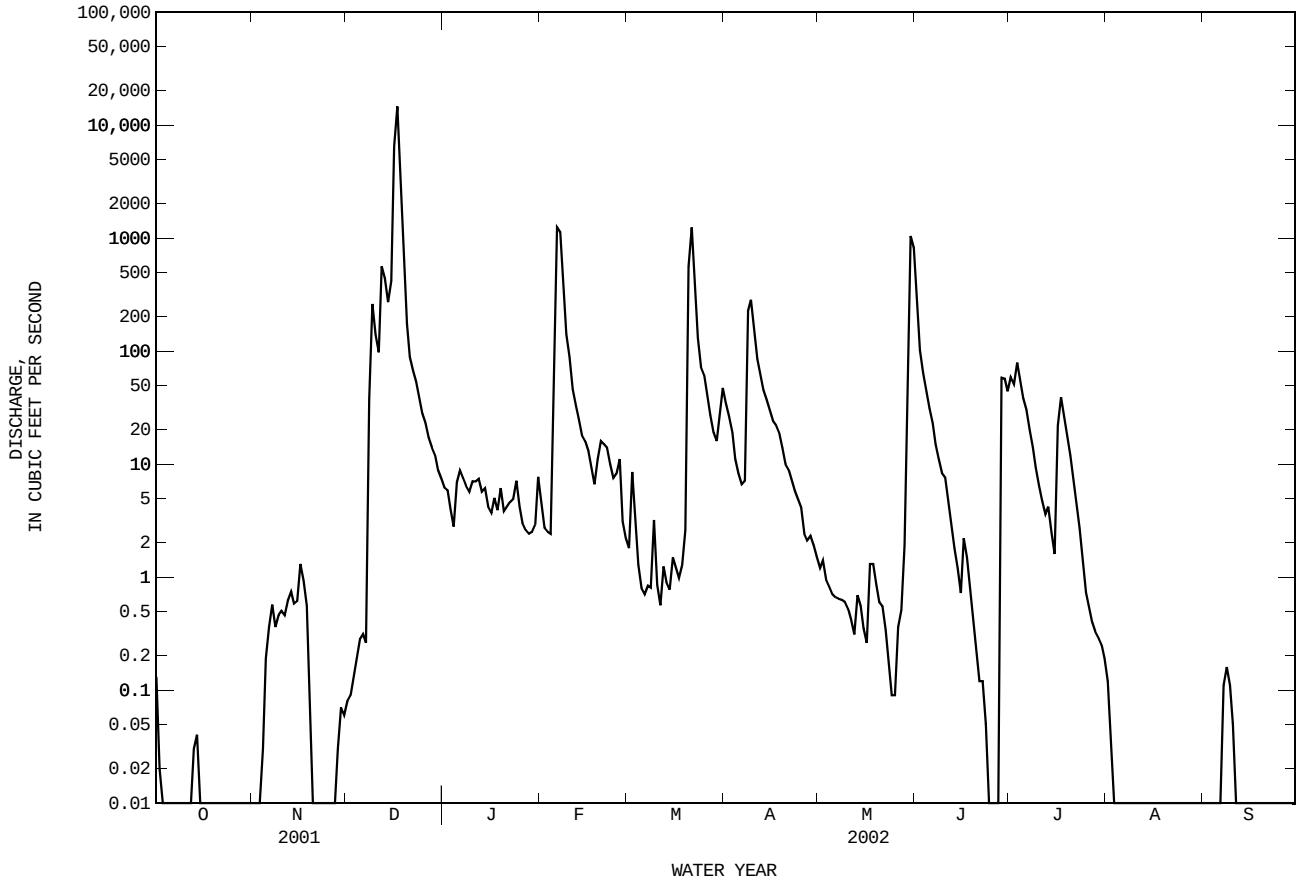
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.13	0.0	0.08	6.2	4.5	1.8	34	1.2	243	59	0.12	0.0
2	0.02	0.0	0.09	5.9	2.7	8.5	26	1.4	102	51	0.04	0.0
3	0.0	0.0	0.13	4.0	2.5	3.6	19	0.95	64	79	0.01	0.0
4	0.0	0.03	0.19	2.8	2.4	1.3	11	0.82	44	55	0.0	0.0
5	0.0	0.19	0.28	6.9	42	0.80	8.2	0.70	31	38	0.0	0.0
6	0.0	0.36	0.31	8.8	1250	0.71	6.6	0.66	23	30	0.0	0.0
7	0.0	0.57	0.26	7.5	1130	0.84	7.1	0.64	15	20	0.0	0.11
8	0.0	0.36	37	6.4	342	0.80	227	0.63	11	14	0.0	0.16
9	0.0	0.46	260	5.7	141	3.2	284	0.60	8.3	9.3	0.0	0.11
10	0.0	0.50	139	7.0	89	0.85	149	0.52	7.6	6.5	0.0	0.05
11	0.0	0.46	97	7.0	46	0.56	85	0.42	4.7	4.7	0.0	0.0
12	0.0	0.62	559	7.4	33	1.2	61	0.31	2.9	3.6	0.0	0.0
13	0.03	0.74	439	5.7	25	0.90	45	0.69	1.8	4.2	0.0	0.0
14	0.04	0.58	270	6.1	18	0.78	37	0.55	1.2	2.5	0.0	0.0
15	0.01	0.61	417	4.2	16	1.5	30	0.35	0.72	1.6	0.0	0.0
16	0.0	1.3	6490	3.7	13	1.2	24	0.26	2.2	22	0.0	0.0
17	0.0	0.93	14600	5.0	9.2	0.98	22	1.3	1.5	39	0.0	0.0
18	0.0	0.56	3110	3.9	6.6	1.3	19	1.3	0.80	27	0.0	0.0
19	0.0	0.13	586	6.1	11	2.6	14	0.85	0.43	18	0.0	0.0
20	0.0	0.01	175	3.8	16	563	10	0.60	0.22	12	0.0	0.0
21	0.0	0.0	88	4.2	15	1240	8.9	0.55	0.12	6.9	0.0	0.0
22	0.0	0.0	67	4.6	14	377	7.3	0.34	0.12	4.3	0.0	0.0
23	0.0	0.0	53	4.9	10	131	5.8	0.16	0.05	2.7	0.0	0.0
24	0.0	0.0	38	7.1	7.5	72	4.9	0.09	0.0	1.4	0.0	0.0
25	0.0	0.0	28	4.2	8.2	61	4.1	0.09	0.0	0.73	0.0	0.0
26	0.0	0.0	23	3.0	11	42	2.4	0.36	0.0	0.53	0.0	0.0
27	0.0	0.0	17	2.6	3.1	27	2.1	0.51	0.0	0.40	0.0	0.0
28	0.0	0.03	14	2.4	2.2	19	2.3	1.9	58	0.33	0.0	0.0
29	0.0	0.07	12	2.5	---	16	1.9	76	57	0.29	0.0	0.0
30	0.0	0.06	8.9	2.9	---	27	1.5	1040	44	0.25	0.0	0.0
31	0.0	---	7.5	7.7	---	47	---	818	---	0.19	0.0	---
TOTAL	0.23	8.57	27536.74	160.2	3270.9	2655.42	1160.1	1952.75	724.66	514.42	0.17	0.43
MEAN	0.007	0.286	888.3	5.168	116.8	85.66	38.67	62.99	24.16	16.59	0.005	0.014
MAX	0.13	1.3	14600	8.8	1250	1240	284	1040	243	79	0.12	0.16
MIN	0.00	0.00	0.08	2.4	2.2	0.56	1.5	0.09	0.00	0.19	0.00	0.00
AC-FT	0.5	17	54620	318	6490	5270	2300	3870	1440	1020	0.3	0.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2002, BY WATER YEAR (WY)

MEAN	39.68	60.98	227.8	132.9	231.5	174.5	91.98	243.9	115.5	5.588	28.17	0.567
MAX	347	450	1154	806	909	1109	857	1384	648	51.4	570	5.24
(WY)	1982	1986	1992	1998	1986	1990	1997	1979	2000	1981	1995	1979
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1993	1996	2000	2000	1996	1996	1996	1996	1996	1998	1994	1993

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1978 - 2002	
ANNUAL TOTAL	66072.56		37984.59			
ANNUAL MEAN	181.0		104.1		111.3	
HIGHEST ANNUAL MEAN					270	1992
LOWEST ANNUAL MEAN					0.011	1996
HIGHEST DAILY MEAN	14600	Dec 17	14600	Dec 17	17300	May 11 1979
LOWEST DAILY MEAN	0.00	Jul 9	0.00	Oct 3	0.00	Jun 14 1978
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 9	0.00	Oct 3	0.00	Jun 14 1978
MAXIMUM PEAK FLOW			20600	Dec 17	27200	May 11 1979
MAXIMUM PEAK STAGE			13.20	Dec 17	15.06	May 11 1979
ANNUAL RUNOFF (AC-FT)	131100		75340		80640	
10 PERCENT EXCEEDS	274		61		99	
50 PERCENT EXCEEDS	2.4		1.3		1.1	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

08110325 Navasota River above Groesbeck, TX--Continued



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^2.

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. 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.--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.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	30	8.1	17	9.5	713	5.2	11	15	0.15	0.0
2	0.0	0.0	12	8.0	12	10	241	4.5	5.8	20	0.07	0.0
3	0.0	0.0	8.8	7.8	9.2	10	65	4.1	4.0	44	0.08	0.0
4	0.0	0.0	6.0	7.5	8.0	8.8	37	3.9	2.7	13	0.07	0.0
5	29	0.0	4.6	27	70	8.3	27	3.9	1.9	5.4	0.04	0.0
6	11	0.0	4.5	44	437	8.0	23	4.0	1.6	3.3	0.01	0.0
7	0.81	0.0	4.3	20	468	8.3	24	3.5	1.6	2.2	0.0	0.0
8	0.31	0.0	89	13	105	8.7	450	3.1	1.3	1.5	0.0	0.0
9	0.14	0.04	56	11	40	8.9	657	2.9	1.2	1.1	0.0	0.0
10	0.11	7.6	22	9.8	26	8.6	335	2.6	1.2	0.80	0.0	0.0
11	31	1.7	81	9.2	18	8.1	75	2.3	0.94	0.55	0.0	0.0
12	9.9	0.34	482	8.8	14	7.7	40	2.1	1.1	0.38	0.0	0.0
13	193	0.14	402	8.2	13	7.9	28	1.9	0.85	0.26	0.0	0.0
14	82	0.06	146	7.7	12	7.7	53	1.8	0.73	0.15	0.0	0.0
15	13	0.80	243	7.3	11	7.5	47	1.8	0.73	4.4	0.0	0.0
16	4.5	1.4	1700	6.8	11	7.4	26	1.6	1.0	206	0.0	0.0
17	2.0	1.9	3060	7.0	10	8.6	21	20	1.6	246	0.0	0.0
18	0.96	2.0	947	6.9	9.6	19	17	27	1.8	42	0.0	0.0
19	0.49	2.7	339	7.0	314	22	15	9.5	1.1	11	0.0	0.0
20	0.35	19	72	8.5	612	281	13	5.2	0.79	6.3	0.0	0.0
21	0.24	8.0	38	8.3	115	395	11	3.5	0.72	3.7	0.0	0.0
22	0.16	3.6	28	7.6	40	91	11	2.6	0.54	2.6	0.0	0.0
23	0.06	1.4	23	7.8	26	36	10	2.1	0.49	2.0	0.0	0.0
24	0.04	1.1	18	8.6	20	25	9.4	1.8	0.26	1.3	0.0	0.0
25	0.04	0.93	15	8.9	17	21	8.1	1.6	0.14	1.0	0.0	0.0
26	0.02	1.3	13	8.2	14	19	6.9	1.4	0.21	1.0	0.0	0.0
27	0.0	0.96	12	e7.1	e11	17	6.5	1.4	0.15	0.85	0.0	0.0
28	0.0	100	11	6.8	e9.5	16	6.2	2.7	12	0.51	0.0	0.0
29	0.0	195	9.8	9.3	---	16	5.9	58	4.2	0.36	0.0	0.0
30	0.0	87	9.2	7.3	---	141	5.7	151	3.1	0.26	0.0	0.0
31	0.0	---	8.8	8.6	---	1250	---	31	---	0.18	0.0	---
TOTAL	379.13	436.97	7895.0	322.1	2469.3	2493.0	2987.7	368.0	64.75	637.10	0.42	0.0
MEAN	12.23	14.57	254.7	10.39	88.19	80.42	99.59	11.87	2.158	20.55	0.014	0.000
MAX	193	195	3060	44	612	1250	713	151	12	246	0.15	0.00
MIN	0.00	0.00	4.3	6.8	8.0	7.4	5.7	1.4	0.14	0.15	0.00	0.00
AC-FT	752	867	15660	639	4900	4940	5930	730	128	1260	0.8	0.00

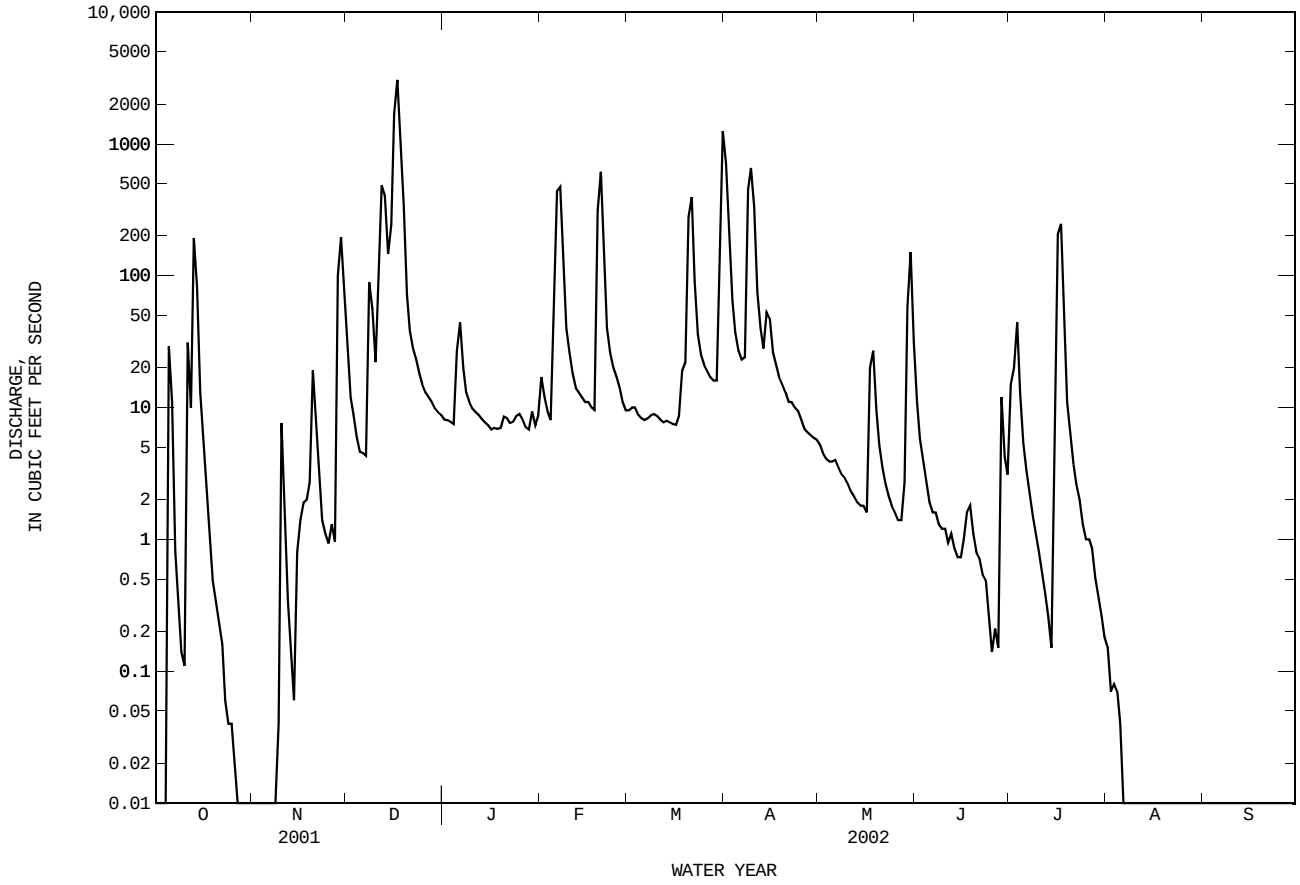
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2002, BY WATER YEAR (WY)

MEAN	31.64	33.93	97.88	75.63	97.98	78.00	51.43	81.16	40.75	5.334	2.223	5.171
MAX	301	155	609	329	307	234	348	335	159	62.0	18.5	44.0
(WY)	1999	2001	1992	1998	1997	2001	1997	1990	1989	1981	1995	1998
MIN	0.000	0.000	0.056	0.20	2.64	4.50	3.31	0.26	0.000	0.000	0.000	0.000
(WY)	1990	1996	1981	1981	2000	1986	1984	1984	1996	1996	1984	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1978 - 2002	
ANNUAL TOTAL	25174.19		18053.47			
ANNUAL MEAN	68.97		49.46		49.45	
HIGHEST ANNUAL MEAN					138	1992
LOWEST ANNUAL MEAN					0.27	1978
HIGHEST DAILY MEAN	3060	Dec 17	3060	Dec 17	8390	Dec 21 1991
LOWEST DAILY MEAN	0.00	Jul 16	0.00	Oct 1	0.00	Sep 24 1978
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 26	0.00	Oct 27	0.00	Sep 29 1983
MAXIMUM PEAK FLOW			4180	Dec 17	17500	Dec 21 1991
MAXIMUM PEAK STAGE			p14.40	Dec 17	16.33	Dec 21 1991
ANNUAL RUNOFF (AC-FT)	49930		35810		35820	
10 PERCENT EXCEEDS	151		71		79	
50 PERCENT EXCEEDS	5.8		4.6		3.1	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated
p Observed

08110430 Big Creek near Freestone, TX--Continued



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^2.

PERIOD OF RECORD.--Nov. 1978 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. Conservation pool storage is 215,748 acre-ft. 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
Top of conservation pool	363.0
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.--Maximum contents, 245,000 acre-ft, Dec. 21, 1991, elevation, 364.39 ft; minimum contents after initial filling, 138,400 acre-ft, Nov. 23, 1996, elevation, 356.30 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 225,300 acre-ft, Dec. 17, elevation, 363.69 ft; minimum contents, 197,700 acre-ft, Sept. 30, elevation, 361.60 ft.

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

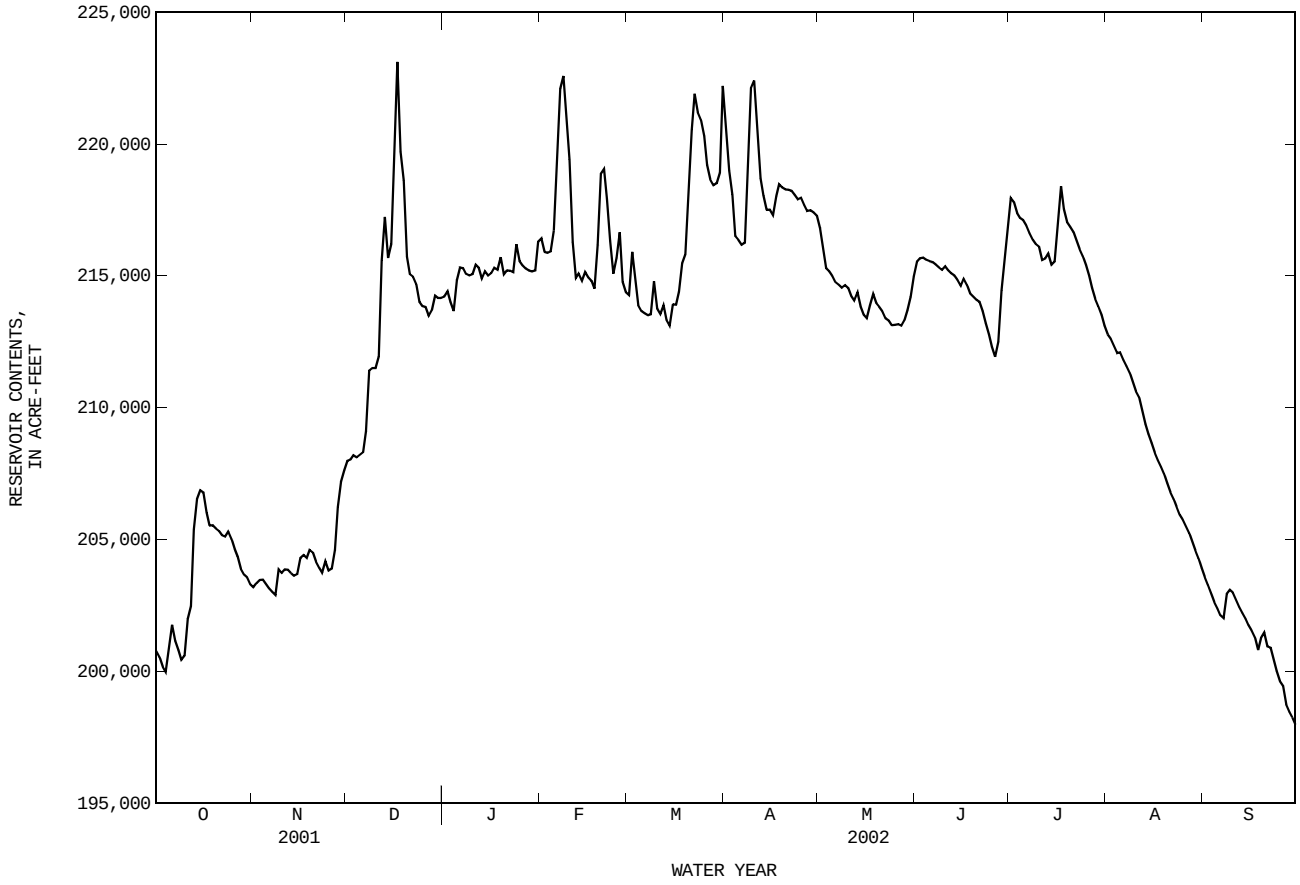
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200800	203200	208000	214200	216400	214300	220400	216800	215500	217900	212800	203600
2	200500	203300	208000	214400	215900	215900	219000	216100	215700	217800	212600	203300
3	200200	203500	208200	214000	215900	215000	218100	215300	215700	217400	212300	203000
4	200000	203500	208100	213700	215900	213900	216500	215200	215600	217200	212100	202600
5	200900	203300	208200	214800	216700	213700	216400	215000	215500	217100	212100	202400
6	201800	203100	208300	215300	219400	213600	216200	214800	215500	216900	211800	202100
7	201100	203000	209100	215300	222100	213500	216200	214700	215400	216600	211600	202000
8	200800	202900	211400	215100	222600	213500	219500	214500	215300	216400	211300	202900
9	200400	203900	211500	215000	220900	214800	222100	214600	215200	216200	211000	203100
10	200600	203700	211500	215100	219400	213700	222400	214500	215400	216100	210600	203000
11	202000	203900	211900	215400	216300	213500	220700	214200	215200	215600	210400	202700
12	202500	203800	215600	215300	214900	213900	218700	214100	215100	215700	209900	202400
13	205400	203700	217200	214900	215100	213300	218000	214400	215000	215800	209400	202200
14	206500	203600	215700	215200	214800	213100	217500	213800	214800	215400	209000	202000
15	206900	203700	216200	e215000	215100	213900	217500	213500	214600	215500	208700	201700
16	206800	204300	219400	e215100	214900	213900	217300	213400	214900	216900	208300	201500
17	206000	204400	223100	e215300	214800	214400	218000	213900	214700	218400	208000	201300
18	205500	204300	219700	215200	214500	215500	218500	214300	214300	217500	207700	200800
19	205500	204600	218600	215700	216200	215800	218300	213900	214200	217000	207500	201200
20	205400	204500	215700	215000	218900	218400	218300	213800	214100	216900	207100	201500
21	205300	204200	215100	215200	219000	220500	218300	213600	214000	216700	206800	200900
22	205100	203900	215000	215200	217900	e221900	218200	213400	213700	216400	206500	200900
23	205100	203700	214700	215100	216300	e221200	218100	213300	213200	216000	206200	200400
24	205300	204200	214000	216200	215100	e220900	217900	213100	212800	215800	205900	200000
25	205000	203800	213900	215600	215700	e220300	218000	213100	212300	215400	205700	199600
26	204600	203900	213800	215400	216600	219200	217700	213200	211900	215000	205500	199400
27	204300	204600	213500	215300	214800	218600	217500	213100	212500	214500	205200	198700
28	203900	206200	213700	215200	214400	218400	217500	213300	214400	214100	204900	198500
29	203700	207200	214200	215200	---	218500	217400	213700	215700	213800	204600	198300
30	203600	207600	214200	215200	---	218900	217300	214200	216700	213500	204300	198000
31	203300	---	214200	216300	---	222200	---	215000	---	213100	203900	---
MEAN	203500	204100	213600	215100	216800	216400	218200	214200	214600	216100	208500	201300
MAX	206900	207600	223100	216300	222600	222200	222400	216800	216700	218400	212800	203600
MIN	200000	202900	208000	213700	214400	213100	216200	213100	211900	213100	203900	198000
(+)	362.04	362.38	362.88	363.04	362.90	363.47	363.11	362.94	363.07	362.80	362.09	361.62
(@)	+2100	+4300	+6600	+2100	-1900	+7800	-4900	-2300	+1700	-3600	-9200	-5900

CAL YR 2001 MAX 223100 MIN 200000 (@) -2200
WTR YR 2002 MAX 223100 MIN 198200 (@) -3200

e Estimated

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

08110470 Lake Limestone near Marquez, TX--Continued



08110500 Navasota River near Easterly, TX

LOCATION.--Lat 31°10′12", long 96°17′51", Leon-Robertson County line, 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^2.

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. 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.--No estimated daily discharges. Records good. 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^3/s, 294,100 acre-ft/yr.

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1924-60).--Maximum discharge, 60,300 ft^3/s May 2, 1944 (gage height, 27.13 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1845, 29 ft in June 1899, from information by local residents (discharge, 90,000 ft^3/s), from rating curve extended above 60,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	9.2	135	28	59	31	2540	221	47	199	14	8.6
2	8.9	9.5	58	27	49	32	4040	302	29	849	14	8.5
3	8.7	9.4	36	26	33	43	2460	90	23	1170	14	8.5
4	8.6	9.2	28	25	27	38	857	28	21	566	15	8.5
5	11	9.1	25	39	43	29	152	23	19	365	14	8.4
6	25	8.8	26	81	564	28	68	22	18	176	13	8.8
7	19	8.6	22	79	1240	30	200	20	18	60	12	8.8
8	13	8.7	96	47	1440	31	1060	19	17	50	12	11
9	10	11	288	37	1500	32	2210	18	17	46	12	21
10	9.6	13	171	33	1460	37	2540	18	18	44	11	17
11	11	14	76	30	1430	30	2090	17	18	43	11	11
12	18	13	409	27	1080	28	1520	16	16	45	11	9.7
13	178	14	1090	25	248	28	827	17	32	46	11	9.4
14	325	13	1900	24	48	26	364	18	64	46	11	9.4
15	246	12	1980	22	36	25	120	16	53	46	10	9.4
16	78	23	2710	20	33	24	62	15	44	40	9.7	9.7
17	32	25	13600	20	30	27	53	20	44	614	9.9	10
18	20	27	26000	20	28	154	52	32	41	1370	9.9	9.9
19	16	21	10400	22	103	138	48	47	43	1360	9.5	9.6
20	14	20	5380	25	789	588	44	25	42	345	9.1	9.4
21	13	16	3010	25	1260	1120	41	20	41	56	8.8	9.1
22	12	15	791	22	754	839	39	18	42	36	8.6	8.9
23	12	16	424	21	637	879	37	17	47	29	8.6	8.7
24	11	19	381	22	588	661	35	16	54	27	8.9	8.6
25	9.6	17	139	28	173	146	33	17	42	22	8.8	8.6
26	8.8	15	50	28	49	58	31	21	41	19	8.7	8.7
27	8.8	15	40	25	60	47	29	21	41	17	8.8	8.6
28	9.0	23	37	21	36	38	28	22	43	16	8.7	8.5
29	8.8	96	35	20	---	45	28	41	158	16	8.6	8.6
30	8.9	202	32	20	---	353	26	112	68	15	8.6	8.7
31	9.8	---	31	29	---	1300	---	94	---	15	8.5	---
TOTAL	1172.7	712.5	69400	918	13797	6885	21634	1383	1201	7748	328.7	293.6
MEAN	37.83	23.75	2239	29.61	492.8	222.1	721.1	44.61	40.03	249.9	10.60	9.787
MAX	325	202	26000	81	1500	1300	4040	302	158	1370	15	21
MIN	8.6	8.6	22	20	27	24	26	15	16	15	8.5	8.4
AC-FT	2330	1410	137700	1820	27370	13660	42910	2740	2380	15370	652	582

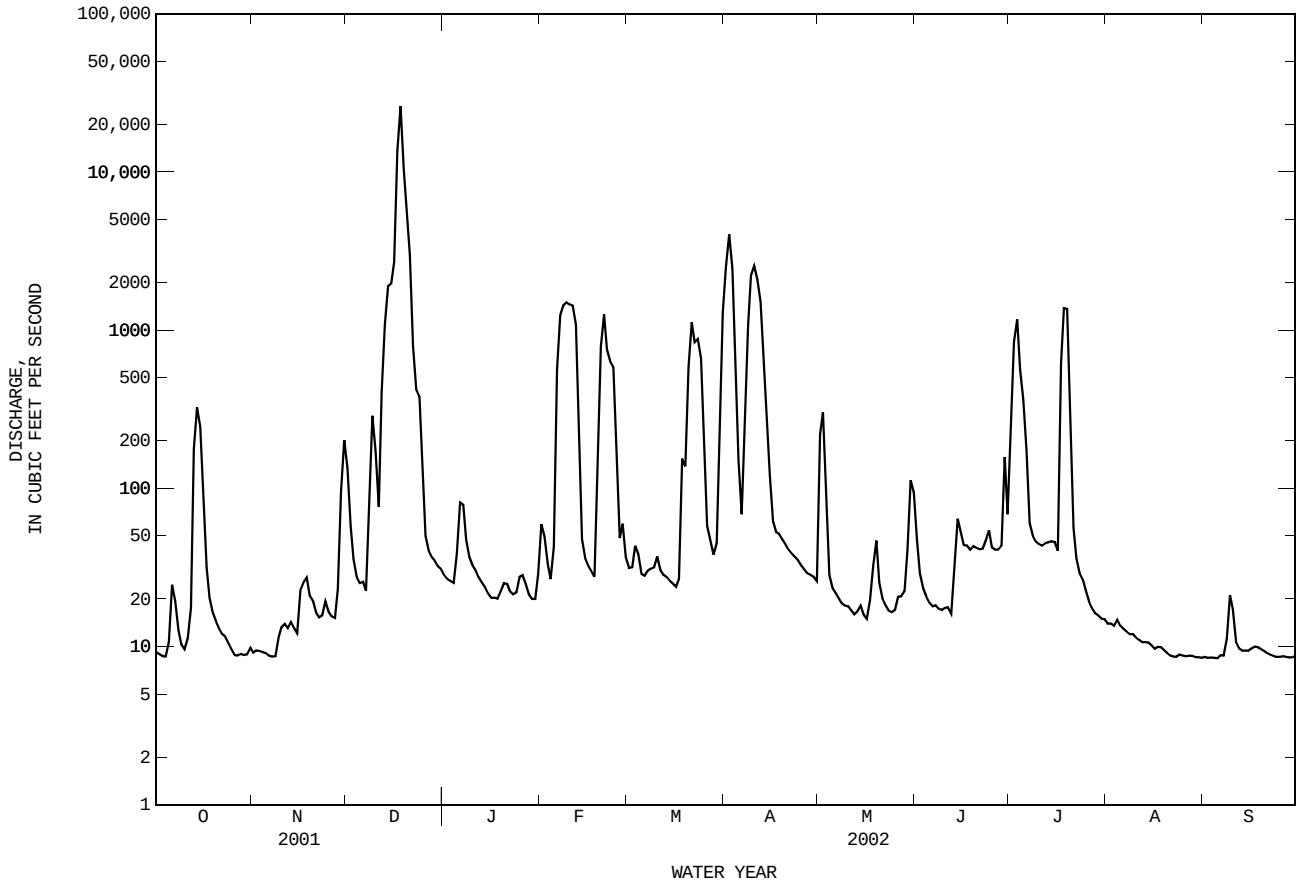
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2002z, BY WATER YEAR (WY)

MEAN	222.0	302.5	697.1	609.6	715.6	619.9	609.1	833.9	462.9	70.21	66.13	105.6
MAX	2427	4059	5244	2974	3322	2386	3761	5195	2794	474	1032	1614
(WY)	1974	1975	1992	1961	1992	1993	1966	1965	1973	1961	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1961 - 2002z	
ANNUAL TOTAL	227392.4		125473.5			
ANNUAL MEAN	623.0		343.8		441.6	
HIGHEST ANNUAL MEAN					1172	1992
LOWEST ANNUAL MEAN					15.4	1963
HIGHEST DAILY MEAN	26000	Dec 18	26000	Dec 18	57400	Dec 22 1991
LOWEST DAILY MEAN	7.0	Aug 13	8.4	Sep 5	0.19	Aug 11 1980
ANNUAL SEVEN-DAY MINIMUM	7.6	Aug 7	8.5	Aug 30	0.26	Jul 12 1964
MAXIMUM PEAK FLOW			28100	Dec 18	61800	Dec 22 1991
MAXIMUM PEAK STAGE			p24.74	Dec 18	27.22	Dec 22 1991
ANNUAL RUNOFF (AC-FT)	451000		248900		319900	
10 PERCENT EXCEEDS	1570		768		897	
50 PERCENT EXCEEDS	28		27		28	
90 PERCENT EXCEEDS	9.2		8.9		3.3	

p Observed
z Period of regulated streamflow.



08110800 Navasota River at OSR near Bryan, TX

LOCATION.--Lat 30°58′25", long 96°14′29", Robertson-Leon-Brazos-Madison county intersection, 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^2.

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.--Records fair except those for estimated daily discharges, which are poor. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	20	268	87	78	83	1220	45	136	132	e20	9.4
2	16	21	231	e80	128	e72	e1990	160	80	203	e19	10
3	15	21	124	e71	129	e68	e3010	299	52	639	19	10
4	14	21	79	e67	97	e71	e4130	159	40	1040	19	10
5	16	21	62	e112	98	e74	e2890	65	34	1010	19	9.1
6	22	e20	55	235	333	64	1010	44	31	586	20	8.8
7	34	e19	52	333	860	e64	372	38	28	302	19	8.9
8	46	19	61	294	1430	e63	490	34	26	125	18	9.8
9	39	19	134	201	1730	e62	1160	31	25	84	17	16
10	29	23	385	153	1830	e62	1830	30	25	68	e17	24
11	25	27	329	129	1860	e62	2660	29	25	61	e16	29
12	25	27	305	e110	1990	e58	3000	27	25	57	e16	24
13	39	28	597	e96	1880	e48	2630	26	24	56	e15	17
14	167	28	1050	e87	943	e44	1800	25	23	60	e15	14
15	398	27	1520	e78	300	e42	941	25	48	79	e16	13
16	362	28	2130	75	151	e41	417	26	63	98	e15	13
17	184	34	3030	72	114	e41	198	25	57	124	e15	14
18	79	62	10000	67	97	e45	135	27	56	459	e15	15
19	50	54	22600	e61	92	179	108	50	54	996	e15	15
20	39	43	14100	e70	236	327	91	64	51	1300	e14	15
21	33	37	8150	78	892	829	79	50	51	901	e14	14
22	30	35	6130	80	1470	1420	72	36	50	226	e12	13
23	28	31	4210	78	1340	1490	66	30	52	77	11	12
24	27	30	2040	e76	1020	1280	63	27	50	52	12	12
25	25	30	1050	e79	839	1040	60	25	57	42	13	11
26	24	31	528	e85	419	452	55	25	54	36	12	11
27	22	29	244	e89	146	186	52	26	51	31	12	11
28	20	36	158	84	102	129	50	34	50	27	11	11
29	20	68	126	80	---	111	49	42	58	24	10	11
30	20	158	108	69	---	120	47	75	139	e22	10	11
31	20	---	95	68	---	446	---	172	---	e21	10	---
TOTAL	1885	1047	79951	3344	20604	9073	30675	1771	1515	8938	466	402.0
MEAN	60.81	34.90	2579	107.9	735.9	292.7	1022	57.13	50.50	288.3	15.03	13.40
MAX	398	158	22600	333	1990	1490	4130	299	139	1300	20	29
MIN	14	19	52	61	78	41	47	25	23	21	10	8.8
AC-FT	3740	2080	158600	6630	40870	18000	60840	3510	3010	17730	924	797

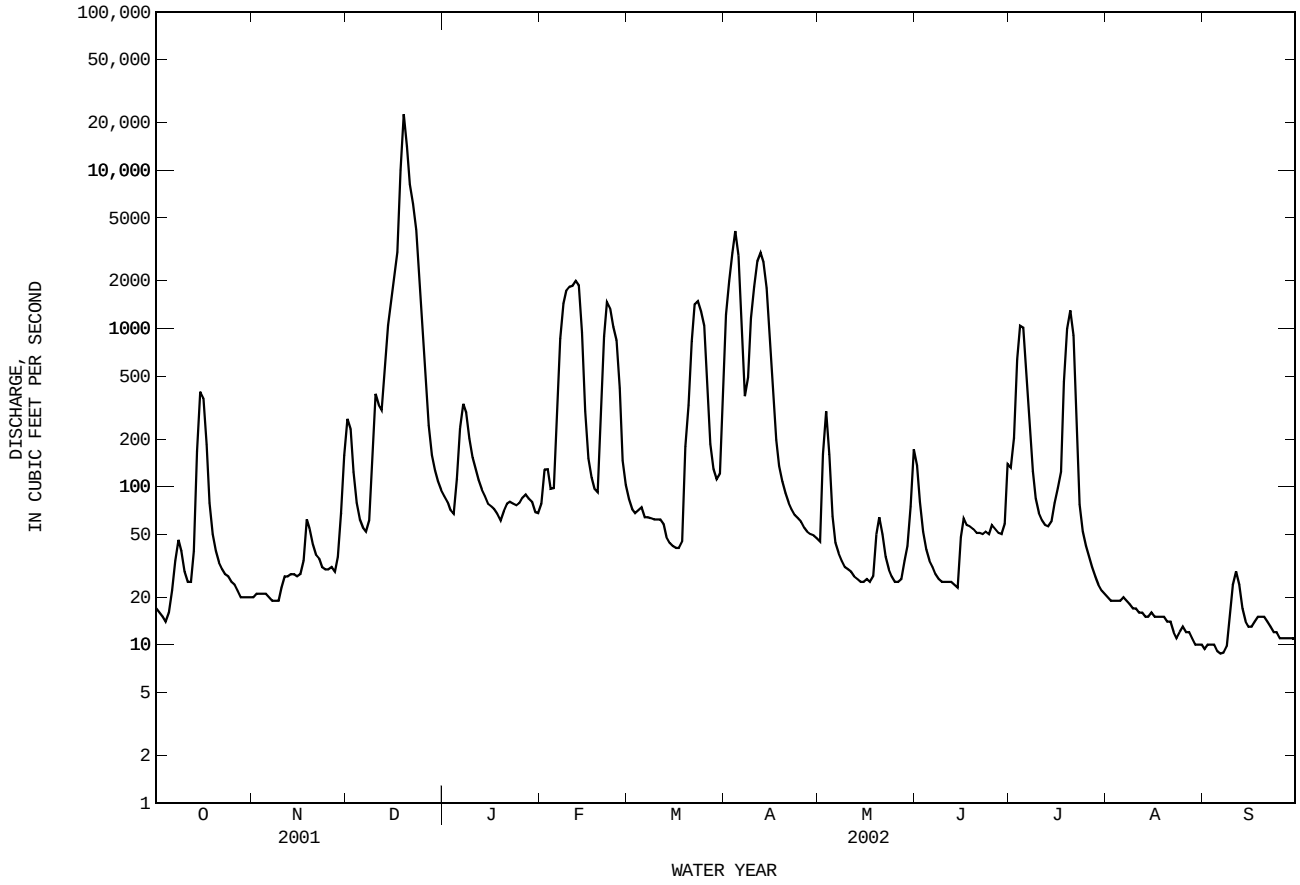
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

MEAN	552.0	615.6	1292	1402	1043	822.2	668.2	361.1	402.0	95.83	43.29	45.17
MAX	2596	1927	2579	2950	1629	2661	2063	981	1492	288	73.1	88.1
(WY)	1999	1999	2002	1998	1999	2001	1997	1997	1997	2002	1997	1998
MIN	24.3	33.1	22.9	38.3	33.9	113	153	57.1	50.5	16.9	10.7	13.4
(WY)	1998	1998	2000	2000	2000	2000	2001	2002	2002	2000	2000	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1997 - 2002	
ANNUAL TOTAL	289412		159671.0			
ANNUAL MEAN	792.9		437.5		579.3	
HIGHEST ANNUAL MEAN					965	1999
LOWEST ANNUAL MEAN					106	2000
HIGHEST DAILY MEAN	22600	Dec 19	22600	Dec 19	28800	Jan 31 1999
LOWEST DAILY MEAN	11	Aug 14	8.8	Sep 6	5.0	Aug 25 2000
ANNUAL SEVEN-DAY MINIMUM	13	Aug 9	9.5	Sep 1	5.1	Aug 20 2000
MAXIMUM PEAK FLOW			23900	Dec 19	30100	Jan 31 1999
MAXIMUM PEAK STAGE			p19.30	Dec 19	20.53	Jan 31 1999
ANNUAL RUNOFF (AC-FT)	574000		316700		419700	
10 PERCENT EXCEEDS	2100		1040		1360	
50 PERCENT EXCEEDS	84		56		68	
90 PERCENT EXCEEDS	20		15		16	

e Estimated
p Observed

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-Waller County line, 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^2, approximately, of which 9,566 mi^2 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

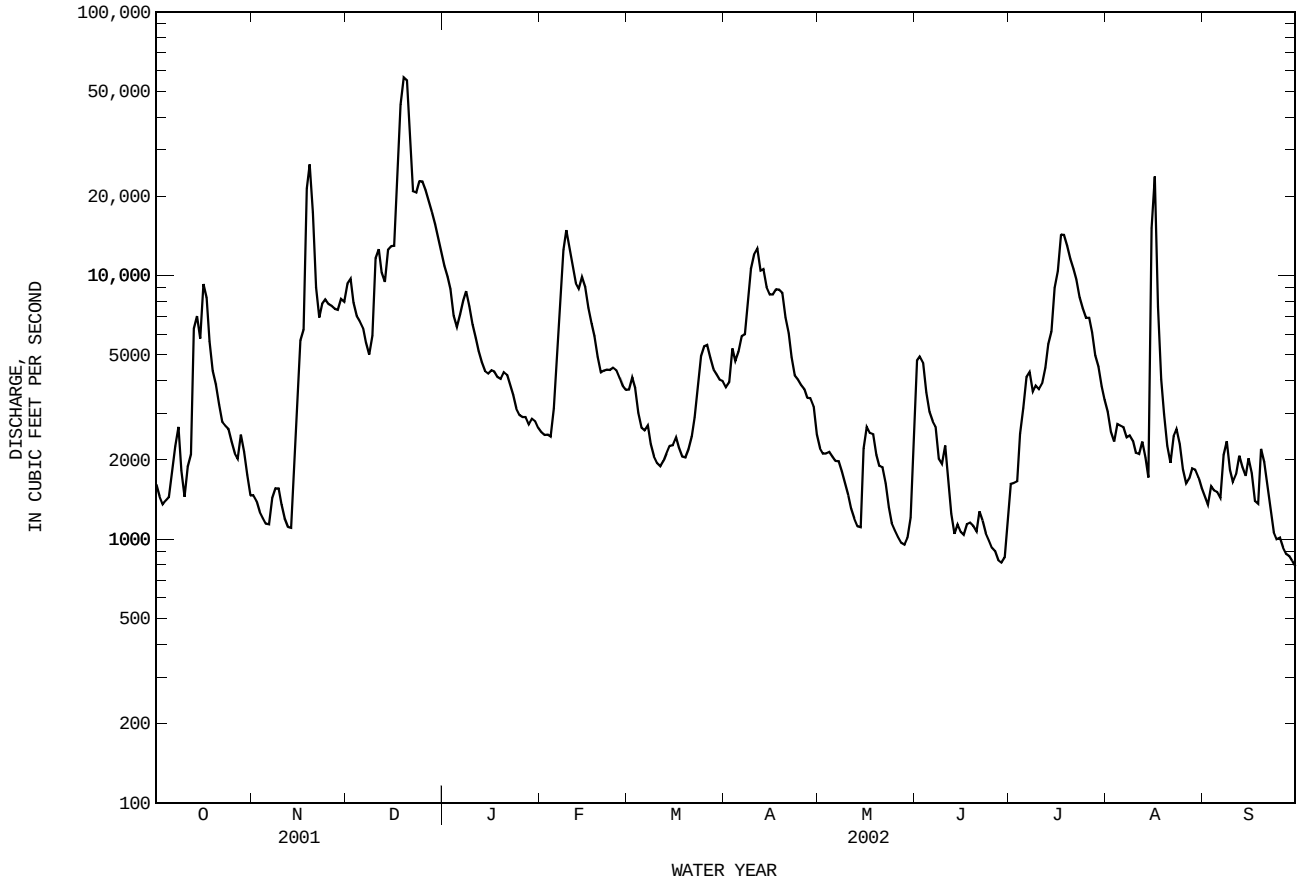
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1610	1470	9320	10900	2550	3700	3770	2210	4760	1620	3040	1460
2	1450	1400	9700	9900	2490	4100	3930	2110	4940	1640	2550	1350
3	1350	1270	7900	8880	2500	3750	5290	2120	4670	1660	2340	1590
4	1400	1200	7030	7040	2450	3020	4750	2150	3600	2520	2740	1530
5	1450	1150	6700	6370	3130	2650	5150	2060	3040	3150	2700	1510
6	1830	1140	6330	7110	5140	2590	5890	1980	2810	4110	2660	1440
7	2260	1430	5570	8040	7640	2700	5990	1980	2670	4310	2430	2090
8	2670	1560	5020	8730	12500	2300	8250	1810	2020	3630	2470	2350
9	1820	1560	5930	7650	14900	2060	10600	1620	1940	3820	2360	1830
10	1450	1350	11600	6530	12700	1940	12000	1470	2270	3710	2130	1650
11	1880	1200	12600	5810	10900	1890	12700	1310	1670	3910	2100	1760
12	2100	1120	10300	5180	9370	1990	10400	1200	1250	4480	2350	2070
13	6290	1110	9460	4690	8940	2110	10600	1120	1050	5490	2040	1880
14	7010	1660	12600	4350	9880	2260	9050	1110	1140	6140	1720	1740
15	5780	2850	12900	4260	9050	2270	8500	2220	1070	9010	15100	2030
16	9290	5680	13000	4380	7550	2430	8490	2670	1040	10400	23800	1780
17	8230	6250	25600	4320	6580	2220	8890	2530	1140	14300	7610	1400
18	5650	21400	44500	4130	5880	2070	8860	2500	1160	14300	4040	1370
19	4350	26400	56500	4060	4920	2050	8600	2090	1130	13000	2990	2200
20	3860	17400	55200	4300	4290	2200	6950	1900	1070	11600	2260	1960
21	3240	9020	34800	4210	4360	2450	6050	1880	1280	10600	1950	1580
22	2790	6940	20900	3880	4400	2900	4900	1630	1180	9650	2460	1280
23	2700	7800	20700	3530	4390	3770	4190	1320	1050	8290	2620	1060
24	2620	8110	22900	3130	4470	4940	4040	1150	990	7500	2300	1000
25	2350	7810	22800	2960	4370	5390	3850	1080	931	6930	1840	1010
26	2120	7680	21100	2910	4090	5450	3710	1020	902	6920	1630	930
27	2020	7490	19200	2910	3830	4880	3440	971	834	6100	1700	880
28	2500	7420	17400	2730	3690	4420	3430	954	815	4970	1860	863
29	2150	8150	15700	2870	---	4220	3200	1010	852	4520	1830	827
30	1760	7950	14000	2810	---	4030	2490	1210	1200	3810	1710	788
31	1470	---	12300	2660	---	3980	---	2450	---	3380	1560	---
TOTAL	97450	176970	549560	161230	176960	96730	197960	52835	54474	195470	110890	45208
MEAN	3144	5899	17730	5201	6320	3120	6599	1704	1816	6305	3577	1507
MAX	9290	26400	56500	10900	14900	5450	12700	2670	4940	14300	23800	2350
MIN	1350	1110	5020	2660	2450	1890	2490	954	815	1620	1560	788
AC-FT	193300	351000	1090000	319800	351000	191900	392700	104800	108000	387700	220000	89670

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

MEAN	4581	4927	6387	7103	8115	8334	8733	13660	10530	4712	2393	2918
MAX	24830	29490	41590	55990	54750	50450	42860	69860	51960	19000	11510	18030
(WY)	1960	1975	1941	1992	1992	1992	1945	1957	1957	1940	1995	1974
MIN	181	318	299	386	484	426	922	954	1027	817	714	454
(WY)	1953	1989	1955	1940	2000	1954	1954	1996	1956	2000	2000	1954

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1939 - 2002	
ANNUAL TOTAL	3653691		1915737			
ANNUAL MEAN	10010		5249		6858	
HIGHEST ANNUAL MEAN					26170	1992
LOWEST ANNUAL MEAN					1175	2000
HIGHEST DAILY MEAN	56500	Dec 19	56500	Dec 19	138000	May 1 1957
LOWEST DAILY MEAN	941	Aug 10	788	Sep 30	137	Nov 6 1952
ANNUAL SEVEN-DAY MINIMUM	1080	Aug 8	900	Sep 24	140	Nov 3 1952
MAXIMUM PEAK FLOW			59200	Dec 20	143000	May 2 1957
MAXIMUM PEAK STAGE			38.98	Dec 20	54.21	May 2 1957
ANNUAL RUNOFF (AC-FT)	7247000		3800000		4968000	
10 PERCENT EXCEEDS	22900		10700		17800	
50 PERCENT EXCEEDS	7030		2990		2510	
90 PERCENT EXCEEDS	1650		1190		685	

08111500 Brazos River near Hempstead, TX--Continued



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^2.

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.--No estimated daily discharges. Records good. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	22	108	50	54	44	39	13	8.1	33	3.2	3.0
2	20	22	392	45	45	52	30	12	7.2	22	3.0	2.4
3	19	20	633	39	43	45	26	11	6.6	25	3.2	2.3
4	17	19	259	39	41	39	24	10	6.3	42	3.9	2.3
5	38	19	163	238	53	35	21	12	6.3	18	3.4	2.2
6	650	19	123	332	125	36	21	11	4.8	9.8	3.3	2.2
7	604	18	97	180	104	40	24	8.9	5.2	7.0	3.1	2.6
8	357	17	154	111	93	40	1410	7.7	4.0	5.8	2.9	4.6
9	128	19	262	90	70	39	2820	7.9	4.9	5.1	3.0	7.5
10	85	17	207	82	56	35	1620	7.4	3.7	4.2	2.9	6.9
11	89	18	142	72	48	34	259	7.1	3.3	4.2	2.9	6.1
12	110	20	1370	63	44	36	151	6.6	3.0	6.7	2.7	5.6
13	2190	19	547	64	43	34	104	5.7	2.9	5.0	2.7	5.4
14	3570	19	299	58	40	36	80	5.5	2.8	3.3	2.9	5.0
15	1560	22	231	53	40	37	66	5.8	2.4	47	20	4.5
16	262	44	236	51	38	33	57	6.1	6.4	89	48	4.2
17	125	48	1020	51	36	32	48	6.2	7.0	327	23	4.3
18	77	36	526	49	39	38	38	5.9	4.5	336	14	5.6
19	59	29	250	53	46	38	34	6.6	4.2	78	9.7	6.8
20	48	25	165	50	56	61	29	7.2	3.7	37	7.3	6.1
21	42	26	123	52	53	59	28	6.4	4.4	22	6.1	4.9
22	36	26	106	53	55	47	24	6.6	3.6	14	5.2	4.3
23	32	25	102	55	46	42	21	6.0	3.6	12	4.7	3.6
24	32	26	88	105	43	35	21	6.2	3.3	9.1	4.4	3.4
25	25	23	72	71	42	34	18	5.9	3.1	7.3	3.9	3.0
26	20	22	67	52	37	38	16	5.9	3.2	6.0	3.5	2.8
27	20	57	61	46	31	33	16	5.3	3.6	5.2	3.2	3.0
28	21	303	60	46	34	31	15	6.9	4.9	4.4	3.0	2.7
29	19	483	60	47	---	32	15	7.2	9.5	3.9	3.2	2.6
30	20	194	59	45	---	35	14	9.2	23	3.7	3.0	2.5
31	21	---	55	50	---	51	---	9.8	---	3.5	3.0	---
TOTAL	10317	1657	8037	2392	1455	1221	7089	239.0	159.5	1196.2	208.3	122.4
MEAN	332.8	55.23	259.3	77.16	51.96	39.39	236.3	7.710	5.317	38.59	6.719	4.080
MAX	3570	483	1370	332	125	61	2820	13	23	336	48	7.5
MIN	17	17	55	39	31	31	14	5.3	2.4	3.3	2.7	2.2
AC-FT	20460	3290	15940	4740	2890	2420	14060	474	316	2370	413	243
CFSM	0.89	0.15	0.69	0.21	0.14	0.10	0.63	0.02	0.01	0.10	0.02	0.01
IN.	1.02	0.16	0.80	0.24	0.14	0.12	0.70	0.02	0.02	0.12	0.02	0.01

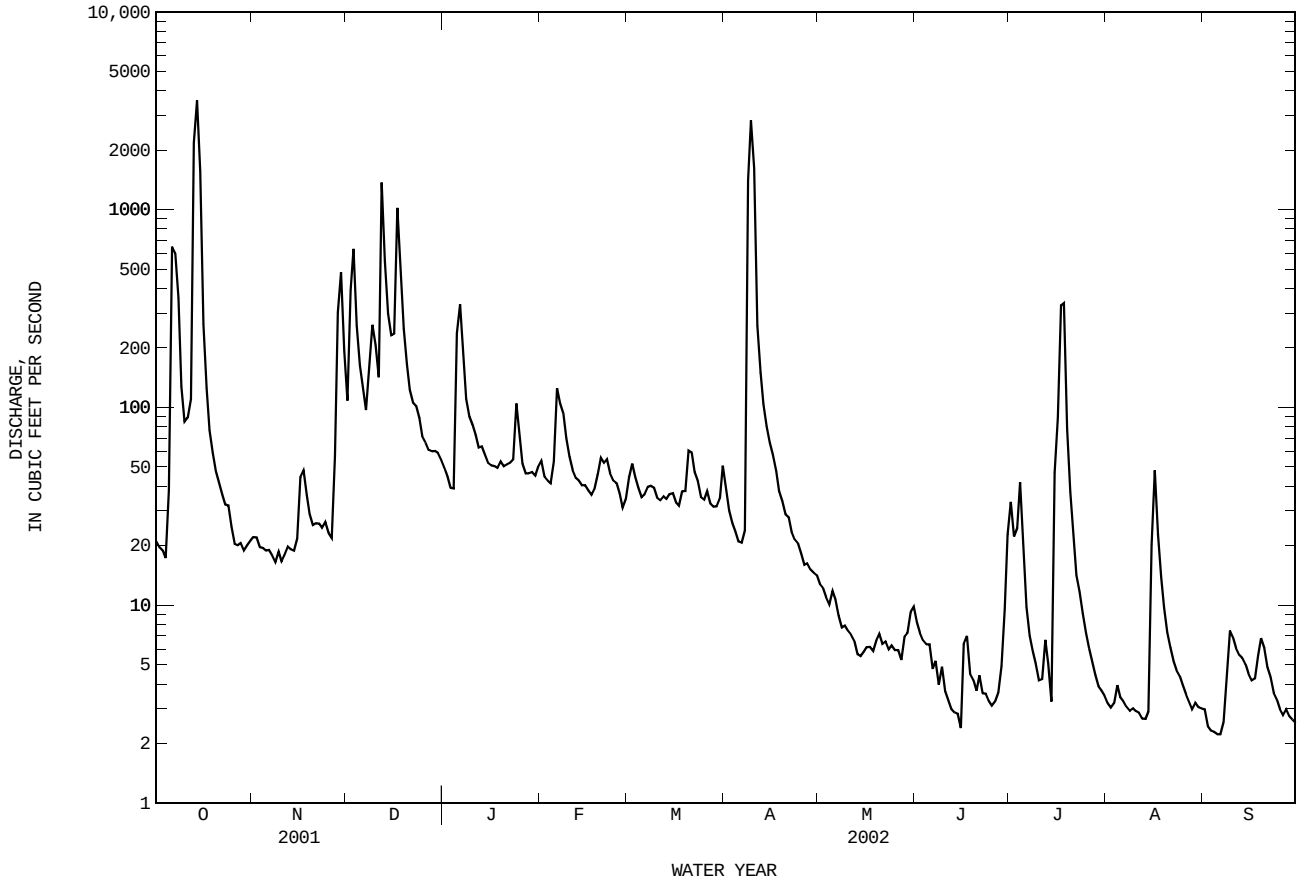
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002h, BY WATER YEAR (WY)

MEAN	114.4	163.1	236.2	280.3	336.0	277.2	319.3	487.1	444.8	33.94	28.92	97.54
MAX	955	1178	1472	1350	2188	1202	1604	1930	2022	201	302	1202
(WY)	1974	1982	1977	1974	1992	1983	1991	1979	1987	1968	1974	1974
MIN	3.23	3.84	8.20	15.6	11.8	12.4	8.86	7.71	2.77	0.98	1.18	1.14
(WY)	1989	1964	1964	1964	1967	1967	2000	2002	1990	1971	2000	1963

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1963 - 2002h	
ANNUAL TOTAL	73019.3		34093.4			
ANNUAL MEAN	200.1		93.41		232.9	
HIGHEST ANNUAL MEAN					667	1992
LOWEST ANNUAL MEAN					1.40	1963
HIGHEST DAILY MEAN	7150	Mar 29	3570	Oct 14	24000	Nov 1 1981
LOWEST DAILY MEAN	1.4	Aug 23	2.2	Sep 5	0.08	Jul 22 1971
ANNUAL SEVEN-DAY MINIMUM	1.7	Aug 21	2.4	Sep 1	0.20	Jun 28 1967
MAXIMUM PEAK FLOW			4610	Oct 14	44400	Jun 13 1973
MAXIMUM PEAK STAGE			13.41	Oct 14	17.95	Jun 13 1973
ANNUAL RUNOFF (AC-FT)	144800		67620		168700	
ANNUAL RUNOFF (CFSM)	0.53		0.25		0.62	
ANNUAL RUNOFF (INCHES)	7.22		3.37		8.42	
10 PERCENT EXCEEDS	352		146		280	
50 PERCENT EXCEEDS	55		24		34	
90 PERCENT EXCEEDS	4.5		3.3		4.0	

h See PERIOD OF RECORD paragraph.

08111700 Mill Creek near Bellville, TX--Continued



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^2, approximately, of which 9,566 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

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.

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 good. 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^3/s (5,223,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1903-06, 1923-40).--Maximum discharge, 123,000 ft^3/s, June 6, 1929 (gage height, 53.6 ft, from floodmark), present site and datum; minimum daily, 35 ft^3/s, Aug. 23, 1934.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1710	1640	8890	12800	2810	3680	3980	2850	772	922	3610	1810
2	1600	1420	9400	11500	2680	3610	3920	2290	2100	868	3190	1680
3	1680	1370	12300	10400	2550	3770	3740	2010	4390	1190	2910	1530
4	1530	1400	11600	9400	2450	3930	4330	1900	4630	1290	2570	1420
5	1440	1350	8700	8240	2450	3190	5230	1820	4210	1230	2350	1470
6	1620	1270	7630	7570	2480	2720	4820	1810	3290	1900	2590	1430
7	3100	1130	7020	7790	3640	2470	5470	1710	2650	2610	2510	2090
8	3250	1090	6430	8150	6230	2410	10200	1630	2470	3940	2340	2210
9	3070	1190	6100	8810	9980	2440	13700	1610	2250	3660	2150	4800
10	2860	1350	6380	8550	13600	2160	15800	1480	1750	3330	2210	4460
11	2340	1400	8980	7410	12800	1900	13900	1310	1560	3410	2090	2930
12	2340	1250	14400	6570	11100	1770	13500	1170	1760	3360	1920	2240
13	4440	1150	16000	5900	9750	1710	11700	1030	1400	3680	1920	2000
14	11000	1050	13500	5240	8910	1730	10900	920	1050	5540	2030	2100
15	15300	1000	12500	4720	9230	1850	10200	816	873	7110	2630	1960
16	10100	1350	13400	4390	9820	2040	9030	776	893	8520	13100	1820
17	8860	3320	13500	4440	8500	2050	8750	1540	891	10500	26000	1950
18	9830	5360	24000	4540	7140	2060	8990	2290	814	12800	14100	1810
19	7630	15500	39200	4500	6470	1910	9110	2320	788	13800	6660	1540
20	5650	23500	48400	4330	5850	1860	8990	2100	835	13000	4420	2430
21	4640	19000	51200	4380	5000	1860	8190	1760	856	11700	3440	2940
22	4040	11700	39700	4510	4540	1910	6660	1540	774	10700	2760	2300
23	3420	7910	23800	4290	4620	2060	5840	1490	828	10000	2510	1860
24	2980	7440	19200	3980	4510	2550	4740	1350	856	8950	2870	1460
25	2850	8070	20700	3750	4610	3690	4220	1120	809	7960	2790	1250
26	2700	8000	21200	3500	4560	4890	3980	919	733	7270	2500	1130
27	2440	8100	20100	3180	4340	5260	3700	833	904	6950	2040	1090
28	2190	8230	18500	3030	3890	5050	3550	785	843	6680	1760	1050
29	2050	8570	16900	2880	---	4510	3300	740	894	5750	1650	958
30	2290	9730	15500	2710	---	4140	3260	699	1160	4920	1720	816
31	1970	---	14200	2820	---	4110	---	716	---	4290	1830	---
MEAN	4223	5495	17720	5945	6232	2880	7457	1462	1601	6059	4102	1951
MAX	15300	23500	51200	12800	13600	5260	15800	2850	4630	13800	26000	4800
MIN	1440	1000	6100	2710	2450	1710	3260	699	733	868	1650	816
AC-FT	259700	327000	1090000	365500	346100	177100	443700	89920	95270	372600	252200	116100

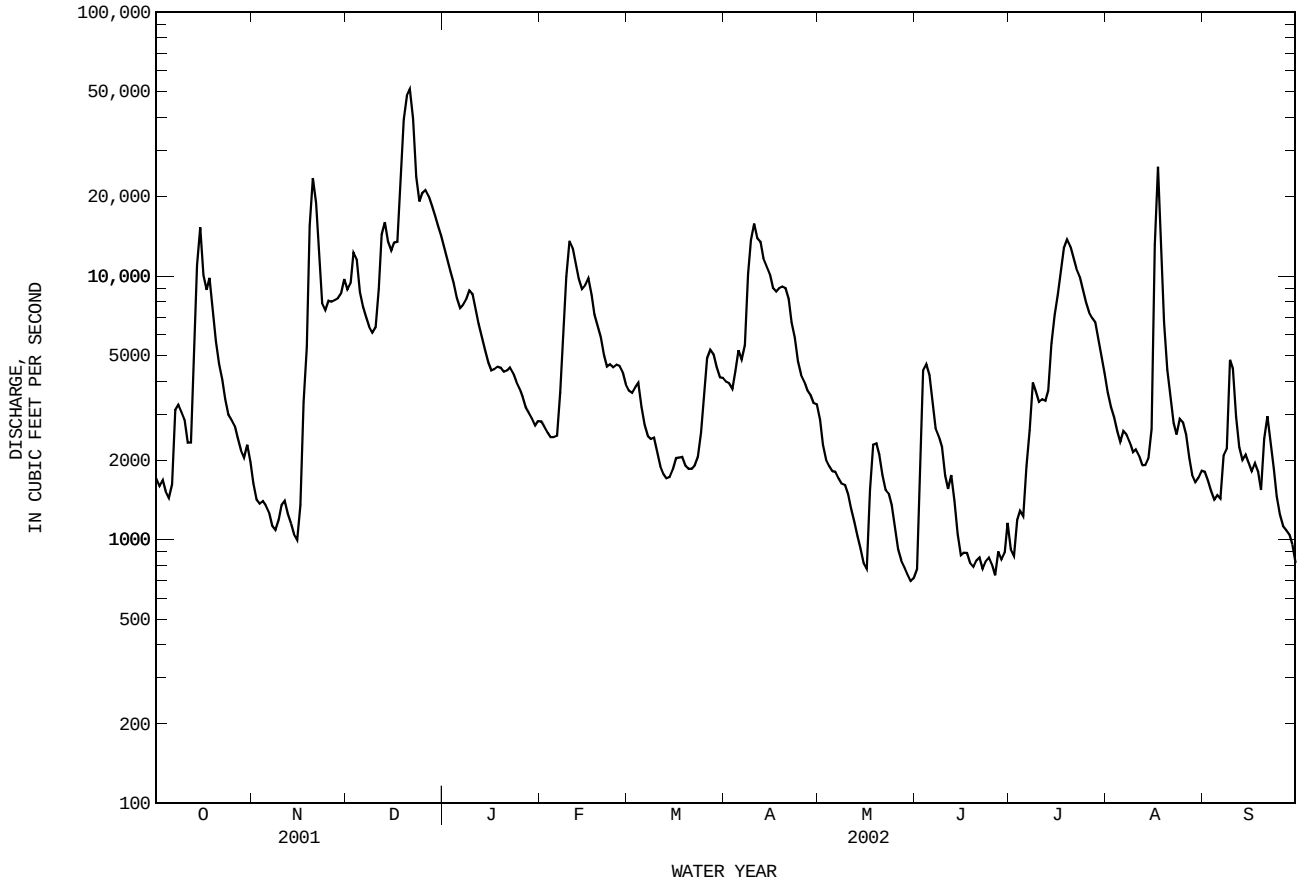
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002z, BY WATER YEAR (WY)

MEAN	5124	5716	7201	8066	8865	9240	9269	14610	11520	4827	2554	3289
MAX	28760	32360	52860	60500	54410	54050	41900	77200	58350	17100	11800	19850
(WY)	1958	1975	1941	1992	1992	1992	1945	1957	1957	1968	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1941 - 2002z	
ANNUAL MEAN	10340		5435		7514	
HIGHEST ANNUAL MEAN					26620	1992
LOWEST ANNUAL MEAN					1201	2000
HIGHEST DAILY MEAN	51200	Dec 21	51200	Dec 21	118000	May 5 1957
LOWEST DAILY MEAN	609	Aug 13	699	May 30	55	Jul 5 1956
ANNUAL SEVEN-DAY MINIMUM	702	Aug 10	781	May 26	93	Jul 4 1956
MAXIMUM PEAK FLOW			52300	Dec 21	119000	May 5 1957
MAXIMUM PEAK STAGE			37.52	Dec 21	50.30	Oct 21 1994
ANNUAL RUNOFF (AC-FT)	7490000		3935000		5444000	
10 PERCENT EXCEEDS	23400		12600		19000	
50 PERCENT EXCEEDS	7930		3250		2910	
90 PERCENT EXCEEDS	1400		1110		767	

z Period of regulated streamflow.



08114000 Brazos River at Richmond, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Oct. 1941 to current year.
BIOCHEMICAL DATA: Jan. 1968 to current year.
PESTICIDE DATA: Oct. 1967 to May 1982
SEDIMENT DATA: Apr. 1957 to Sept. 1996.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Oct. 1941. to Sept. 1995.
WATER TEMPERATURE: Nov. 1950 to Sept. 1995.
SUSPENDED-SEDIMENT DISCHARGE: Jan. 1966 to Sept. 1986.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed for previous water years using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. The computation of the selected constituent loads might include estimated discharge or specific conductance data. Regression equations developed for this station may be obtained from the U.S. Geological Survey District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,600 microsiemens/cm, Sept. 4, 1978; minimum daily, 152 microsiemens/cm, Oct. 19, 1994.
WATER TEMPERATURE: Maximum daily, 33.0°C, Aug. 5, 1951; minimum daily, 1.0°C, Jan. 8, 1970 and Dec. 23, 24, 1989.
SEDIMENT CONCENTRATION: Maximum daily mean, 13,500 mg/L, Apr. 4, 1979; minimum daily mean, 8 mg/L, Nov. 29, 1967, Sept. 20, and Oct. 6, 7, 1980.
SEDIMENT LOAD: Maximum daily, 1,860,000 tons, Apr. 4, 1979; minimum daily, 9.8 tons, Oct. 11, 1983.

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

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
FEB													
12...	1118	11100	542	8.1	10.2	773	11.8	104	170	51	53.7	7.88	40.5
MAY													
08...	0942	1630	878	8.1	27.8	764	6.9	88	200	55	57.8	14.6	83.1
AUG													
06...	1130	2580	543	8.0	31.0	764	6.2	83	160	25	43.2	11.8	45.6
SEP													
25...	1148	1230	912	8.3	26.0	760	8.2	102	190	62	51.2	14.8	102

Date	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
FEB													
12...	1	4.18	116	53.3	55.4	.3	8.1	293	E.055	E1.58	E.07	.52	E.04
MAY													
08...	3	4.49	150	80.6	128	.2	7.9	467	<.008	<.05	<.04	.28	<.06
AUG													
06...	2	4.04	131	40.8	67.2	.3	9.1	301	<.008	<.05	<.04	.24	<.06
SEP													
25...	3	5.39	127	77.0	143	.3	6.7	477	<.008	<.05	<.04	.27	<.06

Date	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
FEB													
12...	E.04	E1	78.4	<.1	<.8	1.8	54	M	3.3	<.01	<2	<.1	<24
MAY													
08...	<.02	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
06...	E.01	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
25...	<.02	4	124	<.1	<.8	7.4	<10	M	<2.0	<.01	<2	<.1	<24

Remark codes used in this report:
< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

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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^2.

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 fair 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.5	10	1.0	1.6	1.3	e1.3	1.3	2.7	40	1.6	2.9
2	1.2	1.1	331	0.89	1.2	1.4	e1.4	1.3	2.6	34	0.96	2.8
3	0.49	1.6	387	1.6	1.2	1.3	e1.6	1.3	2.6	22	1.0	3.0
4	0.67	1.7	112	1.6	1.2	1.3	e1.9	0.75	2.9	13	4.5	2.3
5	2.1	1.8	41	39	0.47	1.3	e1.0	0.48	3.0	10	2.2	2.3
6	57	1.6	21	22	1.6	0.84	e1.0	0.66	2.9	8.3	9.6	2.5
7	8.0	1.6	20	6.5	1.5	0.83	e1.0	0.85	3.4	7.3	8.2	12
8	2.8	2.0	22	4.1	0.66	1.3	1190	0.81	2.9	6.7	4.1	7.5
9	2.0	2.0	58	3.0	0.42	1.3	202	1.1	2.8	6.7	2.6	65
10	1.3	2.0	25	2.8	0.49	1.2	39	1.0	3.0	6.8	1.9	36
11	108	2.1	115	2.1	1.1	1.3	18	1.0	3.2	7.4	1.5	7.6
12	112	2.2	688	1.7	1.2	1.4	11	1.1	3.1	7.7	1.5	4.2
13	1170	1.3	352	1.6	1.2	e1.2	8.1	1.1	3.0	9.5	2.4	2.9
14	350	2.2	235	1.5	1.2	e1.3	5.1	1.2	2.6	130	1.9	2.3
15	98	2.4	74	0.73	1.1	e1.2	4.3	1.2	2.3	576	519	29
16	39	5.0	35	0.67	1.1	1.1	3.8	1.1	3.9	686	1120	19
17	20	4.2	138	0.70	1.2	1.1	2.9	e4.5	4.7	263	207	8.0
18	12	2.5	47	1.1	1.2	1.3	2.7	e11	5.5	87	95	4.9
19	6.8	2.2	22	1.4	1.3	e1.4	2.7	e6.0	5.8	42	36	8.3
20	4.7	1.9	11	1.3	1.3	e1.5	3.0	e4.0	5.8	26	16	160
21	3.8	1.2	7.5	1.3	1.2	e1.5	3.0	e3.6	15	17	9.5	47
22	3.2	1.2	5.7	1.3	1.5	e1.4	3.3	e3.0	5.5	12	22	16
23	2.6	1.3	4.8	1.3	1.3	1.3	e1.9	2.2	4.8	6.0	18	8.6
24	2.2	1.3	3.7	1.4	1.3	1.2	e0.95	1.7	4.5	4.5	13	5.7
25	2.0	1.9	2.9	1.3	1.3	e1.4	e1.0	1.5	8.3	3.5	6.9	4.3
26	1.7	2.2	2.3	1.3	1.2	e5.9	e1.1	2.4	8.8	2.8	5.1	3.3
27	1.6	55	2.1	1.3	0.57	e1.8	e1.3	2.9	8.2	2.3	4.1	2.7
28	1.5	106	2.1	1.3	1.2	e1.2	e1.5	5.0	8.8	2.1	2.9	2.4
29	1.6	58	2.0	1.2	---	1.4	1.4	4.4	149	2.2	3.5	2.0
30	1.6	23	1.9	1.2	---	1.3	1.4	3.3	93	2.1	3.5	1.6
31	1.6	---	1.8	1.4	---	1.3	---	3.2	---	2.1	3.4	---
TOTAL	2020.66	294.0	2780.8	109.59	31.81	44.57	1518.65	74.95	374.6	2046.0	2128.86	476.1
MEAN	65.18	9.800	89.70	3.535	1.136	1.438	50.62	2.418	12.49	66.00	68.67	15.87
MAX	1170	106	688	39	1.6	5.9	1190	11	149	686	1120	160
MIN	0.49	1.1	1.8	0.67	0.42	0.83	0.95	0.48	2.3	2.1	0.96	1.6
AC-FT	4010	583	5520	217	63	88	3010	149	743	4060	4220	944

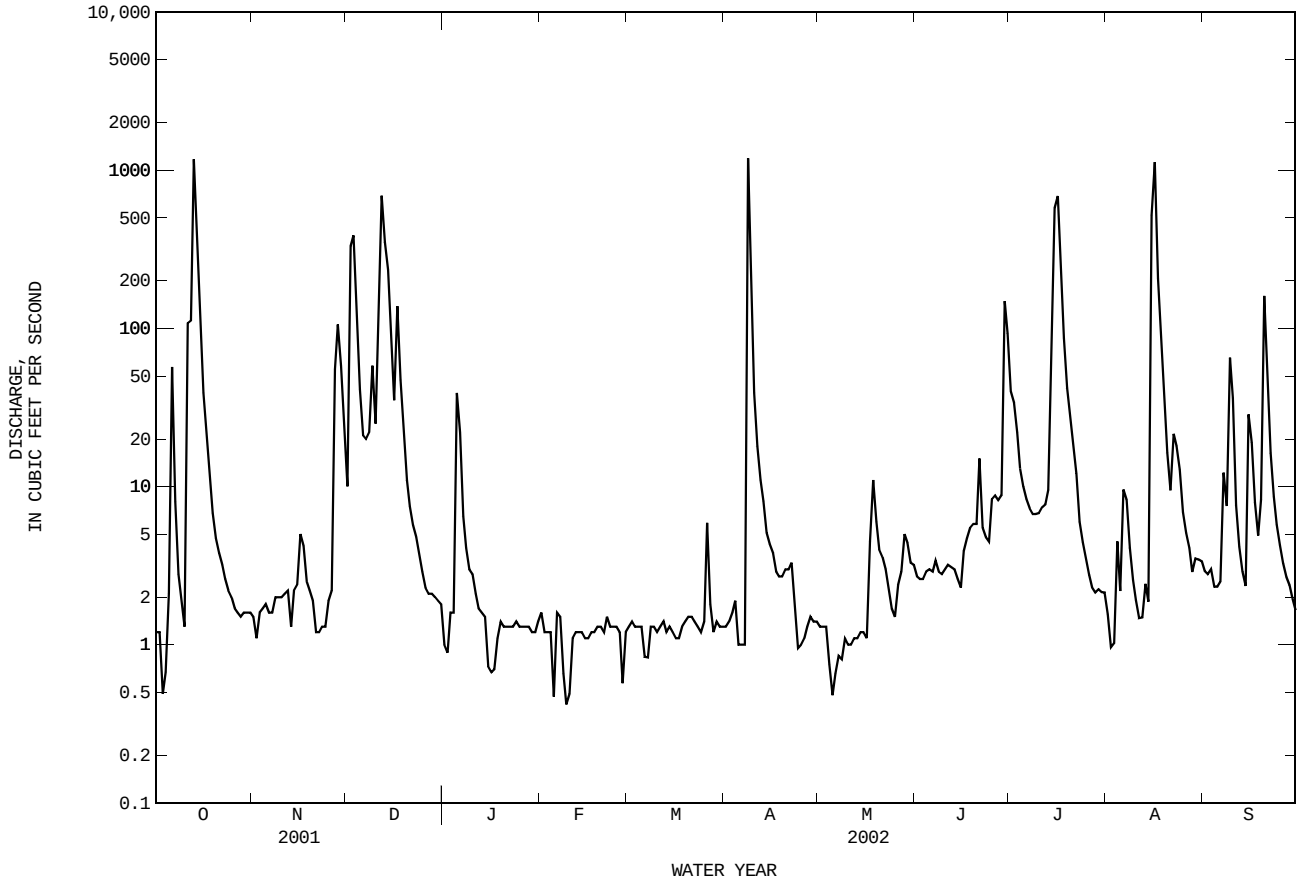
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2002h, BY WATER YEAR (WY)

MEAN	44.30	36.76	39.72	35.90	42.49	22.66	35.67	38.60	45.75	14.95	25.93	45.35
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	0.000	0.000	0.000	0.000	0.039	0.000	0.000	0.33	0.023	0.019	0.000	0.000
(WY)	1948	1956	1949	1957	1962	1954	1954	1963	1948	1956	1948	1948

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1947 - 2002h	
ANNUAL TOTAL	17453.47		11900.59			
ANNUAL MEAN	47.82		32.60		35.57	
HIGHEST ANNUAL MEAN					91.1	1973
LOWEST ANNUAL MEAN					3.18	1947
HIGHEST DAILY MEAN	2670	Aug 31	1190	Apr 8	7080	Jun 26 1960
LOWEST DAILY MEAN	0.15	Feb 15	0.42	Feb 9	0.00	Jun 13 1947
ANNUAL SEVEN-DAY MINIMUM	0.68	May 17	0.81	May 4	0.00	Jun 13 1947
MAXIMUM PEAK FLOW			2250	Aug 15	10400	Jun 26 1960
MAXIMUM PEAK STAGE			20.30	Apr 8	24.23	Oct 18 1994
ANNUAL RUNOFF (AC-FT)	34620		23600		25770	
10 PERCENT EXCEEDS	79		44		49	
50 PERCENT EXCEEDS	1.9		2.4		1.7	
90 PERCENT EXCEEDS	0.89		1.1		0.10	

e Estimated
h See PERIOD OF RECORD paragraph.

08115000 Big Creek near Needville, TX--Continued



08116650 Brazos River at Rosharon, TX

LOCATION.--Lat 29°20′58", long 95°34′56", Fort Bend-Brazoria County line, 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^2, approximately, of which 9,566 mi^2 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2370	2220	9200	12600	3320	4110	4060	3180	754	1500	3960	1640
2	2240	1960	9090	11300	3230	4100	3920	2780	853	969	3450	1590
3	2090	1740	13100	10200	3090	3980	3790	2370	2510	840	3130	1490
4	2050	1710	13600	9330	3030	4070	3720	2200	3870	1100	3030	1450
5	2020	1700	10800	9090	2990	3850	4440	2110	4000	1240	2670	1380
6	2950	1710	8580	8820	2970	3320	4670	2040	3490	1230	2610	1510
7	2680	1620	7720	7940	3080	3030	4570	1970	3080	1840	2770	2340
8	3530	1520	7110	7840	4520	2840	10000	1880	2480	2540	2600	3140
9	3400	1450	6630	8140	6810	2820	17400	1810	2400	3450	e2510	2730
10	3300	1550	6500	8370	10200	2670	17300	1720	2090	3180	2270	6590
11	3330	1670	6900	7800	11800	2470	14800	1630	1750	3060	2240	4780
12	4250	1680	18200	6950	11000	2230	12700	1440	1560	3080	2100	3120
13	6270	1550	22600	6330	9830	2160	11700	1230	1660	3150	2030	2320
14	11600	1470	20900	5830	8830	2120	10200	1160	1330	5130	2150	2090
15	15200	1390	15300	5260	8350	2210	9660	1050	988	7230	5170	2000
16	13100	2450	13700	4920	8720	2300	8830	841	902	9810	13600	2140
17	9050	2600	15200	4720	8670	2360	8180	1250	960	10800	24500	2100
18	8890	4180	16900	4750	7560	2380	8010	2850	836	10600	22800	2090
19	8520	7070	29500	4720	6720	2220	8080	2690	741	11800	12600	1810
20	6720	16900	39700	4650	6170	2130	8130	2450	725	11800	e8730	2360
21	5330	19600	45300	4530	5480	2090	7910	2140	733	10900	4690	3340
22	4630	14700	43500	4590	4950	2010	6950	1850	726	9950	3400	2910
23	4130	9580	31800	4680	4680	2040	5910	1590	651	9290	2930	2390
24	3690	7220	21100	4540	4720	2240	5180	1470	696	8560	2860	1970
25	3360	7040	18700	4250	4620	2780	4410	1380	725	7660	2890	1680
26	3200	7400	19500	4030	4630	3890	4080	1170	893	6960	2670	1430
27	2950	8500	19400	3830	4550	4660	3910	997	859	6520	2340	1220
28	2720	9430	18200	3650	4250	4800	3730	909	989	6300	1920	1230
29	2520	9120	16700	3560	---	4510	3470	791	1110	5910	1690	1110
30	2460	9200	15200	3410	---	4280	3270	800	1360	5090	1550	1090
31	2490	---	13800	3340	---	4370	---	725	---	4470	1570	---
TOTAL	151040	159930	554430	193970	168770	95040	222980	52473	45721	175959	153430	67040
MEAN	4872	5331	17880	6257	6028	3066	7433	1693	1524	5676	4949	2235
MAX	15200	19600	45300	12600	11800	4800	17400	3180	4000	11800	24500	6590
MIN	2020	1390	6500	3340	2970	2010	3270	725	651	840	1550	1090
AC-FT	299600	317200	1100000	384700	334800	188500	442300	104100	90690	349000	304300	133000

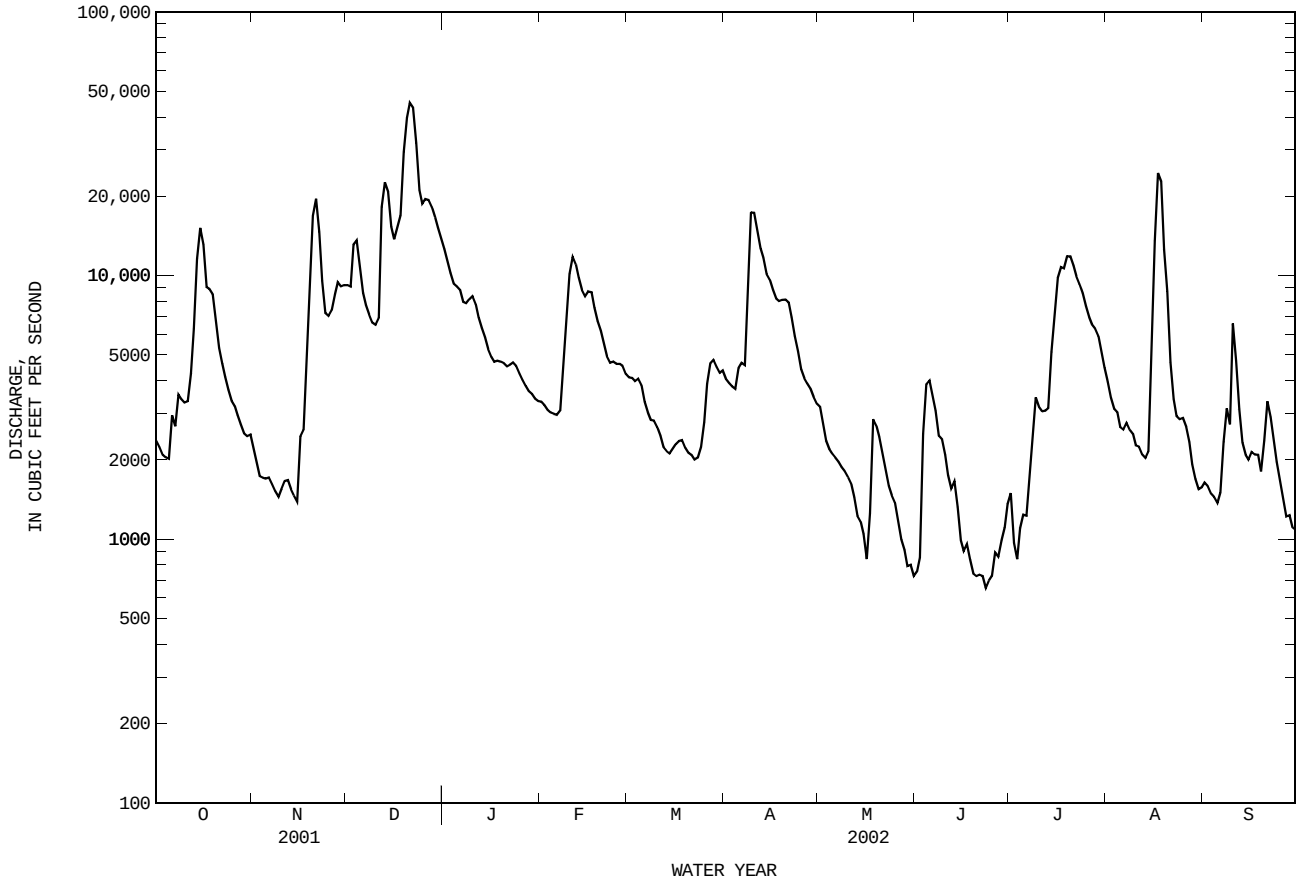
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2002h, BY WATER YEAR (WY)

MEAN	5043	6189	8085	10350	10400	12320	10420	12400	11910	4443	2589	3397
MAX	24240	33580	23360	70560	60530	60170	32050	39370	41010	18200	11370	19370
(WY)	1974	1975	1992	1992	1992	1992	1977	1990	1987	1968	1995	1974
MIN	342	290	504	665	436	498	458	312	367	246	400	347
(WY)	2000	1989	2000	2000	2000	1971	1984	1978	1971	1971	2000	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1967 - 2002h	
ANNUAL TOTAL	3750939		2040783			
ANNUAL MEAN	10280		5591		8089	
HIGHEST ANNUAL MEAN					29050	1992
LOWEST ANNUAL MEAN					885	1984
HIGHEST DAILY MEAN	45400	Mar 18	45300	Dec 21	83900	Oct 22 1994
LOWEST DAILY MEAN	623	Aug 14	651	Jun 23	27	Jul 21 2000
ANNUAL SEVEN-DAY MINIMUM	706	Aug 12	714	Jun 19	44	Apr 4 1967
MAXIMUM PEAK FLOW			46300	Dec 21	84400	Oct 22 1994
MAXIMUM PEAK STAGE			40.52	Dec 21	51.89	Jan 3 1992
ANNUAL RUNOFF (AC-FT)	7440000		4048000		5860000	
10 PERCENT EXCEEDS	24400		12100		21200	
50 PERCENT EXCEEDS	7210		3400		3300	
90 PERCENT EXCEEDS	1370		1250		654	

e Estimated
h See PERIOD OF RECORD paragraph.

08116650 Brazos River at Rosharon, TX--Continued



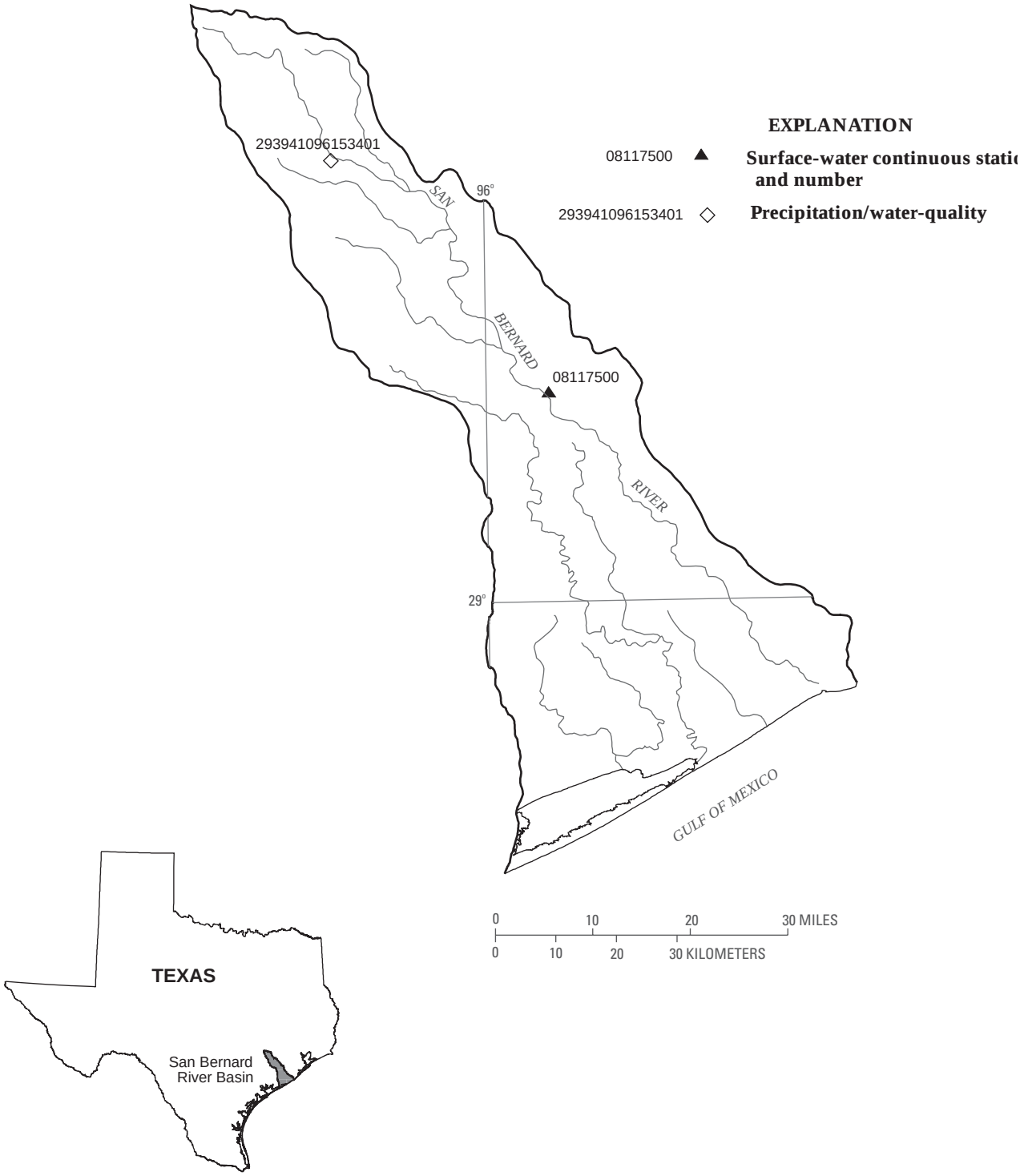


Figure 10.--Map showing location of gaging stations in the San Bernard River Basin

08117500 San Bernard River near Boling, TX

LOCATION.--Lat 29°18′48", long 95°53′37", Wharton-Fort Bend County line, 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^2.

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 FROM DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

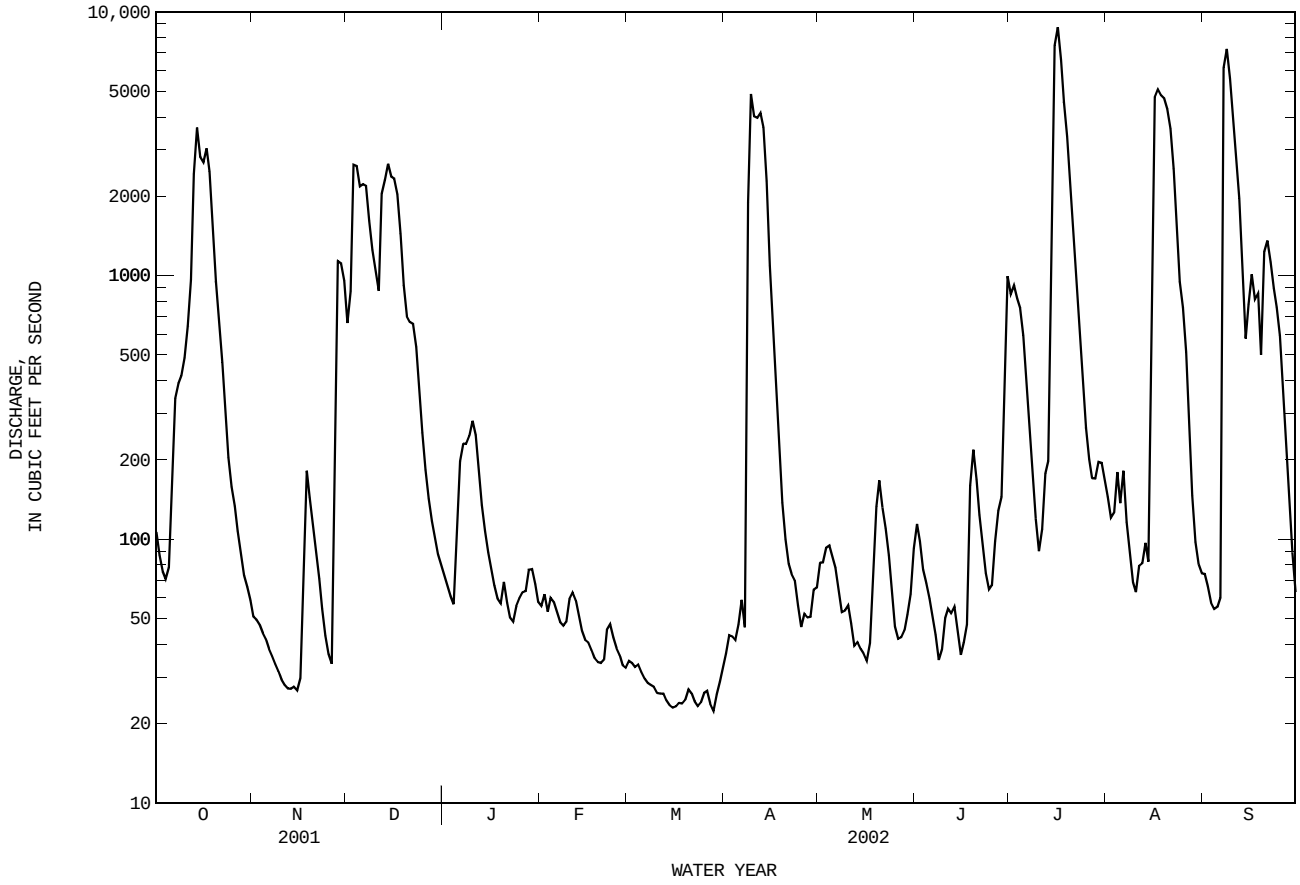
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	51	663	72	56	35	37	82	115	851	145	74
2	87	50	872	66	62	34	43	82	98	918	121	66
3	75	47	2640	61	53	33	43	93	77	819	126	57
4	71	44	2610	57	60	34	41	95	68	756	180	54
5	78	42	2180	107	58	31	48	85	60	594	137	55
6	192	38	2220	198	53	30	59	78	50	388	182	60
7	344	36	2190	230	49	29	46	65	43	265	116	6150
8	390	34	1620	230	47	28	1890	53	35	183	91	7250
9	417	32	1250	247	49	28	4880	54	38	119	69	5600
10	488	29	1050	282	60	26	4020	56	50	90	63	3930
11	643	28	876	248	63	26	3960	48	55	109	79	2860
12	961	27	2040	182	59	26	4130	39	52	177	81	1960
13	2430	27	2300	135	51	25	3650	41	55	198	97	1170
14	3640	28	2650	108	45	23	2280	38	45	2610	82	578
15	2820	27	2380	89	42	23	1090	37	36	7470	1050	779
16	2690	30	2340	76	41	23	660	35	41	8770	4750	1010
17	3040	68	2040	67	38	24	392	40	48	6580	5090	811
18	2480	182	1440	60	35	24	221	75	160	4570	4830	855
19	1510	144	922	57	34	25	138	133	218	3380	4710	501
20	951	116	699	69	34	27	100	167	169	2210	4280	1230
21	675	90	667	58	35	26	81	132	124	1320	3610	1360
22	470	71	657	51	45	24	74	110	98	884	2540	1130
23	305	54	537	49	48	23	70	87	74	605	1520	896
24	205	43	375	56	42	24	56	65	64	402	948	759
25	158	37	255	60	39	26	47	47	67	265	756	592
26	134	34	183	63	36	27	52	42	98	201	513	387
27	107	340	143	64	33	24	51	43	128	171	259	227
28	88	1140	117	77	33	22	51	45	145	170	146	136
29	73	1110	100	77	---	26	64	52	395	197	98	89
30	66	957	88	68	---	29	65	62	997	195	80	63
31	59	---	80	58	---	32	---	92	---	170	74	---
TOTAL	25754	4956	38184	3322	1300	837	28339	2173	3703	45637	36823	40689
MEAN	830.8	165.2	1232	107.2	46.43	27.00	944.6	70.10	123.4	1472	1188	1356
MAX	3640	1140	2650	282	63	35	4880	167	997	8770	5090	7250
MIN	59	27	80	49	33	22	37	35	35	90	63	54
AC-FT	51080	9830	75740	6590	2580	1660	56210	4310	7340	90520	73040	80710

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2002, BY WATER YEAR (WY)

MEAN	674.6	548.1	464.3	567.8	643.6	426.0	505.9	630.3	809.9	343.4	227.6	677.1
MAX	5565	4170	2497	2316	4303	2680	3348	2840	5083	1472	1188	3794
(WY)	1999	1999	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1954 - 2002	
ANNUAL TOTAL	271105		231717			
ANNUAL MEAN	742.8		634.8		541.4	
HIGHEST ANNUAL MEAN					1357	1992
LOWEST ANNUAL MEAN					37.9	1956
HIGHEST DAILY MEAN	12600	Sep 1	8770	Jul 16	31300	Oct 21 1998
LOWEST DAILY MEAN	24	Aug 22	22	Mar 28	1.7	Dec 7 1988
ANNUAL SEVEN-DAY MINIMUM	28	Nov 10	24	Mar 13	2.2	Dec 1 1988
MAXIMUM PEAK FLOW			9170	Jul 16	31900	Oct 21 1998
MAXIMUM PEAK STAGE			28.79	Jul 16	42.61	Oct 21 1998
ANNUAL RUNOFF (AC-FT)	537700		459600		392200	
10 PERCENT EXCEEDS	2250		2240		1340	
50 PERCENT EXCEEDS	167		88		123	
90 PERCENT EXCEEDS	55		33		18	

08117500 San Bernard River near Boling, TX--Continued



293941096153401 Attwater Prairie Chicken National Wildlife Refuge near Eagle Lake, TX
(National Atmospheric Deposition Program)

PRECIPITATION WATER-QUALITY RECORDS

LOCATION.--Lat 29°39′41", long 96°15′34", Colorado County, Hydrologic Unit Code 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 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 units, Mar. 26 to Apr. 2; minimum field pH, 4.0 units, June 18-25.

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

Date	Time	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	CALCIUM ATM DEP WET DIS (MG/L) (82932)	MAG-NESIUM ATM DEP WET DIS (MG/L) (83002)	POTAS-SIUM ATM DEP WET DIS (MG/L) (83120)	SODIUM ATM DEP WET DIS (MG/L) (83138)	NI-TROGEN AMMON. ATM DEP WET DIS AS N (MG/L) (83044)	NI-TROGEN NITRATE ATM DEP WET DIS AS N (MG/L) (83068)	CHLO-RIDE ATM DEP WET DIS (MG/L) (82944)	SULFATE ATM DEP WET DIS AS SO4 (MG/L) (83160)	PHOS-PHORUS ORTHO ATM DEP WET DIS AS P (MG/L) (83108)	CALCIUM ATM DEP WET DIS (MG/M2) (82933)
OCT 02-09	0835	9	5.0	.04	.04	.02	.28	.170	.087	.51	.80	<.003	2.1
OCT 09-16	0845	11	5.7	.40	.04	.02	.28	.070	.085	.47	.85	<.003	22.3
NOV 06-13	0800	47	4.1	.67	.09	.06	.66	.480	1.17	1.06	3.96	<.003	.8
NOV 13-20	0815	9	4.9	.09	.06	.02	.49	.090	.156	.86	.55	<.003	2.2
NOV 20-27	0947	16	4.6	.07	.05	.03	.42	.130	.097	.77	1.39	<.003	2.3
NOV 27-DEC 04	0803	12	4.8	.29	.03	.04	.20	.100	.178	.35	1.29	<.003	18.5
DEC 04-11	0817	13	4.8	.10	.04	.01	.31	.190	.198	.54	1.14	<.003	2.4
DEC 11-18	0809	21	4.5	.12	.07	.04	.61	.180	.204	1.10	1.75	<.003	3.0
JAN 02-08	0900	7	5.3	.15	.01	.01	.15	.120	.091	.11	.79	<.003	3.0
JAN 22-29	0812	15	5.1	.18	.12	.06	1.01	.350	.152	1.89	1.63	.003	1.3
JAN 29-FEB 05	0815	24	5.8	.92	.19	.12	1.49	.380	.295	2.54	3.03	<.003	8.1
FEB 05-12	0810	--	--	--	--	--	--	--	--	--	--	--	--
FEB 19-26	0815	41	6.5	2.45	.33	.17	2.45	.720	.990	4.09	4.13	<.003	7.2
FEB 26-MAR 05	0832	18	4.6	.20	.04	.01	.30	.270	.281	.48	1.87	<.003	1.0
FEB 26-MAR 05	0832	18	4.6	.20	.04	.01	.30	.270	.280	.48	1.87	<.003	1.0
MAR 05-13	1045	--	--	1.18	.59	.27	5.94	.900	.780	10.3	5.76	<.003	1.2
MAR 19-26	1012	20	5.8	.74	.16	.09	1.39	.420	.270	2.28	2.22	<.003	12.3
MAR 26-APR 02	0815	10	6.7	.41	.06	.05	.46	.260	.125	.71	1.50	<.003	6.1
APR 02-09	0807	12	5.4	.63	.07	.06	.45	.250	.136	.76	1.27	<.003	56.7
MAY 07-14	0815	--	--	.62	.07	.11	.48	.720	.360	.80	2.23	<.003	.5
MAY 14-21	0911	14	5.9	.41	.09	.10	.79	.660	.487	1.27	1.48	<.003	4.5
MAY 21-28	0900	8	5.2	.14	.03	.02	.19	.160	.182	.34	.53	<.003	.6
MAY 28-JUN 04	1300	--	--	.54	.10	.07	.72	.770	.587	1.07	2.46	<.003	.4
JUN 04-11	0825	--	--	.71	.13	.15	.73	.506	.786	1.67	3.05	<.012	.3
JUN 11-18	0810	7	5.0	.08	.01	.01	.06	.090	.145	.10	.55	<.003	2.8
JUN 18-25	0802	46	4.0	.83	.08	.04	.36	.470	1.46	.64	4.75	<.003	3.6
JUN 25-JUL 02	0908	7	5.0	.07	.02	.02	.17	.070	.100	.31	.53	<.003	4.9
JUL 02-09	0800	16	4.5	.15	.03	.02	.22	.150	.230	.40	1.44	<.003	4.9
JUL 02-16	0823	7	5.0	.05	.03	.01	.23	.050	.113	.41	.42	<.003	2.1
JUL 16-23	0905	6	5.3	.02	.03	.01	.23	.020	.049	.42	.15	<.003	.4
JUL 30-AUG 06	1305	30	4.3	.56	.07	.09	.27	.470	.781	.41	--	<.003	2.5
AUG 06-13	1050	12	4.8	.07	.03	.01	.20	.170	.222	.39	.85	<.003	1.1
AUG 13-20	0805	12	5.1	.04	.05	.02	.45	.070	.099	.84	.51	<.003	4.7
AUG 20-27	0838	--	--	.52	.11	.11	.79	.580	.457	.47	1.08	<.012	.2
SEP 04-10	1005	13	4.9	.06	.04	.01	.38	.070	.150	.68	.64	<.003	3.3
SEP 10-17	0900	15	4.6	.06	.01	.01	.03	.101	.235	.08	.99	<.003	.9
SEP 17-24	0804	8	5.4	.04	.04	.02	.32	.047	.070	.53	.44	<.003	1.3

293941096153401 Attwater Prairie Chicken National Wildlife Refuge near Eagle Lake, TX--Continued
(National Atmospheric Deposition Program)

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

Date	MAG-NESIUM ATM DEP WET DIS (MG/M2) (83003)	POTAS-SIUM ATM DEP WET DIS (MG/M2) (83121)	SODIUM ATM DEP WET DIS (MG/M2) (83139)	NI-TROGEN AMMON. ATM DEP WET DIS AS N (MG/M2) (83045)	NI-TROGEN NITRATE ATM DEP WET DIS AS N (MG/M2) (83069)	CHLO-RIDE ATM DEP WET DIS (MG/M2) (82945)	SULFATE ATM DEP WET DIS AS SO4 (MG/M2) (83161)	PHOS-PHORUS ORTHO ATM DEP WET DIS AS P (MG/M2) (83109)	HY-DROGEN ION ATM DEP WET DIS (MG/M2) (82975)	VOLUME ATM DEP WET (L) (83177)
OCT 02-09	1.8	1.0	14.2	8.44	4.4	25.9	40.6	<.1	.4	3.400
OCT 09-16	2.4	1.3	15.7	4.08	4.8	26.7	47.7	<.2	.1	3.800
NOV 06-13	.1	.1	.8	.550	1.4	1.2	4.6	<.010	.1	.100
NOV 13-20	1.3	.6	11.9	2.00	3.8	20.8	13.4	<.1	.3	1.600
NOV 20-27	1.6	.9	13.3	4.24	3.1	24.4	44.1	<.1	.6	2.200
NOV 27-DEC 04	1.9	2.2	12.9	6.26	11.4	22.2	82.7	.2	.9	4.300
DEC 04-11	.9	.3	7.1	4.30	4.6	12.6	26.5	<.1	.3	1.600
DEC 11-18	1.7	1.0	15.1	4.43	5.0	26.8	42.7	<.1	.6	1.700
JAN 02-08	.2	.2	2.9	2.34	1.8	2.1	15.4	<.1	.1	1.300
JAN 22-29	.9	.4	7.5	2.58	.2	14.0	12.0	<.02	M	.500
JAN 29-FEB 05	1.7	1.0	13.1	3.37	2.6	22.2	26.6	<.03	M	.600
FEB 05-12	--	--	--	--	--	--	--	--	--	--
FEB 19-26	1.0	.5	7.2	2.12	2.9	12.0	12.2	<.010	<.1	.200
FEB 26-MAR 05	.2	.1	1.5	1.32	1.4	2.3	9.0	<.1	.1	.300
FEB 26-MAR 05	.2	.1	1.5	1.32	1.4	2.3	9.0	M	.1	.300
MAR 05-13	.6	.3	5.8	.890	.8	10.1	5.7	<.002	M	.070
MAR 19-26	2.6	1.4	23.1	6.97	9.6	37.9	36.8	<.034	M	1.130
MAR 26-APR 02	.9	.8	6.8	3.87	1.9	10.6	22.4	<.029	M	1.010
APR 02-09	5.8	5.0	40.7	20.8	12.2	68.3	114	<.2	.1	6.080
MAY 07-14	.1	.1	.4	.550	.3	.6	1.7	<.003	M	.050
MAY 14-21	1.0	1.1	8.7	7.31	5.4	14.1	16.4	<.033	M	.750
MAY 21-28	.1	.1	.9	.750	.8	1.6	2.4	<.013	M	.310
MAY 28-JUN 04	.1	.1	.6	.610	.5	.8	1.9	<.003	M	.050
JUN 04-11	.1	.1	.3	.210	.3	.7	1.3	<.004	M	.030
JUN 11-18	.4	.2	1.9	3.01	4.8	3.1	18.1	<.1	.4	2.220
JUN 18-25	.4	.2	1.6	2.05	6.3	2.7	20.5	<.013	.5	.290
JUN 25-JUL 02	1.5	1.1	11.5	4.41	6.7	20.5	35.1	<.2	.6	4.530
JUL 02-09	1.0	.6	7.1	4.71	9.3	12.7	46.0	<.1	.8	2.170
JUL 02-16	1.3	.6	9.9	2.29	5.0	17.4	18.3	<.1	.4	2.980
JUL 16-23	.4	.1	3.9	.430	.8	7.1	2.6	<.1	.1	1.160
JUL 30-AUG 06	.3	.4	1.2	2.16	3.6	1.9	--	<.01	.2	.310
AUG 06-13	.5	.2	3.5	2.33	3.7	6.6	14.3	<.1	.3	1.139
AUG 13-20	5.7	2.3	49.3	7.77	10.8	91.6	55.3	<.3	1.0	7.375
AUG 20-27	.1	.1	.4	.260	.2	.7	.5	<.01	M	.031
SEP 04-10	2.4	.8	20.2	3.86	8.0	36.3	34.1	<.2	.7	3.622
SEP 10-17	.1	.1	.4	1.60	3.8	1.3	16.0	<.046	.4	1.092
SEP 17-24	1.2	.6	10.1	1.60	2.2	16.9	13.9	<.1	.2	2.152

Remark codes used in this report:
< -- Less than
M -- Presence verified, not quantified

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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 2002

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Brazos River Basin				
08084100	Deadman Creek near Nugent, TX	Lat 32°40'36", long 99°37'00", Jones County, at low-water crossing on county road, 3.2 mi east of Nugent, and 4.4 mi upstream from Clear Fork Brazos River.	163	1967-2002	10-11-01 12-11-01 02-12-02 04-03-02 06-11-02 08-13-02	22.4 14.3 14.8 13.8 7.21 18.3
08104795	North Fork San Gabriel River upstream from State Highway 418 at Georgetown, TX	Lat 30°38'44", long 97°40'49", Williamson County, 0.2 mi upstream from State Highway 418 at Georgetown.	271	1984-88, 1990-2002	03-07-02 04-02-02 05-01-02 06-05-02 08-13-02	15.12 7.99 8.55 7.72 8.74
08104950	South Fork San Gabriel River upstream from State Hwy 418 at Georgetown, TX	Lat 30°38'38", long 97°40'50", Williamson County, 0.2 mi upstream from State Highway 418 at Georgetown.	136	1984-88, 1990-2002	03-07-02 04-02-02 05-01-02 06-05-02 08-13-02	17.71 14.47 6.71 2.82 28.25
08105000	San Gabriel River at Georgetown, TX	Lat 30°39'14", long 97°39'18", Williamson County, 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 northeast of Williamson County Courthouse in Georgetown.	399	1924-25, 1934-73✞, 1984-87✞, 1988, 1990-2002	03-07-02 04-02-02 05-01-02 06-05-02 08-13-02	53.95 37.61 29.23 20.0 52.25
08105095	Berry Creek upstream from IH-35 near Georgetown, TX	Lat 30°42'11", long 97°39'58", Williamson County, about 1.4 mi upstream from IH-35 near Georgetown.	71.4	1984-88, 1990-2002	03-07-02 04-02-02 05-01-02 06-05-02 08-13-02	4.37 1.80 0 0 7.34
08105160	Dry Berry Creek near Georgetown, TX	Lat 30°41'28", long 97°38'14", Williamson County, at downstream side of county road, 0.4 mi upstream from mouth, and 4.0 mi northeast of Georgetown.	33.1	1986-88, 1990-2002	03-07-02 04-02-02 05-01-02 06-05-02	1.02 0.66 0.33 0.05
08105200	Berry Creek at State Highway 971 near Georgetown, TX	Lat 30°40'33", long 97°36'52", Williamson County, at downstream side of State Highway 971 bridge and 4.7 mi northeast of Georgetown.	117	1964-73, 1984-87✞, 1988, 1990-2002	03-07-02 04-02-02 05-01-02 06-05-02 08-13-02	15.9 11.2 7.33 3.23 20.08
08105300	San Gabriel River near Weir, TX	Lat 30°38'45", long 97°35'06", Williamson County, 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, 1991-2002	03-07-02 04-02-02 05-01-02 06-05-02 08-13-02	66.8 61.73 33.9 22.2 72.55

✞ Operated as a continuous-record station.

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 2002

Station name and number	Location	Period of record	Water Year 2002 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
		San Jacinto River Basin						
Goose Creek at Baytown, TX 08067525	Lat 29°46'14", long 94°59'58", Harris County, 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^2.	1986-2002	09-20-02	a/*18.50	--	01-22-98	*23.47	--
Willow Creek near Tomball, TX 08068325	Lat 30°06'19", long 95°32'47", Harris County, at bridge on Kuykendahl Road, 0.6 mi upstream from Cannon Gully, and 4.0 mi east of Tomball. Drainage area is 41.0 mi^2.	1984-2002	12-11-01	23.74	619	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, at bridge on Sharp Road and 7.4 mi south of Hockley. Drainage area is 80.7 mi^2.	1976-78 1979-2002	12-14-01	*64.83	--	10-18-94	*69.86	--
Buffalo Bayou near Fulshear, TX 08072350	Lat 29°43'22", long 95°46'01", Ft. Bend County, at proposed location of Peek Road bridge, 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^2.	1986-2002	08-15-02	11.42	--	02-21-94	r15.84	--
South Mayde Creek near Addicks, TX 08072700	Lat 29°48'03", long 95°41'33", Harris County, at bridge on Groeschke Road, 3.2 mi west of Addicks, and 4.6 mi upstream from langham Greek. Drainage area is 32.3 mi^2.	1974-2002	04-08-02	*106.42	--	08-31-81	108.76	4,080
Langham Creek near Addicks, TX 08072800	Lat 29°50'08", long 95°37'32", Harris County, at bridge on Clay Road, 3.6 mi north of Addicks, and 4.4 mi upstream from mouth. Drainage area is 48.9 mi^2.	1974-2002	08-15-02	*100.29	--	08-31-81	102.25	3,360
Little Whiteoak Bayou at Trimble Street at Houston, TX 08074540	Lat 29°47'33", long 95°22'06", Harris County, at bridge on Trimble Street in Houston. Drainage area is 18.0 mi^2.	1979-2002	12-11-01	*34.09	--	06-09-01	*46.21	--
Brays Bayou at Alief, TX 08074760	Lat 29°42'39", long 95°35'13", Harris County, at bridge on High Star Street in Alief. Drainage area is 14.1 mi^2.	1977-2002	12-12-01	13.67	--	03-04-92	21.16	--
Keegans Bayou at Keegan Road near Houston, TX 08074780	Lat 29°39'55", long 95°35'42", Harris County, at bridge on Keegan Road and about 16 mi southwest of Houston. Drainage area is 8.63 mi^2.	1965-71, 1975-2002	12-12-01	*78.82	--	04-14-66	83.55	--
Greens Bayou at Cutten Road near Houston, TX 08075780	Lat 29°56'56", long 95°31'10", Harris County, at bridge on Cutten Road and about 16.5 mi northwest of Houston. Drainage area is 8.65 mi^2.	1965-2002	--	*114.75 a/	4,030	02-21-69 06-09-01	*118.04 *116.77	508 5,670

* Elevation, in feet.
a/ From high-water mark.
r Revised.

See footnote at end of table.

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CALENDAR FOR WATER YEAR 2002

2001

OCTOBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

NOVEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

DECEMBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

2002

JANUARY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

FEBRUARY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

MARCH

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

APRIL

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

MAY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

JUNE

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

JULY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

AUGUST

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

SEPTEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

CONVERSION FACTORS

Multiply	By	To obtain
	Length	
inch (in.)	2.54×10^{1}	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^{0}	kilometer
	Area	
acre	4.047×10^{3}	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi^2)	2.590×10^{0}	square kilometer
	Volume	
gallon (gal)	3.785×10^{0}	liter
	3.785×10^{0}	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^{3}	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft^3)	2.832×10^{1}	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft^3/s) d]	2.447×10^{3}	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^{3}	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
	Flow	
cubic foot per second (ft^3/s)	2.832×10^{1}	liter per second
	2.832×10^{1}	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^{1}	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
	Mass	
ton (short)	9.072×10^{-1}	megagram or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$°F = (1.8 \times °C) + 32$$